

Lwarp

L^AT_EX HTML5

The lwarp package

L^AT_EX to HTML

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Abstract

The `lwarp` package converts L^AT_EX to HTML by using L^AT_EX to process the user's document and directly generate HTML tags. External utility programs are only used for the final conversion of text and images. Math may be represented by SVG images or MathJax. Hundreds of L^AT_EX packages are supported.

Documents may be produced by DVI or PDF L^AT_EX, LuaL^AT_EX, XeL^AT_EX; by several CJK engines, classes, and packages; or by customized systems such as `perltex` and `pythontex`. A `texlua` script automates compilation, index, glossary, and batch image processing, and also supports `latexmk`. Configuration is semi-automatic at the first manual compile. Support files are self-generated. Print and HTML versions of each document may coexist.

Assistance is provided for HTML import into EPUB conversion software and word processors.

Requirements include the commonly-available POPPLER utilities (included with MiKTeX) and PERL. Detailed installation instructions are included for each of the major operating systems and T_EX distributions.

A quick-start tutorial is provided, as well as extensive documentation for special cases, a general index, and a troubleshooting index. Automatic testing of package load order and image generation offers useful advice for resolving errors.

SVG math and many other generated images include L^AT_EX expressions in the alt tags. MATHJAX may be used with advanced equation numbering under the direct control of `lwarp`.

Complicated tables are supported, which copy/paste well into LIBREOFFICE WRITER.

Supported classes and packages include `memoir` and `koma-script`, `cleveref`, `caption`, `mdframed`, `siunitx`, and many popular packages for tabulars, floats, graphics, theorems, the title page, bibliography, indexing, footnotes, and editorial work.

T_EX is a self-modifying tokenized macro-expansion language. Since `lwarp` is written directly in L^AT_EX, it is able to interpret the document's meaning at a deeper level than external conversions which merely approximate T_EX. HTML5 and CSS3 are leveraged to provide advanced features such as `booktabs trim`, `multicolumns`, `side-by-side minipages`, and JAVASCRIPT-free navigation.

For a list of supported features, see [table 2: Supported packages and features](#).

To update existing projects, see [section 2: Updates](#).

Lwarp is still in development. Changes are likely.

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1 Support T_EX development

T_EX and related projects:

- are mostly open-sourced and a volunteer effort;
- benefit students, academics, scientists, engineers, and businesses;
- help drive education, public and private research, and commercial activity;
- are used in the fields of mathematics, science, engineering, and humanities;
- are international in reach;
- span decades of development;
- are enduring — many older packages are still actively used and maintained;
- are largely backwards compatible;
- are portable across all the major computing platforms;
- are usable even on older computers and away from internet access;
- are continuing to maintain relevance with modern improvements;
- require no yearly subscription fees;
- and are supported by an active community of knowledgeable volunteers.

Please consider helping by joining and/or contributing to the T_EX Users Group, a United States 501(c)(3) tax-exempt charitable organization. Contributions are accepted by credit card, check, or Pay Pal, via the United Way, or by USA or European bank transfer. Membership in TUG supports the development of T_EXLive, the major T_EX distribution.

Donations may be directed towards individual projects:

TUG Bursary Fund: Assistance for attending annual TUG meetings.

CTAN: The Comprehensive T_EX Archive Network — Central storage for T_EX.

TeX Development Fund: Support for specific projects.

EduTeX: Teaching and using T_EX in schools and universities.

GUST e-foundry fonts: Enhanced for math and additional language groups.

LaTeX Project: Modernizing the L^AT_EX core.

Libre Font Fund: Fonts, tools (FontForge), and distribution (the Open Font Library).

LuaTeX: Combining the pdfT_EX engine and the Lua language.

MetaPost: Postscript graphics.

MacTeX: T_EX for Mac.

PDF Accessibility: Modern PDF standards.

Other: Additional projects may be specified.

To make a contribution: <https://www.tug.org/donate.html>

For country-specific T_EX users groups: <http://tug.org/usergroups.html>

For users of MiK_TE_X: <https://miktex.org/donations.html>

Contents

1	Support T_EX development	2
	List of Figures	54
	List of Tables	54
2	Updates	55
3	Introduction	75
3.1	Typesetting conventions	77
3.2	Supported packages and features	78
4	Alternatives	84
4.1	internet class	84
4.2	T _E X4HT	84
4.3	Translators	84
4.4	ASCIIDOC and ASCIIDOCTOR	85
4.4.1	ASCIIDOCTOR-L _A T _E X	85
4.5	PANDOC	85
4.6	Word processors	85
4.7	Commercial systems	85
4.8	Comparisons	85
5	Installation	87
5.1	Installing the <i>lwarp</i> package	89
5.2	Installing the <i>lwarpmk</i> utility	90
5.2.1	Using a local copy of <i>lwarpmk</i>	92
5.3	Installing additional utilities	92
6	Tutorial	94
6.1	Starting a new project	94
6.2	Compiling the print version with <i>lwarpmk</i>	98
6.3	Compiling the HTML version with <i>lwarpmk</i>	99
6.4	Generating the SVG images	100
6.5	Using MATHJAX for math	101
6.6	Changing the CSS style	102
6.7	Customizing the HTML output	102
6.8	Using <i>latexmk</i>	103
6.9	Using X _Y L _A T _E X or Lua _A T _E X	104
6.10	Using DVI L _A T _E X	104
6.11	Using a glossary	105
6.11.1	gloss package	105
6.11.2	glossaries package	105
6.12	Cleaning auxiliary files	106
6.13	Cleaning auxiliary and output files	106
6.14	Cleaning the images from the <project>-images directory	106
6.15	Converting PDF or EPS images to SVG	106
6.16	Creating HTML from an incomplete compile	106
6.17	Processing multiple projects in the same directory	106
6.18	Using the <i>make</i> utility	107

7	Converting an existing document	108
8	Additional details	109
8.1	Shell escape	109
8.2	Font and UTF-8 support	109
8.2.1	Indexes, glossaries, and encoding	110
8.3	lwarp package loading and options	111
8.4	Customizing the HTML output	115
8.4.1	Example HTML file naming	120
8.5	Customizing the CSS	121
8.6	Selecting the operating system	122
8.7	Selecting actions for print or HTML output	123
8.8	Commands to be placed into the warpprint environment	124
8.9	Title page	124
8.10	HTML page meta descriptions	125
8.11	HTML homepage meta title	125
8.12	HTML page meta author	126
9	Special cases and limitations	126
9.1	Things to avoid	126
9.1.1	Invalid HTML	127
9.2	Formatting	127
9.2.1	Text formatting	127
9.2.2	Horizontal space	127
9.2.3	Text alignment	127
9.2.4	Accents	128
9.2.5	textcomp package	128
9.2.6	Superscripts and other non-math uses of math mode	128
9.2.7	Empty \item followed by a new line of text or a nested list:	128
9.2.8	Filenames and URLs in lists or footnotes	128
9.2.9	resize package	128
9.3	Boxes and minipages	128
9.3.1	Marginpars	128
9.3.2	Save Boxes	129
9.3.3	Minipages	129
9.3.4	Side-by-side minipages	130
9.3.5	Framed minipages and other environments	130
9.3.6	fancybox package	131
9.3.7	mdframed package	132
9.4	Section names	133
9.5	Cross-references	134
9.5.1	Page references	134
9.5.2	cleveref and varioref packages	134
9.5.3	Hyperlinks, hyperref, and url	135
9.5.4	Footnotes and page notes	135
9.6	Front and back matter	136
9.6.1	Custom classes with multiple authors and affiliations	136
9.6.2	Starred chapters and sections	137
9.6.3	abstract package	137
9.6.4	titling and authblk	137
9.6.5	tocloft package	138

9.6.6	appendix package	138
9.6.7	pagenote package	138
9.6.8	endnotes package	138
9.6.9	BIBTEX	138
9.6.10	gloss package	139
9.6.11	glossaries package	139
9.6.12	nomencl package	140
9.6.13	Indexing overview	140
9.6.14	Indexing with basic L ^A T _E X and makeidx	140
9.6.15	Indexing with index	141
9.6.16	Indexing with splitidx	142
9.6.17	Indexing with imakeidx	144
9.6.18	Indexes with memoir	147
9.6.19	Using a custom <i>makeindex</i> style file	149
9.6.20	Using a custom <i>xindy</i> style file	150
9.6.21	Additional indexing limitations	150
9.6.22	Index positions, TOC, tocbibind	151
9.7	Math	152
9.7.1	Math in section names	152
9.7.2	Rendering tradeoffs	152
9.7.3	SVG option	153
9.7.4	MATHJAX option	153
9.7.5	Customizing MATHJAX	154
9.7.6	MATHJAX limitations	154
9.7.7	Catcode changes	155
9.7.8	Complicated inline math objects	155
9.7.9	Complicated display math objects	155
9.7.10	ntheorem package	155
9.7.11	siunitx package	156
9.7.12	units and nicefrac packages	156
9.7.13	newtxmath package	156
9.8	Graphics	156
9.8.1	tikz package	158
9.8.2	grffile package	158
9.8.3	color package	158
9.8.4	xcolor package	158
9.8.5	epstopdf package	159
9.8.6	pstricks package	159
9.8.7	pdftricks package	159
9.8.8	psfrag package	159
9.8.9	pstool package	160
9.8.10	asymptote package	160
9.8.11	overpic package	160
9.9	Tabbing	160
9.10	Tabular	161
9.10.1	tabular environment	161
9.10.2	multirow package	163
9.10.3	longtable package	163
9.10.4	threeparttablex package	164
9.10.5	supertabular and xtab packages	164
9.10.6	colortbl package	165

9.10.7	<code>ctable</code> package	165
9.10.8	<code>bigdelim</code> package	165
9.11	Floats	165
9.11.1	Float contents alignment	165
9.11.2	<code>float</code> , <code>trivfloat</code> , and/or <code>algorithmicx</code> together	166
9.11.3	<code>caption</code> and <code>subcaption</code> packages	166
9.11.4	<code>subfig</code> package	166
9.11.5	<code>floatrow</code> package	166
9.11.6	<code>keyfloat</code> package	167
9.12	KOMA-SCRIPT classes	167
9.13	MEMOIR class	167
9.14	International languages	168
9.15	Miscellaneous packages	168
9.15.1	<code>verse</code> and <code>memoir</code>	168
9.15.2	<code>newclude</code> package	169
9.15.3	<code>babel</code> package	169
9.15.4	<code>polyglossia</code> package	169
9.15.5	<code>todonotes</code> and <code>luatodonotes</code> packages	170
9.15.6	<code>fixme</code>	170
9.15.7	<code>chemfig</code> package	170
9.15.8	<code>chemformula</code> package	170
9.15.9	<code>mhchem</code> package	170
9.15.10	<code>xparse</code> package	171
9.15.11	<code>kotex</code> package	171
10	Compiling using custom shell commands	172
10.1	Command options	172
10.2	Literal character macros	172
10.3	<code>latexmk</code>	173
10.4	<code>perltex</code> package	174
10.5	<code>pythontex</code> package	174
10.6	Other packages	174
10.7	<code>make</code> program	175
10.8	UTF-8 locale	175
11	EPUB conversion	176
12	Word-processor conversion	178
12.1	Activating word-processor conversion	178
12.2	Additional modifications	179
12.3	Recommendations	181
12.4	Limitations	182
13	Modifying lwarp	183
13.1	Creating a development system	183
13.2	Modifying a package for lwarp	184
13.2.1	Adding a package to the <code>lwarp.dtx</code> file	185
13.3	Modifying a class for lwarp	185
13.4	Testing lwarp	186
13.5	Modifying <code>lwarpmk</code>	186
14	Troubleshooting	188

14.1	Using the <code>lwarp.sty</code> package	188
14.1.1	Debug tracing output	191
14.2	Compiling the <code>lwarp.dtx</code> file	191
15	Trademarks	193
1	lwarp.sty	194
16	Implementation	194
17	Section depths and HTML headings	195
18	Source code	196
19	Detecting the T_EX engine — <i>pdf_latex, lualatex, xelatex</i>	197
20	Early package requirements	197
21	Package load order	197
21.1	Tests of package load order	198
21.2	Error for disallowed packages and classes loaded before <code>lwarp</code>	200
21.3	Enforcing package loading after <code>lwarp</code>	201
22	MD5 hashing	209
23	pdf_lAT_EX T1 and UTF-8 encoding	210
24	Unicode input characters	211
25	Avoid a bitmapped font	211
26	Upright quotes	212
27	Miscellaneous tools	212
28	Operating-System portability	213
28.1	Literal characters	213
28.2	Common portability code	215
28.3	UNIX, LINUX, and MAC OS	215
28.4	MS-WINDOWS	215
29	Package options	216
29.1	Additional options support	220
29.2	Conditional compilation	221
30	Required packages	223
31	Loading packages	226
32	Additional required packages	231
33	File handles	232

34	Include a file	232
35	Copying a file	233
36	Debugging messages	234
37	Defining print and HTML versions of macros and environments	235
38	HTML-conversion output modifications	239
38.1	User-level controls	239
38.2	Heading adjustments	241
39	Remembering original formatting macros	242
40	Accents	244
41	Configuration files	246
41.1	Decide whether to generate configuration files	246
41.2	<project>_html.tex	246
41.3	<i>lwarpmk</i> configuration files	247
41.3.1	Helper macros	247
41.3.2	lwarpmk.conf	253
41.3.3	<project>.lwarpmkconf	253
41.4	lwarp.css	253
41.5	lwarp_sagebrush.css	282
41.6	lwarp_formal.css	286
41.7	sample_project.css	290
41.8	lwarp.ist	291
41.9	lwarp.xdy	291
41.10	lwarp_one_limage.cmd	292
41.11	lwarp_mathjax.txt	293
41.12	lwarpmk.lua — <i>lwarpmk</i> option	295
42	Stacks	312
42.1	Assigning depths	312
42.2	Closing actions	313
42.3	Closing depths	313
42.4	Pushing and popping the stack	314
43	Data arrays	315
44	Localizing catcodes	315
45	Localizing dynamic math	316
46	HTML entities	317
47	HTML filename generation	318
48	Homepage link	321
49	\LWRPrintStack diagnostic tool	322
50	Closing stack levels	322

51	PDF pages and styles	323
52	HTML tags, spans, divs, elements	324
52.1	Mapping L ^A T _E X sections to HTML sections	325
52.2	Babel-French tag modifications	325
52.3	HTML output formatting	326
52.4	HTML tags	326
52.5	Block tags and comments	328
52.6	Div class and element class	329
52.7	Single-line elements	330
52.8	HTML5 semantic elements	331
52.9	High-level block and inline classes	331
52.10	Closing HTML tags	333
53	Paragraph handling	334
54	Paragraph start/stop handling	337
55	Indentfirst	340
56	Page headers and footers	340
57	css	341
58	MathJax script	341
59	Title, HTML meta author, HTML meta description	342
60	Footnotes	343
60.1	Regular page footnotes	344
60.2	Minipage footnotes	344
60.3	Titlepage thanks	344
60.4	Regular page footnote implementation	344
60.5	Minipage footnote implementation	347
60.6	Printing pending footnotes	348
61	Marginpars	349
62	Splitting HTML files	350
62.1	Customizing MATHJAX	355
63	Sectioning	360
63.1	User-level starred section commands	360
63.2	Book class commands	361
63.3	Sectioning support macros	361
63.4	Pre- and post- sectioning names	368
63.5	\section and friends	369
64	Starting a new file	371
65	Starting HTML output	375
66	Ending HTML output	377

67	Title page	379
67.1	Setting the title, etc.	380
67.2	\if@titlepage	381
67.3	Changes for \affiliation	381
67.4	Printing the thanks	382
67.5	Printing the title, etc. in HTML	382
67.6	Printing the title, etc. in print form	384
67.7	\maketitle for HTML output	384
67.8	\published and \subtitle	387
68	Abstract	388
69	Quote and verse	389
69.1	Attributions	389
69.2	Quotes, quotations	389
69.3	Verse	390
69.3.1	L ^A T _E X core verse environment	390
69.3.2	verse and memoir	391
70	Verbatim and tabbing	391
71	Theorems	394
72	Lists	395
72.1	List environment	395
72.2	Itemize	399
72.3	Enumerate	399
72.4	Description	400
72.5	Patching the lists	400
73	Tabular	402
73.1	Limitations	402
73.2	Temporary package-related macros	404
73.2.1	arydshln	404
73.3	Token lookahead	404
73.4	Tabular variables	405
73.5	Handling &, @, !, and bar	407
73.5.1	Handling &	409
73.5.2	Filling an unfinished row	410
73.6	Handling \\	412
73.7	Looking ahead in the column specifications	413
73.8	Parsing @, >, <, !, bar columns	413
73.9	Parsing 'l', 'c', or 'r' columns	417
73.10	Parsing 'p', 'm', or 'b' columns	417
73.11	Parsing 'w' columns	418
73.12	Parsing '*' columns	418
73.13	Parsing 'D' columns	418
73.14	Parsing the column specifications	419
73.15	colortbl and xparse tabular color support	423
73.16	Starting a new row	425
73.17	Printing vertical bar tags	425
73.18	Printing at or bang tags	426

73.19	Data opening tag	427
73.20	Midrules	429
73.21	Cell colors	434
73.22	Multicolumns	438
73.22.1	Parsing multicolumns	438
73.22.2	Multicolumn factored code	442
73.22.3	Multicolumn	444
73.22.4	Longtable captions	445
73.22.5	Counting HTML tabular columns	447
73.23	Multirow if not loaded	449
73.24	Multicolumnrow	449
73.25	Utility macros inside a table	450
73.26	Special-case tabular markers	451
73.27	Checking for a new table cell	452
73.28	\mrowcell	454
73.29	\mcolrowcell	455
73.30	HTML tabular environment	455
74	Cross-references	462
74.1	Setup	462
74.2	New lwarp labels.	464
74.3	Labels	465
74.4	References	466
74.5	Hyper-references	469
75	Floats	473
75.1	Float environment	473
75.2	Float tracking	475
75.3	Caption inside a float environment	477
75.4	Caption and LOF linking and tracking	477
76	Table of Contents, LOF, LOT	480
76.1	Reading and printing the toc	481
76.2	High-level toc commands	483
76.3	Side toc	484
76.4	Low-level toc line formatting	485
77	Index and glossary	488
78	Bibliography presentation	492
79	Restoring original formatting	493
80	Math	494
80.1	Limitations	494
80.1.1	Math in section names	494
80.1.2	Rendering tradeoffs	495
80.1.3	svg option	495
80.1.4	MATHJAX option	496
80.1.5	Customizing MATHJAX	496
80.1.6	MATHJAX limitations	496
80.1.7	Catcode changes	497

80.1.8	Complicated inline math objects	497
80.1.9	Complicated display math objects	497
80.2	HTML alt tag names	498
80.3	Inline and display math	498
80.4	MATHJAX support	509
80.5	Equation environment	511
80.6	<code>\displaymathnormal</code> and <code>\displaymathother</code>	514
80.7	AMS Math environments	515
80.7.1	Support macros	515
80.7.2	Environment patches	517
81	Lateximages	519
81.1	Description	519
81.2	Support counters and macros	520
81.3	Font size	521
81.4	Sanitizing math expressions for HTML	521
81.5	Equation numbers	523
81.6	HTML alt tags	524
81.7	lateximage environment	525
82	center, flushleft, flushright	530
83	Preloaded packages	532
84	siunitx	533
85	Graphics print-mode modifications	534
85.1	General limitations	534
85.2	Print-mode modifications	536
86	xcolor boxes	536
87	chemmacros environments	539
88	cleveref	540
89	picture environment	543
90	Minipages and Boxes	543
90.1	Counters and lengths	544
90.2	Footnote handling	544
90.3	Minipage handling	545
90.4	<code>\parbox</code> , <code>\mbox</code> , <code>\makebox</code> , <code>\framebox</code> , <code>\fbox</code> , <code>\raisebox</code>	549
91	Direct formatting	554
92	Skips, spaces, font sizes	565
93	<code>\phantomsection</code>	572
94	<code>\LaTeX</code> and other logos	572
95	<code>\AtBeginDocument</code>, <code>\AtEndDocument</code>	576

96	Loading KOMA-SCRIPT class patches	576
97	Loading MEMOIR class patches	577
98	ut* class patches	577
99	CTEX patches	578
100	kotexutf patches	579
2	lwarp-2in1.sty	580
101	2in1	580
3	lwarp-2up.sty	580
102	2up	580
4	lwarp-a4.sty	580
103	a4	580
5	lwarp-a4wide.sty	581
104	a4wide	581
6	lwarp-a5comb.sty	581
105	a5comb	581
7	lwarp-abstract.sty	581
106	abstract	581
8	lwarp-academicons.sty	583
107	academicons	583
9	lwarp-accsupp.sty	584
108	accsupp	584
10	lwarp-acro.sty	584
109	acro	584

11	lwarp-acronym.sty	586
110	acronym	586
12	lwarp-adjmulticol.sty	587
111	adjmulticol	587
13	lwarp-addlines.sty	588
112	addlines	588
14	lwarp-afterpage.sty	588
113	afterpage	588
15	lwarp-algorithm2e.sty	588
114	algorithm2e	588
16	lwarp-algorithmicx.sty	592
115	algorithmicx	592
17	lwarp-alltt.sty	593
116	alltt	593
18	lwarp-amsmath.sty	593
117	amsmath	593
19	lwarp-amsthm.sty	596
118	amsthm	596
20	lwarp-anonchap.sty	600
119	anonchap	600
21	lwarp-anysize.sty	601
120	anysize	601

22	lwarp-appendix.sty	601
121	appendix	601
23	lwarp-ar.sty	601
122	ar	601
24	lwarp-arabicfront.sty	603
123	arabicfront	603
25	lwarp-array.sty	603
124	array	603
26	lwarp-arydshln.sty	604
125	arydshln	604
27	lwarp-asymptote.sty	606
126	asymptote	606
28	lwarp-atbegshi.sty	606
127	atbegshi	606
29	lwarp-attachfile.sty	607
128	attachfile	607
30	lwarp-attachfile2.sty	608
129	attachfile2	608
31	lwarp-authblk.sty	610
130	authblk	610
32	lwarp-autonum.sty	611
131	autonum	611

33	lwarp-axessibility.sty	612
132	axessibility	612
34	lwarp-axodraw2.sty	612
133	axodraw2	612
35	lwarp-backref.sty	613
134	backref	613
36	lwarp-balance.sty	613
135	balance	613
37	lwarp-bbding.sty	613
136	bbding	613
38	lwarp-biblatex.sty	618
137	biblatex	618
39	lwarp-bibunits.sty	619
138	bibunits	619
40	lwarp-bigdelim.sty	619
139	bigdelim	619
41	lwarp-bigfoot.sty	620
140	bigfoot	620
42	lwarp-bigstrut.sty	621
141	bigstrut	621
43	lwarp-bitpattern.sty	621
142	bitpattern	621

44	lwarp-blowup.sty	621
143	blowup	621
45	lwarp-booklet.sty	622
144	booklet	622
46	lwarp-bookmark.sty	622
145	bookmark	622
47	lwarp-booktabs.sty	623
146	booktabs	623
48	lwarp-bophook.sty	624
147	bophook	624
49	lwarp-bounddvi.sty	624
148	bounddvi	624
50	lwarp-boxedminipage2e.sty	625
149	boxedminipage2e	625
51	lwarp-breakurl.sty	625
150	breakurl	625
52	lwarp-breqn.sty	626
151	breqn	626
53	lwarp-bsheaders.sty	627
152	bsheaders	627
54	lwarp-bxpapersize.sty	627
153	bxpapersize	627

55	lwarp-bytefield.sty	628
154	bytefield	628
56	lwarp-cancel.sty	628
155	cancel	628
57	lwarp-caniclayout.sty	629
156	canoniclayout	629
58	lwarp-caption.sty	629
157	caption	629
59	lwarp-cases.sty	632
158	cases	632
60	lwarp-changebar.sty	633
159	changebar	633
61	lwarp-changelayout.sty	633
160	changelayout	633
62	lwarp-changepage.sty	634
161	changepage	634
63	lwarp-changes.sty	634
162	changes	634
64	lwarp-chappg.sty	637
163	chappg	637
65	lwarp-chapterbib.sty	637
164	chapterbib	637

66	lwarp-chemfig.sty	637
165	chemfig	637
67	lwarp-chemformula.sty	638
166	chemformula	638
68	lwarp-chemgreek.sty	643
167	chemgreek	643
69	lwarp-chemmacros.sty	643
168	chemmacros	643
168.1	Changes to the user's document	644
168.2	Code	644
168.3	Loading modules	644
168.4	New environments	645
168.5	Acid-base	645
168.6	Charges	647
168.7	Nomenclature	647
168.8	Particles	649
168.9	Phases	650
168.10	Mechanisms	651
168.11	Newman	653
168.12	Orbital	653
168.13	Reactions	654
168.14	Redox	654
168.15	Scheme	655
168.16	Spectroscopy	655
168.17	Thermodynamics	659
70	lwarp-chemnum.sty	661
169	chemnum	661
71	lwarp-chkfloat.sty	662
170	chkfloat	662
72	lwarp-chngpage.sty	662
171	chngpage	662

73	lwarp-cite.sty	663
172	cite	663
74	lwarp-CJK.sty	663
173	CJK	663
75	lwarp-CJKutf8.sty	663
174	CJKutf8	663
76	lwarp-clrdblpg.sty	664
175	clrdblpg	664
77	lwarp-cmdtrack.sty	664
176	cmdtrack	664
78	lwarp-color.sty	664
177	color	664
79	lwarp-colortbl.sty	664
178	colortbl	664
80	lwarp-continue.sty	666
179	continue	666
81	lwarp-copyrightbox.sty	666
180	copyrightbox	666
82	lwarp-crop.sty	667
181	crop	667
83	lwarp-ctable.sty	667
182	ctable	667

84	lwarp-cuted.sty	670
183	cuted	670
85	lwarp-cutwin.sty	670
184	cutwin	670
86	lwarp-dblfloatfix.sty	671
185	dblfloatfix	671
87	lwarp-dblfnote.sty	671
186	dblfnote	671
88	lwarp-dcolumn.sty	672
187	dcolumn	672
89	lwarp-diagbox.sty	672
188	diagbox	672
90	lwarp-dingbat.sty	673
189	dingbat	673
91	lwarp-dprogress.sty	674
190	dprogress	674
92	lwarp-draftcopy.sty	675
191	draftcopy	675
93	lwarp-draftfigure.sty	675
192	draftfigure	675
94	lwarp-draftwatermark.sty	675
193	draftwatermark	675

95	lwarp-easy-todo.sty	676
194	easy-todo	676
96	lwarp-ebook.sty	677
195	ebook	677
97	lwarp-ed.sty	677
196	ed	677
98	lwarp-ellipsis.sty	678
197	ellipsis	678
99	lwarp-embrac.sty	678
198	embrac	678
100	lwarp-emptypage.sty	679
199	emptypage	679
101	lwarp-endfloat.sty	679
200	endfloat	679
102	lwarp-endheads.sty	680
201	endheads	680
103	lwarp-endnotes.sty	680
202	endnotes	680
104	lwarp-enumerate.sty	681
203	enumerate	681
105	lwarp-enumitem.sty	681
204	enumitem	681

106	lwarp-epigraph.sty	682
205	epigraph	682
107	lwarp-epsfig.sty	683
206	epsfig	683
108	lwarp-epstopdf.sty	684
207	epstopdf	684
109	lwarp-epstopdf-base.sty	684
208	epstopdf-base	684
110	lwarp-eqlist.sty	685
209	eqlist	685
111	lwarp-eqparbox.sty	685
210	eqparbox	685
112	lwarp-errata.sty	686
211	errata	686
113	lwarp-eso-pic.sty	688
212	eso-pic	688
114	lwarp-eurosym.sty	688
213	eurosym	688
115	lwarp-everypage.sty	689
214	everypage	689
116	lwarp-everyshi.sty	689
215	everyshi	689

117	lwarp-extramarks.sty	689
216	extramarks	689
118	lwarp-fancybox.sty	690
217	fancybox	690
119	lwarp-fancyhdr.sty	695
218	fancyhdr	695
120	lwarp-fancyref.sty	696
219	fancyref	696
121	lwarp-fancytabs.sty	697
220	fancytabs	697
122	lwarp-fancyvrb.sty	697
221	fancyvrb	697
123	lwarp-figcaps.sty	703
222	figcaps	703
124	lwarp-figsize.sty	703
223	figsize	703
125	lwarp-fitbox.sty	704
224	fitbox	704
126	lwarp-fix2col.sty	704
225	fix2col	704
127	lwarp-fixme.sty	704
226	fixme	704

128	lwarp-fixmetodonotes.sty	706
227	fixmetodonotes	706
129	lwarp-flafter.sty	706
228	flafter	706
130	lwarp-flippdf.sty	706
229	flippdf	706
131	lwarp-float.sty	707
230	float	707
132	lwarp-floatflt.sty	708
231	floatflt	708
133	lwarp-floatpag.sty	709
232	floatpag	709
134	lwarp-floatrow.sty	709
233	floatrow	709
135	lwarp-fltrace.sty	714
234	fltrace	714
136	lwarp-flushend.sty	715
235	flushend	715
137	lwarp-fnbreak.sty	715
236	fnbreak	715
138	lwarp-fncychap.sty	715
237	fncychap	715

139	lwarp-fnlineno.sty	716
238	fnlineno	716
140	lwarp-fnpara.sty	716
239	fnpara	716
141	lwarp-fnpos.sty	716
240	fnpos	716
142	lwarp-fontawesome.sty	717
241	fontawesome	717
143	lwarp-fontawesome5.sty	718
242	fontawesome5	718
144	lwarp-fontenc.sty	719
243	fontenc	719
145	lwarp-footmisc.sty	719
244	footmisc	719
146	lwarp-footnote.sty	720
245	footnote	720
147	lwarp-footnotebackref.sty	721
246	footnotebackref	721
148	lwarp-footnotehyper.sty	721
247	footnotehyper	721
149	lwarp-footnoterange.sty	722
248	footnoterange	722

150	lwarp-footnpag.sty	722
249	footnpag	722
151	lwarp-foreign.sty	722
250	foreign	722
152	lwarp-forest.sty	722
251	forest	722
153	lwarp-framed.sty	723
252	framed	723
154	lwarp-ftcap.sty	725
253	ftcap	725
155	lwarp-ftnright.sty	726
254	ftnright	726
156	lwarp-fullminipage.sty	726
255	fullminipage	726
157	lwarp-fullpage.sty	726
256	fullpage	726
158	lwarp-fullwidth.sty	726
257	fullwidth	726
159	lwarp-fwlw.sty	727
258	fwlw	727
160	lwarp-gentombow.sty	727
259	gentombow	727

161	lwarp-geometry.sty	727
260	geometry	727
162	lwarp-gloss.sty	728
261	gloss	728
163	lwarp-glossaries.sty	728
262	glossaries	728
164	lwarp-gmeometric.sty	731
263	gmeometric	731
165	lwarp-graphics.sty	731
264	graphics	731
264.1	Graphics extensions	731
264.2	Length conversions and graphics options	732
264.3	Printing HTML styles	734
264.4	\includegraphics	735
264.5	Boxes	740
166	lwarp-graphicx.sty	743
265	graphicx	743
167	lwarp-grffile.sty	743
266	grffile	743
168	lwarp-grid.sty	744
267	grid	744
169	lwarp-grid-system.sty	744
268	grid-system	744
170	lwarp-gridset.sty	744
269	gridset	744

171	lwarp-hang.sty	745
270	hang	745
172	lwarp-hanging.sty	746
271	hanging	746
173	lwarp-hypcap.sty	747
272	hypcap	747
174	lwarp-hypdestopt.sty	747
273	hypdestopt	747
175	lwarp-hypernat.sty	748
274	hypernat	748
176	lwarp-hyperref.sty	748
275	hyperref	748
177	lwarp-hyperxmp.sty	753
276	hyperxmp	753
178	lwarp-hyphenat.sty	753
277	hyphenat	753
179	lwarp-idxlayout.sty	754
278	idxlayout	754
180	lwarp-ifoddpage.sty	755
279	ifoddpage	755
181	lwarp-imakeidx.sty	755
280	imakeidx	755

182	lwarp-index.sty	759
281	index	759
183	lwarp-inputtrc.sty	761
282	inputtrc	761
184	lwarp-intopdf.sty	761
283	intopdf	761
185	lwarp-karnaugh-map.sty	762
284	karnaugh-map	762
186	lwarp-keyfloat.sty	765
285	keyfloat	765
187	lwarp-layaureo.sty	770
286	layaureo	770
188	lwarp-layout.sty	771
287	layout	771
189	lwarp-layouts.sty	771
288	layouts	771
190	lwarp-leading.sty	774
289	leading	774
191	lwarp-letterspace.sty	774
290	letterspace	774
192	lwarp-lettrine.sty	774
291	lettrine	774

193	lwarp-lineno.sty	775
292	lineno	775
194	lwarp-lips.sty	777
293	lips	777
195	lwarp-listings.sty	778
294	listings	778
196	lwarp-listliketab.sty	782
295	listliketab	782
197	lwarp-lltjext.sty	782
296	lltjext	782
198	lwarp-longtable.sty	783
297	longtable	783
199	lwarp-lscape.sty	786
298	lscape	786
200	lwarp-ltablex.sty	786
299	ltablex	786
201	lwarp-ltcaption.sty	787
300	ltcaption	787
202	lwarp-ltxgrid.sty	787
301	ltxgrid	787
203	lwarp-ltxtable.sty	788
302	ltxtable	788

204	lwarp-lua-check-hyphen.sty	788
303	lua-check-hyphen	788
205	lwarp-lua-visual-debug.sty	788
304	lua-visual-debug	788
206	lwarp-luacolor.sty	788
305	luacolor	788
207	lwarp-luatodonotes.sty	789
306	luatodonotes	789
208	lwarp-magaz.sty	791
307	magaz	791
209	lwarp-makeidx.sty	791
308	makeidx	791
210	lwarp-manyfoot.sty	792
309	manyfoot	792
211	lwarp-marginal.sty	794
310	marginal	794
212	lwarp-marginfit.sty	794
311	marginfit	794
213	lwarp-marginfix.sty	794
312	marginfix	794
214	lwarp-marginnote.sty	795
313	marginnote	795

215	lwarp-marvosym.sty	795
314	marvosym	795
216	lwarp-mathtools.sty	796
315	mathtools	796
217	lwarp-mcaption.sty	796
316	mcaption	796
218	lwarp-mdframed.sty	797
317	mdframed	797
317.1	Limitations	797
317.2	Package loading	798
317.3	Patches	798
317.4	Initial setup	798
317.5	Color and length HTML conversion	799
317.6	Environment encapsulation	799
317.7	Mdframed environment	800
317.8	Titles and subtitles	801
317.9	New environments	803
219	lwarp-memhfixc.sty	806
318	memhfixc	806
220	lwarp-metalogo.sty	806
319	metalogo	806
221	lwarp-metalogox.sty	806
320	metalogox	806
222	lwarp-mhchem.sty	807
321	mhchem	807
223	lwarp-microtype.sty	809
322	microtype	809

224	lwarp-midfloat.sty	810
323	midfloat	810
225	lwarp-midpage.sty	810
324	midpage	810
226	lwarp-minitoc.sty	810
325	minitoc	810
227	lwarp-morefloats.sty	811
326	morefloats	811
228	lwarp-moreverb.sty	811
327	moreverb	811
229	lwarp-mparhack.sty	812
328	mparhack	812
230	lwarp-multicap.sty	812
329	multicap	812
231	lwarp-multicol.sty	813
330	multicol	813
232	lwarp-multicolrule.sty	814
331	multicolrule	814
233	lwarp-multirow.sty	814
332	multirow	814
332.1	Multirow	815
332.2	Combined multicolumn and multirow	817
234	lwarp-multitoc.sty	818

333	multitoc	818
235	lwarp-musicography.sty	818
334	musicography	818
236	lwarp-nameauth.sty	820
335	nameauth	820
237	lwarp-nameref.sty	821
336	nameref	821
238	lwarp-natbib.sty	821
337	natbib	821
239	lwarp-nccfancyhdr.sty	822
338	nccfancyhdr	822
240	lwarp-needspace.sty	823
339	needspace	823
241	lwarp-nextpage.sty	823
340	nextpage	823
242	lwarp-nicefrac.sty	824
341	nicefrac	824
243	lwarp-niceframe.sty	824
342	niceframe	824
244	lwarp-nomencl.sty	825
343	nomencl	825

245	lwarp-nonfloat.sty	825
344	nonfloat	825
246	lwarp-nonumonpart.sty	826
345	nonumonpart	826
247	lwarp-nopageno.sty	826
346	nopageno	826
248	lwarp-notes.sty	826
347	notes	826
249	lwarp-notespages.sty	827
348	notespages	827
250	lwarp-nowidow.sty	827
349	nowidow	827
251	lwarp-ntheorem.sty	828
350	ntheorem	828
350.1	Limitations	828
350.2	Options	828
350.3	Remembering the theorem style	829
350.4	HTML cross-referencing	832
350.5	\newtheoremstyle	832
350.6	Standard styles	832
350.7	Additional objects	834
350.8	Renewed standard configuration	834
350.9	amsthm option	835
350.10	Ending a theorem	837
350.11	\NoEndMark	838
350.12	List-of	838
350.13	Symbols	838
350.14	Cross-referencing	839
252	lwarp-octave.sty	839
351	octave	839

253	lwarp-overpic.sty	840
352	overpic	840
254	lwarp-pagegrid.sty	841
353	pagegrid	841
255	lwarp-pagenote.sty	841
354	pagenote	841
256	lwarp-pagesel.sty	841
355	pagesel	841
257	lwarp-paralist.sty	841
356	paralist	841
258	lwarp-parnotes.sty	842
357	parnotes	842
259	lwarp-parskip.sty	843
358	parskip	843
260	lwarp-pbox.sty	843
359	pbox	843
261	lwarp-pdfcomment.sty	844
360	pdfcomment	844
262	lwarp-pdfscape.sty	844
361	pdfscape	844
263	lwarp-pdfmarginpar.sty	844
362	pdfmarginpar	844

264	lwarp-pdfpages.sty	845
363	pdfpages	845
265	lwarp-pdfprivacy.sty	847
364	pdfprivacy	847
266	lwarp-pdfrender.sty	847
365	pdfrender	847
267	lwarp-pdfsync.sty	848
366	pdfsync	848
268	lwarp-pdftricks.sty	848
367	pdftricks	848
269	lwarp-pdfx.sty	849
368	pdfx	849
270	lwarp-perpage.sty	849
369	perpage	849
271	lwarp-pfnote.sty	850
370	pfnote	850
272	lwarp-phfqit.sty	850
371	phfqit	850
273	lwarp-pifont.sty	851
372	pifont	851
274	lwarp-placeins.sty	851
373	placeins	851

275	lwarp-plarydshln.sty	852
374	plarydshln	852
276	lwarp-plext.sty	852
375	plext	852
277	lwarp-plextarydshln.sty	853
376	plextarydshln	853
278	lwarp-plextcolortbl.sty	853
377	plextcolortbl	853
279	lwarp-prelim2e.sty	853
378	prelim2e	853
280	lwarp-prettyref.sty	854
379	prettyref	854
281	lwarp-preview.sty	854
380	preview	854
282	lwarp-psfrag.sty	854
381	psfrag	854
283	lwarp-psfragx.sty	855
382	psfragx	855
284	lwarp-pst-eps.sty	855
383	pst-eps	855
285	lwarp-pstool.sty	856
384	pstool	856

286	lwarp-pstricks.sty	857
385	pstricks	857
287	lwarp-pxatbegshi.sty	857
386	pxatbegshi	857
288	lwarp-pxeveryshi.sty	857
387	pxeveryshi	857
289	lwarp-pxftnright.sty	857
388	pxftnright	857
290	lwarp-pxjahyper.sty	858
389	pxjahyper	858
291	lwarp-quotchap.sty	858
390	quotchap	858
292	lwarp-quoting.sty	859
391	quoting	859
293	lwarp-ragged2e.sty	859
392	ragged2e	859
294	lwarp-realscripts.sty	860
393	realscripts	860
295	lwarp-refcheck.sty	861
394	refcheck	861
296	lwarp-register.sty	861
395	register	861

297	lwarp-reysize.sty	862
396	reysize	862
298	lwarp-repeatindex.sty	863
397	repeatindex	863
299	lwarp-resizegather.sty	864
398	resizegather	864
300	lwarp-rmpage.sty	864
399	rmpage	864
301	lwarp-romanbar.sty	865
400	romanbar	865
302	lwarp-romanbarpagenumber.sty	865
401	romanbarpagenumber	865
303	lwarp-rotating.sty	865
402	rotating	865
304	lwarp-rotfloat.sty	866
403	rotfloat	866
305	lwarp-rviewport.sty	867
404	rviewport	867
306	lwarp-savetrees.sty	867
405	savetrees	867
307	lwarp-scalefnt.sty	867
406	scalefnt	867

308	lwarp-schemata.sty	867
407	schemata	867
309	lwarp-scrextend.sty	868
408	scrextend	868
310	lwarp-scrhack.sty	871
409	scrhack	871
311	lwarp-sclayer.sty	871
410	sclayer	871
312	lwarp-sclayer-notecolumn.sty	872
411	sclayer-notecolumn	872
313	lwarp-sclayer-scrpage.sty	873
412	sclayer-scrpage	873
314	lwarp-scrpage2.sty	874
413	scrpage2	874
315	lwarp-section.sty	875
414	section	875
316	lwarp-sectionbreak.sty	876
415	sectionbreak	876
317	lwarp-sectsty.sty	876
416	sectsty	876
318	lwarp-semantic-markup.sty	877
417	semantic-markup	877

319	lwarp-setspace.sty	878
418	setspace	878
320	lwarp-shadow.sty	879
419	shadow	879
321	lwarp-showidx.sty	879
420	showidx	879
322	lwarp-showkeys.sty	879
421	showkeys	879
323	lwarp-showtags.sty	880
422	showtags	880
324	lwarp-sidecap.sty	880
423	sidecap	880
325	lwarp-sidenotes.sty	881
424	sidenotes	881
326	lwarp-SIunits.sty	882
425	SIunits	882
327	lwarp-siunitx.sty	883
426	siunitx	883
328	lwarp-soul.sty	888
427	soul	888
329	lwarp-soulpos.sty	889
428	soulpos	889

330	lwarp-soulutf8.sty	890
429	soulutf8	890
331	lwarp-splitidx.sty	890
430	splitidx	890
332	lwarp-srcltx.sty	892
431	srcltx	892
333	lwarp-srctex.sty	892
432	srctex	892
334	lwarp-stabular.sty	892
433	stabular	892
335	lwarp-stfloats.sty	893
434	stfloats	893
336	lwarp-struktex.sty	893
435	struktex	893
337	lwarp-subcaption.sty	894
436	subcaption	894
338	lwarp-subfig.sty	895
437	subfig	895
339	lwarp-subfigure.sty	899
438	subfigure	899
340	lwarp-supertabular.sty	900
439	supertabular	900

341	lwarp-syntonly.sty	901
440	syntonly	901
342	lwarp-tablefootnote.sty	902
441	tablefootnote	902
343	lwarp-tables.sty	902
442	tables	902
344	lwarp-tabularx.sty	902
443	tabularx	902
345	lwarp-tabulary.sty	903
444	tabulary	903
346	lwarp-tascmac.sty	903
445	tascmac	903
347	lwarp-textarea.sty	905
446	textarea	905
348	lwarp-textcomp.sty	905
447	textcomp	905
447.1	Limitations	905
447.2	Package loading	906
447.3	HTML symbols	906
447.3.1	pdfL ^A T _E X symbols	906
447.3.2	X _F L ^A T _E X and LuaL ^A T _E X symbols	906
447.4	HTML diacritics	907
349	lwarp-textfit.sty	909
448	textfit	909
350	lwarp-textpos.sty	909

449	textpos	909
351	lwarp-theorem.sty	910
450	theorem	910
450.1	Remembering the theorem style	910
450.2	css patches	912
352	lwarp-thinsp.sty	914
451	thinsp	914
353	lwarp-threadcol.sty	914
452	threadcol	914
354	lwarp-threeparttable.sty	914
453	threeparttable	914
355	lwarp-threeparttablex.sty	915
454	threeparttablex	915
356	lwarp-thumb.sty	916
455	thumb	916
357	lwarp-thumbs.sty	916
456	thumbs	916
358	lwarp-tikz.sty	917
457	tikz	917
359	lwarp-titleps.sty	918
458	titleps	918
360	lwarp-titleref.sty	921
459	titleref	921

361	lwarp-titlesec.sty	921
460	titlesec	921
362	lwarp-titletoc.sty	923
461	titletoc	923
363	lwarp-titling.sty	925
462	titling	925
364	lwarp-tocbasic.sty	929
463	tocbasic	929
365	lwarp-tocbibind.sty	930
464	tocbibind	930
366	lwarp-tocdata.sty	931
465	tocdata	931
367	lwarp-tocenter.sty	933
466	tocenter	933
368	lwarp-tocloft.sty	933
467	tocloft	933
369	lwarp-tocstyle.sty	939
468	tocstyle	939
370	lwarp-todo.sty	939
469	todo	939
371	lwarp-todonotes.sty	940
470	todonotes	940

372	lwarp-topcapt.sty	942
471	topcapt	942
373	lwarp-tram.sty	942
472	tram	942
374	lwarp-transparent.sty	943
473	transparent	943
375	lwarp-trimclip.sty	943
474	trimclip	943
376	lwarp-trivfloat.sty	944
475	trivfloat	944
	475.1 Combining \newfloat, \trivfloat, and algorithmicx	944
377	lwarp-truncate.sty	945
476	truncate	945
378	lwarp-turnthepage.sty	945
477	turnthepage	945
379	lwarp-twoup.sty	945
478	twoup	945
380	lwarp-typearea.sty	946
479	typearea	946
381	lwarp-typicons.sty	946
480	typicons	946
382	lwarp-ulem.sty	947

481	ulem	947
383	lwarp-umoline.sty	948
482	umoline	948
384	lwarp-underscore.sty	949
483	underscore	949
385	lwarp-units.sty	949
484	units	949
386	lwarp-unitsdef.sty	950
485	unitsdef	950
387	lwarp-upref.sty	951
486	upref	951
388	lwarp-url.sty	951
487	url	951
389	lwarp-ospace.sty	952
488	ospace	952
390	lwarp-verse.sty	952
489	verse	952
391	lwarp-ersonotes.sty	953
490	ersonotes	953
392	lwarp-vertbars.sty	954
491	vertbars	954
393	lwarp-vmargin.sty	954

lwarp	50
<hr/>	
492 vmargin	954
394 lwarp-vowel.sty	955
493 vowel	955
395 lwarp-vpe.sty	955
494 vpe	955
396 lwarp-vwcol.sty	956
495 vwcol	956
397 lwarp-wallpaper.sty	958
496 wallpaper	958
398 lwarp-watermark.sty	958
497 watermark	958
399 lwarp-widows-and-orphans.sty	959
498 widows-and-orphans	959
400 lwarp-wrapfig.sty	959
499 wrapfig	959
401 lwarp-xbmks.sty	960
500 xbmks	960
402 lwarp-xcolor.sty	960
501 xcolor	960
501.1 Limitations	961
501.2 xcolor definitions: location and timing	961
501.3 Package loading	963
501.4 Remembering and restoring original definitions	963
501.5 HTML color style	963
501.6 HTML border	964
501.7 High-level macros	965

501.8 Row colors	969
403 lwarp-xexchangebar.sty	971
502 xexchangebar	971
404 lwarp-xellipsis.sty	971
503 xellipsis	971
405 lwarp-xetexko-vertical.sty	972
504 xetexko-vertical	972
406 lwarp-xfakebold.sty	972
505 xfakebold	972
407 lwarp-xfrac.sty	972
506 xfrac	972
408 lwarp-xtabular.sty	975
507 xtabular	975
409 lwarp-xtxtra.sty	975
508 xtxtra	975
410 lwarp-xmpincl.sty	976
509 xmpincl	976
411 lwarp-xpiano.sty	976
510 xpiano	976
412 lwarp-xpinyin.sty	977
511 xpinyin	977

413	lwarp-xtab.sty	977
512	xtab	977
414	lwarp-xunicode.sty	979
513	xunicode	979
415	lwarp-xurl.sty	980
514	xurl	980
416	lwarp-xy.sty	980
515	xy	980
417	lwarp-zhlineskip.sty	981
516	zhlineskip	981
418	lwarp-zwpagelayout.sty	981
517	zwpagelayout	981
419	lwarp-patch-komascript.sty	982
518	patch-komascript	982
420	lwarp-patch-memoir.sty	984
519	patch-memoir	984
519.1	Packages	985
519.2	Preliminary setup	986
519.3	Laying out the page	987
519.4	Text and fonts	989
519.5	Titles	990
519.6	Abstracts	990
519.7	Document divisions	990
519.8	Pagination and headers	993
519.9	Paragraphs and lists	994
519.10	Contents lists	995
519.11	Floats and captions	999
519.12	Page notes1002
519.13	Decorative text1003
519.14	Poetry1003
519.15	Boxes, verbatims and files1004

519.16 Cross referencing1005
519.17 Back matter1005
519.18 Miscellaneous1007
519.19 ccaption emulation1007
519.20 Final patchwork1009
Change History	1010
520 Chg Hist	1010
Index of Objects	1037
General Index	1057
Troubleshooting Index	1061
Index of Indexes	1066

List of Figures

1	tutorial.tex listing	95
---	--------------------------------	----

List of Tables

1	Typesetting conventions	77
2	L ^A T _E X lwarp package — Supported features	78
3	Required software programs	88
4	Configuration files created by print version	97
5	lwarp package options	112
6	HTML settings	116
7	Literal character macros	173
8	Section HTML headings for word-processor conversion	181
9	Section depths and HTML headings	195
10	Tabular baseline	419
11	Tabular HTML column conversions	420
12	Cross-referencing data structures	463
13	Float data structures	473
14	amsthm package — css styling of theorems and proofs	597
15	Ntheorem package — css styling of theorems and proofs	828
16	Theorem package — css styling of theorems and proofs	910

2 Updates

The following is a summary of updates to `lwarp`, highlighting new features and any special changes which must be made due to improvements or modifications in `lwarp` itself.

For a detailed list of the most recent changes, see the end of the Change History on page [1036](#).

v0.70: Error handling, `MATHJAX`, `mathtools`.

- Error handling for “Label(s) changed.” Refuse to `lwarpmk limages` until recompile first.
 - Fix: If Computer Modern font is used, ensures `cm-super` or `lmodern` is used.
 - Fixes for `\makebox`.
 - Fixes for `\parbox` inside a ``.
 - `MathJax`: Updated to v2.7.5. Loads the `autoload-all.js` extension. Added `\MathJaxFilename` to select custom scripts.
 - `textcomp`, `xunicode`: Fix for `\textinterrobang`.
 - `mhchem`: Works with `MATHJAX`. See section [321](#).
 - `changes`: Updated to v3.1.2.
 - Added `autonum`, `changelayout`, `inputtrc`, `mathtools`, `metalogox`.
- packages

v0.69: Error handling, many fixes, improved `keyfloat` / `tocdata`.

- Fix for HTML corruption of `lateximage` displays.
 - `\makebox`, `\framebox`: Fix for `(\langle width,height \rangle)` arguments.
 - `fminipage`: Honors `\minipagefullwidth`.
 - `array`, `longtable`: Fix for `\tabularnewline`.
 - `tabularx`, `tabulary`: Fix to require the `array` package.
 - `supertabular`, `xtable`: Fix to clear caption after use.
 - `graphics`: Added a warning if used the `\includegraphics scale` option.
 - `multirow`: Added an error if didn't use `\mrowcell` or `\mcolrowcell` when using `\multirow` or `\multicolumnrow`.
 - `keyfloat`: Updated for v2.00, additional improvements.
 - Added `ctable`, `eqlist`, `eqparbox`, `ftcap`, `listliketab`, `minitoc`, `tocdata`, `topcapt`.
- packages

v0.68: Error handling, `tabulars`, `footnotes`.

- `lwarpmk`: Improved error handling for image generation if compile was incomplete.
 - `tabular`: Fix for `\warpprintonly`.
 - `longtable`: Improved flexibility for `\endhead`, etc. Improved error reporting if `\endhead`, etc. incorrect for `lwarp`.
- packages

- `threeparttable`: Fix for caption type.
- `hyperref`: Fix for options with braces.
- `morefloats`: Fix to be loaded early for print output.
- `listings`: Updated for v1.7.
- Added `bigfoot`, `fnpara`, `footnotebackref`, `manyfoot`, `tablefootnote`, `threeparttablex`.
- Added `layouts`, `niceframe`, `perpage`, `showtags`.
- Prevented `alg`, `algorithmic`, `pdfcprot`, `fncylab`.

v0.67: Filename generation, symbol fonts.

`docs`

- Documentation fix for `<project>-images`, `<project>-images.txt`.
- Added discussion regarding section names. See section 9.4.

`filenames`

- Added `\FilenameNullify` and `\FilenameSimplify` for filename generation. See section 9.4.
- `Core`, `textcomp`, `xunicode`: Nullified additional symbols during filename generation.

`packages`

- `color`: Fix for version number warnings.
- Added `academicons`, `bbding`, `dingbat`, `eurosym`, `fontawesome`, `fontawesome5`, `marvosym`, `pifont`, `typicons`.
- Added `changes`, `easyReview`, `fitbox`, `foreign`, `gloss`, `karnaugh-map`, `multicap`, `nomencl`, `notes`, `struktex`, `umoline`, `xfakebold`.
- Tested to work as-is with `askmaps`, `curves`, `euro`, `karnaughmap`, `tikz-karnaugh`.

v0.66: `xr`, multiple projects, image names/directory, HTML formatting

⚠ Reset the configuration

- Due to changes in `lwarpmk`, **recompile any existing project a single time** using `pdfLatex filename.tex` or similar, after which `lwarpmk` may then be used with the new configuration files.

`lateximage`

- Adds options `ImagesDirectory` and `ImagesName` to assign directory and name prefixes for `lateximage` images. The new defaults include the job-name, allowing the image directories for multiple projects to coexist.

⚠ existing projects

- To reuse existing `lateximage` directories, add `lwarp` options

```
\usepackage[
  ImagesDirectory={lateximages},
  ImagesName={lateximage-}
]{lwarp}
```

If not reused, the existing `lateximages` directory and `lateximages.txt` file may be removed.

`filenames`

- Added `\FilenameLimit` to control the maximum length of the filenames generated by `lwarp`.

⚠ Possible filename changes

- Improved filename generation when special characters or macros are used in section names.

`WINDOWS`

- Fix for `lwarpmk cleanImages` with `WINDOWS`.

`floats`

- Fixes for floats in the home page.

`lists`, `table notes`

- Improved css for definition lists, table notes.

- tabular
 - indexing
 - minipage
 - colors
 - HTML
 - docs
 - tabular: Fixes for `\par` in column specifier, minipage inside tabular.
 - Indexing: Fix for a long line of multiple entries.
 - `\minipagefullwidth`: Fix for global changes.
 - Added `\UseMinipageWidths` and `\IgnoreMinipageWidths`. See section 9.3.3.
 - Improved `\fbox`, `\fboxBlock`, `\fminipage` to use current text color.
 - Improved HTML output formatting.
 - Added discussion regarding invalid HTML. See section 9.1.1.
 - Added discussion regarding math in section names, `\imagegraphics` scale option. See section 7.
 - Added discussion regarding international languages in section names. See section 9.14.
 - packages
 - caption: Fix for options clash.
 - xr, xr-hyper: Now compatible.
 - subcaption: Improved horizontal spacing.
 - multicol: Fix for minipage inside `multicols`.
 - multicolrule: Updated for v1.2.
 - tocbasic: Minor update.
 - acronym: Fix for acronym in float caption.
 - kotexutf: Patch with *pdf \LaTeX* and new lwarp labels.
 - extramarks, fancyhdr: Updated for v3.10.
 - memoir: Added docs regarding version numbers. See section 9.13.
 - zref: No longer required.
 - Added ar, ed, indentfirst, nameauth, truncate.
 - Verified to work as-is with changelog.
 - Prevented colortab, epsf, hyper, picinpar, picins, sistyle, ucs.
 - v0.65: css layout, alt tags, Japanese.
 - page layout
 - image alt tags
 - duplicate HTML files
 - fixes
 - Japanese
 - packages
- Moved the sideroc to the left side, allowing improved css for margin notes.
 - Improved page layout css.
 - `graphicx \includegraphics`: Added the alt key to assign an alt tag to an image. Default is "(image)", assigned to pass validation.
 - Detects and causes an error if duplicate HTML file names are generated, caused by identical or similar sectioning names.
 - Fix for `tabular*`.
 - Fix for tabular border colors.
 - Fixes `\quad`, `\enskip`, and figure captions to pass validation.
 - Added `ltj*` classes, `bounddvi`, `gentombow`, `lltjext`, `plarydshln`, `plext`, `plextarydshln`, `plextcolortbl`, `pxatbegshi`, `pxeveryshi`, `pxftnright`, `pxjahyper`, `tascmac`.
 - Verified to work with `plarray`, `plautopatch`, `plextarray`, `plextdelarray`, `pxgentombow`, `plsiunitx`, `pxpdfpages`, `pxpgfrcs`, `pxpgfmark`.
 - Added support for `fontspec \textsi` and `\sishape`.
 - Added multicol's `\docolaction`.
 - Added `embrac`, `footnoterange`, `multicolrule`, `versonotes`.

v0.64: Koma-Script, Japanese, Chinese.

- Japanese
 - Added utarticle and related classes.
 - Improved uarticle and related classes.
- Chinese
 - Fix for biblatex with CTeX and other classes.
- Koma-Script packages
 - Fixes for sclayer, sclayer-scrpage.
 - addlines: Updated to v0.3.
 - Added bsheaders, gmeometric, marginal, rmpage, scrpage2.

v0.63: mdframed, Chinese, Japanese, Korean

- localization
 - Added \Linkhomename: A user-definable name for the **Home** link.
 - Documented \sidetocname: A user-definable name for the sideroc.
- fixes
 - Fix: \LinkHome for print output.
- optimizations
 - Moved package load checks to the lwarp core to reduce the number of lwarp-* files.
- packages
 - mdframed: Fix with amsthm, improved titles and font control. Improved rule widths.
- Chinese
 - Fixes for xeCJK.
 - Added xpinyin, zhlineskip.
- Japanese
 - Verified to work with cjkpunct, upzhkinsoku, zhspacing.
 - Added bxjsarticle and related classes.
 - Added ltjsarticle and related classes.
 - Added pL^AT_EX, upL^AT_EX, uarticle and related classes.
 - Prevented utarticle and related classes.
 - Prevented bxcjkatype.
- Korean
 - Verified to work with kotex, xetexko, luatexko.

v0.62: MiKTeX docs, HTML title, CTeX, xeCJK, bitpattern.

- docs
 - Docs: Setting a UTF-8 locale. See section 10.8.
- MiKTeX
 - MiKTeX: Docs for *MiKTeX Console* and miktex-poppler-bin.
- HTML <title>
 - HTML subpage titles: Added \HTMLTitleBeforeSection and \HTMLTitleAfterSection to select whether the HTML <title> displays the website name before or after the section name. See section 8.4.
- fixes
 - Fix for package options handling.
 - Fixes for horizontal white space between fminipage, fcolorminipage, colorboxBlock, fcolorboxBlock.
 - Logos: Fix for X_YL_AT_EX logo, improved css, made robust, improved search-engine optimization.
 - \[\$1]: Additional HTML
 if \$1 > 0 pt.
 - Fixes for \includgraphics filename, and with FormatWP.
 - Fix: css for \textup.

- Fix: Added `\slshape`.
- Chinese
 - Added `ctex` package and related classes, `xeCJK`.
- packages
 - Prevented `CJK`, `CJKutf8` unless `xeCJK`, `ctex` are used.
 - `chemfig`: Docs for new macro `\polymerdelim`.
 - `asymptote`: Docs for compilation.
 - `chngepage`: Fix to load `lwarp-changeage`.
 - `algorithm2e`: Fix with non-book classes.
 - `register`: Updated to v1.8.
 - `nicefrac`: Improved font control and css, honors nice and ugly.
 - `units`: Improved font control and css, honors tight and loose.
 - `xfrac`: Improved css.
 - `textcomp` and `xunicode`: Fix conflicts with `\textcircled`.
 - `ulem`: Improved compatibility with `CJKulem`, `lateximage`.
 - `MathJax` and `siunitx`: Removed inoperable extension.
 - Added `bitpattern`, `pdfcomment`, `pdfmarginpar`, `tram`, `unitsdef`, `xexchangebar`.
 - Added `musicography`, `octave`, `semantic-markup`.
 - Added `2in1`, `flippdf`, `notespages`, `rviewport`, `twoup`.
- v0.61:** Custom compilation, EPS-related packages, documentation, indexes.
- docs
 - Split index into multiple indexes. See page 1066.
 - Improved documentation regarding font selection. See section 8.2.
 - Added documentation regarding debugging options. See section 36.
 - Added documentation regarding HTML entities inside program listings. See section 9.2.1.
- custom compiling
 - Added options to specify the shell commands to execute for `lwarpmk print` and `lwarpmk html`, allowing the use of `lwarp` with `perltex`, `pythontex`, etc. If not specified, these are set automatically depending on the `LATEX` engine, `--shell-escape`, and `lwarp` options. See section 10.
- ⚠ changed names
 - Changed macro names to match `\displaymathother`, `\displaymathnormal`:

Old	New
<code>\StartDynamicMath</code>	<code>\inlinemathother</code>
<code>\StopDynamicMath</code>	<code>\inlinemathnormal</code>
- fixes
 - Fix: Paragraph tags in a tabular.
 - Fix: `supertabular` and `xtab` captions.
 - Fix: `DVI LATEX \includegraphics` EPS images.
 - Fix: `newfloat` lists.
 - Fix: css footnotes text align, `minipage` tabular and footnote margins.
- packages
 - Added `epsfig`, `psfrag`, `psfragx`, `pstool`.
 - Added `copyrightbox`, `pdfprivacy`, `thinsp`, `threadcol`, `uspace`.
 - Added `chkfloat`, `cmdtrack`, `dprogress`, `lua-visual-debug`, `refcheck`, `srcltx`, `srctex`, `vpe`, `xbmks`.

v0.60: Fixes for longtable, listings.

fixes

- longtable, etc.: Fixes for slowdown and memory management for very long tables.
- listings: Fix for HTML entities, and also when used inside a list.
- diagbox: Fix for incorrect HTML par tags.

packages

- Added 2up, booklet.
- Added bophook, draughtfigure, fullminipage, grid-system, layaureo.
- Added leading, widows-and-orphans.
- Added fancytabs, thumb, thumbs.

v0.59: DVI *latex*, MATHJAX, asymptote, pdftricks and pstricks, epstopdf, brqen.

 Reset the configuration

- Due to changes in *lwarpmk*, **recompile any existing project a single time** using **pdf latex filename.tex** or similar, after which *lwarpmk* may then be used with the new configuration files.

lwarpmk

- Added an error if *lwarpmk.conf*'s format has changed and the document must be recompiled.
- Added a warning if the *lwarpmk.conf* configuration file appears to be for the wrong operating system, in case files are transferred between systems.
- Added

```
lwarpmk epstopdf <list-of-EPS-files>
```

to quickly convert a document's EPS images to PDF or SVG. See section 9.8.

DVI *latex*

- Added support for DVI *latex*. See section 8.3.

latexmk

- Fix for `--shell-escape` with *latexmk*.

math

- Updated MathJax script to v2.7.4.
- Fix: Mathjax chapter number removed from non-numeric tagged equations.
- Added MathJax support for nicefrac, units.
- Fix for `\[` and `\]` with `\displaymathnormal`.

images

- Fix for `\includegraphics` filename expansion.
- `\includegraphics` now works with `.pdf` and `.eps` filename extensions.

packages

- Moved *amsmath* out of the *lwarp* core.
- Fix for `chemformula \NMR`.
- Added *asymptote*, *pdftricks*, *pstricks*, *pst-eps*.
- Added *brqen*, *Slunits*.
- Added *bxpapersize*, *canoniclayout*, *draftcopy*, *fnbreak*, *nccfancyhdr*.
- Added *accsupp*, *axessibility*.
- Added *xunicode*.
- Improved and now supports *epstopdf*.
- Tested to work as-is: *eepic*, *sepfootnotes*.

docs

- Added information about setting up a development version of *lwarp*.

v0.58: Extensive improvements in indexing, glossaries. Adds PDF-inclusion packages.

⚠ Reset the configuration

lwarpmk
glossaries

index and glossary

misc. fixes

packages

- Due to changes in *lwarpmk*, **recompile any existing project a single time** using `pdflatex filename.tex` or similar, after which *lwarpmk* may then be used with the new configuration files.
- *lwarpmk*: Added the `-p` option to specify the project name.
- *lwarpmk*: Now uses *makeglossaries* for glossary generation, allowing the processing of multiple glossaries at once.
- Added `lwarp` option `GlossaryCmd` to specify the shell command used by `lwarpmk printglossary` and `lwarpmk htmlglossary`. Defaults to `makeglossaries`.
- Docs: Extra indexing options. See section 9.6.13.
- Added support for *makeindex*. (Previously supported only *xindy*.) Also added indexing packages listed below.
- Added `lwarp` options `PrintIndexCmd`, `HTMLIndexCmd`, and `LatexmkIndexCmd` to specify shell commands used by `lwarpmk printindex`, `lwarpmk htmlindex`, and *latexmk*. May be preset with the `makeindex` or `xindy` `lwarp` options. See section 8.3.
- Added `lwarp` options `makeindex` and `xindy` to set `PrintIndexCmd`, `HTMLIndexCmd`, and `LatexmkIndexCmd` to sensible values for a typical single index. See section 8.3.
- Added `lwarp` option `makeindexStyle` to tell *lwarpmk* to use a custom style instead of `lwarp.ist`. See section 9.6.19.
- Fix for index entries with `\see`, `\seealso`, `\emph`, `\textbf`, etc.
- Replaced each `\csuse` with `\@nameuse` for improved error detection.
- Additional internal `print/HTML` macro selection improvements.
- Fix: `\printindex` finishes pending `\index` writes first.
- Fixes for *memoir*: `makeidx`, `ccaption`, multiple indexes, `\specialindex`.
- Fixes for *komascript*: Indexing improvements.
- Added `imakeidx`, `index`, `repeatindex`, `splitidx`.
- Added `attachfile`, `attachfile2`, `intopdf`, `pdfpages`, `pdfx`.
- Added `cases`.
- Tested to work as-is: `notes2bib`, `hindex`.

v0.57: *algorithm2e*, float styles, tabular packages, internal improvements.

MathJax
math macros

dynamic math

⚠ new name

- Added support for MathJax equations with `\footnote`, `\footnotemark`.
- Added `\StartDefiningMath` and `\StopDefiningMath` for use when defining macros in the preamble which contain `$`. See section 9.7.7.
- Added `\inlinemathother` and `\inlinemathnormal` to delimit math expressions which depend on a variable condition such as a counter. Such expressions will not be hashed for reuse, and will be converted to `svg` math images even when MathJax is enabled. See section 9.7.8.
- Renamed `\EndDefiningTabulars` to `\StopDefiningTabulars`.

- lateximage alt tags**
- Improved localization for lateximage HTML alt tags. For svg math images, the alt tag under some conditions will be set to `\mathimagename`, which defaults to “math image”. For packages, the alt tag is set using the package name followed by `\packagediagramname`, which defaults to “diagram”. Ex:
(-xy- diagram)
See section 8.4.
- misc. fixes**
- Fix: Improved print/HTML macro selection.
 - Fix: `\href` text catcodes.
 - Fix: `\subref` text.
 - Fixes: Colored `\rule` and `\boxframe`.
- packages**
- `float`, `rotfloat`: Adds support for float styles ruled and boxed.
 - `float`: Fix: Do not create `\l@<type>` until `\listof` is used.
 - `marginnote`: Fix: Long optional argument.
 - `ellipsis`: Adds `\midwordellipsis`.
 - `breakurl`: Fix for text catcodes.
 - Added `algorithm2e`, `register`, `ltablex`, `xltabular`, `xellipsis`, `trimclip`, `errata`, `vowel`, `xpiano`.
 - Prevents `glossary`.
 - Tested to work as-is with `gauss`, `phonrule`, `piano`, `Slunits`, `tikzcodeblocks`.
- v0.56:** Shell escape, tabular packages.
- lwarpmk**
- Added
`lwarpmk pdftosvg <list-of-PDF-files>`
to quickly convert a document’s PDF images to SVG, for use with HTML. See section 9.8.
 - Added support for `--shell-escape`. See section 8.1.
- tabular**
- Added support for `array w` and `W` columns.
 - Fix: `\multicolumn` parameter handling.
 - Added support for double `\hlines`, `\midrules`, and vertical rules.
 - Added support for `arydshln` dashed lines with HTML `tabular`, but reverts to plain rules for `lateximage` and `svg math array`.
- misc. fixes**
- Fix: `\thinspace`.
 - Fix: `paralist` compact environments.
- packages**
- Added `parnotes`, `quoting`, `lua-check-hyphen`, `tocenter`, `underscore`.
 - Tested to work as-is with `babelbib`, `bibunits`, `bodegraph`, `fast-diagram`, `nicematrix`, `structmech`.
- v0.55:** Various fixes.
- misc fixes**
- Fix: Extraneous space in file links, which also prevented *Calibre* EPUB conversions.
 - Fix: Float optional argument regression.
 - Fix: `\ForceHTMLTOC` with `\phantomsection`.

packages

- Fix: Overfull boxes in lateximages.
- Fix: QED symbols in lateximage.
- koma-script: Fix: Figure with \centering, etc.
- Added clrdblpg.

v0.54: Float \centering, improved image checks.

⚠ Reset the configuration

- Due to changes in *lwarpmk*, **recompile any existing project a single time** using **pdfLatex filename.tex** or similar, after which *lwarpmk* may then be used with the new configuration files.

lwarpmk

- *lwarpmk* limages checks for the presence of the HTML version of the document and valid image references before attempting to create the lateximages.

BibTeX

- *lwarpmk*: Improved error message if configuration file does not exist.
- Added documentation for avoiding error with BibTeX and \eta\lchar. See section 9.6.9.

polyglossia

- Added documentation regarding polyglossia. See section 9.15.4.

macros in section names

- Added documentation regarding the use of macros in section names. See section 9.1.

document encoding

⚠ New and revised encoding options

- Renamed and added package options:

Old Package Option	New Package Option
xdyFilename	xindyStyle
IndexLanguage	xindyLanguage
---	xindyCodepage
---	pdftotextEnc

Use these options along with `inputenc` or `inputenx` to process documents in an encoding other than UTF-8. See section 8.2.

floats with \centering, etc.

- Floats now honor \centering, \raggedright, \raggedleft, and their ragged2e equivalents, when placed directly after:

```
\begin{floattype}
\centering
```

misc. fixes

- tikz: \pgfpicture, fit, align, font.
- ragged2e: \centering etc.
- hyperref: \hypertarget was creating duplicate of \label.
- hyperref: Active chars inside \hyperref, \hyperlink.
- hyperref: \ref inside \hyperlink caused a nested HTML link.
- glossaries: Fix when not using babel or polyglossia.
- textcomp: \textperthousand.
- L^AT_EX core verse environment: line spacing.
- Removed \citetitle, adjusted \attribution.
- memoir: Minor update for v3.7g.
- Added inputenx, bibunits, chngpage, forest, magaz, gridset.
- Prevents loading ae, aecc, t1enc, and wasysym.



packages

v0.53: Improved image checks.

lwarpmk

- *lwarpmk*: Added a warning about corrupted images due to the need to recompile the document one more time.
- *lwarpmk*: Added the `lwarpmk cleanimages` command.
- Added documentation for `lwarpmk cleanimages` and `lwarpmk pdftohtml`.

v0.52: Improved footnotes, svg math.

documentation

- Improved install instructions regarding `lwarp_baseline_marker.png`.
- Added documentation regarding footnotes in section headings, and footnotes with `\VerbatimFootnotes` from `fancybox`, `fancyvrb`. See section 9.5.4.
- Added documentation regarding font selection when using X_YL^AT_EX or Lua_AT_EX with `fontspec` and traditional font packages. See section 8.2.

SVG math

- Fix: Limit the number of background tasks when generating `lateximages`.
- Added user-adjustable svg math font scaling. See section 8.1.3.
- Added warnings if `lwarp_baseline_marker.png` is not present, or if `graphicx` or `graphics` is not loaded.
- Improved `\ensuremath` hashing expansion.
- Fix: `equation*` with `split`.
- `tabbing` now works inside a `lateximage`. Use for math in `tabbing`.

MathJax

- Fix: MathJax script was not executing in some conditions.
- Added `\CustomizeMathJax` to add custom functions. See section 9.7.

footnotes

- Fix: Footnote numbering when using `HTMLDebugComments`.
- Fix: Footnote paragraph tags.
- Fix: `FootnoteDepth` defaults to `\subsubsection`.

misc. fixes

- Fix: `\kill` in a `lateximage`.
- Fix: `\FileDepth`, misc. others, when input encoding is not utf8.
- Fix: `\texorpdfstring` in a section name.

packages

- `hyperref` emulation: Fix for #, %, &, ~, _ characters in URLs.
- `fancybox`, `fancyvrb`: Initial support for `\VerbatimFootnotes`.
- `nicefrac`: Added with fix for `\ensuremath`.
- `graphicx`: Fix for option defaults. Added v1.1a/b options.
- `endfloat`: Updated for v2.6.
- `url`: Fixes for active characters.

v0.51: Improved svg math, added numerous chemistry packages.

documentation

- Docs: Added **Things to avoid**.
- Docs: Added to **Converting an existing document**.
- Docs: Multiple authors and affiliations with custom classes. See section 9.6.1.
- Docs: `tikz` with matrices. See section 9.8.1.

- SVG math
 - Improved svg math baseline.
 - Improved svg math font and color.
 - Faster svg math rendering.
 - Improved support for display math containing complicated math objects, such as tikz-cd. See section 9.7.9.
 - Fix: `\addcontentsline` inside svg math.
 - Fix: SVG math containing an embedded `lateximage`.
- MathJax
 - MathJax now handles `\ensuremath` in expressions.
- misc. fixes
 - Fix: Added `alignat` environment.
 - Fix: `afterpackage` no longer required, which conflicted with `scrfile`.
 - Fix: `titling` `\thanks` mark.
 - Fix: `fancybox` improvements.
 - Fix: `tikz` `\tikz` macro. (Previously only the `tikzpicture` environment worked.)
 - Fix: `tikz` with optional argument.
- packages
 - Added `mhchem`, `chemfig`, `chemformula`, `chemmacros`, `chemnum`, `chemgreek`, `epstopdf-base`, `grid`, `ltxgrid`.

v0.50: Improved svg math.

- svg math
 - `svg math` and other `lateximages` now are converted to `svg` using parallel background tasks, utilizing all available CPU cores.
 - Inline `svg math` image file names now are MD5 hashes made from their source `LATEX` code. Identical inline math expressions, such as multiple instance of `x`, now share a single image file. This reduces the number of images to store, transmit, process, and display. Each image file is only converted to `svg` a single time, and reused if it already exists. Display math and other forms of `svg` image such as `picture` and `Tikz` still use individual image files which are recreated each time `lwarpmk` `limages` is run.
 - Fixes: `SVG math` and/or `\underline` in a sectioning file name.
 - Improved `svg display math` and tags.
 - Improved `svg math` and `siunitx alt` tags.
 - Improved `siunitx` units.
 - Fix: `\ensuremath` with `MathJax` now creates a `lateximage`.
 - Fix: `\centering`, etc. in `svg math`, `lateximage`, `Tikz`.
- misc. fixes
 - Fix: Made various macros robust, additionally fixing `authblk`.
 - Fix: `ntheorem` if neither `standard` nor `amsthm` selected.
 - Fix: `listings`: Improved column alignment.
 - Fix: Load `fontspec` if necessary.
- packages
 - Added `xy`, `epstopdf`, `diagbox`, `pbox`, `bytefield`, `axodraw2`, `phfqit`, `schemata`, `dblfloatfix`, `nonfloat`, `morefloats`.

v0.49:

- tabular
 - Added xcolor \rowcolors.
 - Fix: \noalign inside a tabular.
- math
 - Fix: \eqref in a caption.
- misc fixes
 - Fix: Incorrect PDF font size changes caused occasional HTML corruption.
 - Fix: printlen changes are now grouped for HTML output.
- packages
 - Added vwcol, vertbars, hyphenat, lineno, flineno, figsize, hypdestopt, pagegrid, pdfrender, luacolor, resizegather.

v0.48:

- documentation
 - Added some documentation regarding converting an existing document. See section 7.
- cleveref
 - Updated compatibility for new cleveref v0.21.
- tabular
 - Fix: Ignores optional tabular column arguments.
- minor updates
 - Added \leftline, \centerline, \rightline.
 - Lists have improved font control via \makeLabel.
 - Print-mode lateximage now boxed to the natural width of its multiline contents.
 - abstract now allows an optional name, as required by some classes.
- math
 - Fix: Improved spacing, \mbox, and font sizes with svg math, Tikz.
 - siunitx: Improved svg math, fraction compatibility, color output.
- misc. fixes
 - Fix: LOF/LOT links.
 - Fix: Virtual page size grouping caused excessive PDF page breaks.
 - Fix: Parsing similar package names in a single \usepackage.
 - Fix: Adapts to classes without \part.
 - Fix: \newline in \title was causing
 in window title.
 - Fix: \maketitle with \cr, \crr, \noalign, for IEEEtran class.
 - Fix: xfrac neutralized BlockClass and others.
 - Fix: todonotes and luatodonotes: Improved \todotoc.
- packages
 - Added colortbl, chapterbib, acro, acronym, hypernat, hypcap, stfloats, vmargin, fancyheadings.
 - fancyref: Now directly supported.

v0.47:

- math
 - Improved svg math baseline and sizing.
 - Fixes: svgmth in captions, subcaptions, \nameref.
 - Fixes: Line wrap at hyphen in HTML output.
- packages
 - Added endheads, multitoc, sectionbreak, blowup, xurl.

v0.46:

⚠ **name change**
misc. fixes

- `\PrintStack` changed to `\LWRPrintStack`.
- Fix: Empty lines between tabular rows.
- Fix: Stack unnesting.
- Fix: SVG math and `lateximages` in numerous situations.
- Fix: Spaces in `\usepackage`.
- Fix: Now allows MATHJAX inside verse.

v0.45:

documentation

- Improved *MiKTeX* install instructions.
- Improved graphics and `epstopdf` instructions.
- Updates to the **Introduction**.

memoir

- Added memoir, `memhfixc`. See section 9.13.

cross-references

- Fix: Now allows underscores in labels.
- Fix: `_` and `\<blank>` in section/file names.

math

- Fix: Now allows MATHJAX inside tabbing.

bibliography

- Fix: Bibliography `\em` names.
- Added `cite`, `natbib`, `backref`. (Also works as-is with `biblatex`.)

misc. fixes

- Fix: Empty lines between tabular rows.
- Fix: “Improper `\prevdepth`” with `minipages`, `lists`.
- Fix: Incorrect `svg` math and `lateximages` with `subfig`.
- Fix: `Lateximages` from incorrect pages with `Mathjax`.
- Fix: Missing `sidetoc` if using `listings`.
- Fix: Added an array emulation package.

packages

- Added `subfigure`, `prettyref`, `hanging`, `midpage`, `flafter`, `fltrace`, `changebar`, `endfloat`, `continue`, `fwlw`, `turnthepage`, `footnpag`, `pagesel`, `textfit`, `titleref`.

v0.44:

koma-script

- Added koma-script classes (except `scltr2`, `scrjura`).
- Added `scrextend`, `sclayer`, `sclayer-notecolumn`, `sclayer-scrpage`, `scrhack`, `tocstyle`, `tocbasic`.

HTML title and author

- Added `\HTMLtitle`. Fixed web page title if `\HTMLtitle` empty and no `\title` given and not using `titling` package.
- Fixed web page author if `\HTMLauthor` is empty and `\author` is not given.

encodings

- If using `pdflatex`, automatically loads T1 and UTF-8 encodings. (Additional `fontenc` encodings may be loaded after `lwarp`.)

lists

- Added `list` and `trivlist` environments, `hang`.

tabular

- Fix: `\multicolumn` alignment if formatting for a word processor.
- Added `ltxtable`.

math

- Fix: MATHJAX combined with `lateximages`.

packages

- `algorithmicx`: Improved comment symbol and floating.
- Completed `todonotes` and `luatodonotes`.
- Added `todo`, `easy-todo`, `fixmetodonotes`, `fixme`.
- Added `soulutf8`, `soulpos`, `cancel`.
- Added section, `fancyref`, `ifoddpage`.
- Added `preview`, `atbegshi`, `watermark`.
- Improved `tocloft` `\newlistof` and `\newlistentry`.

v0.43:

footnotes

- Docs: Reorganized HTML customization, added an HTML settings table. See section 8.4.

sectioning

tabular

- Added `FootnoteDepth` to control the placement of pending footnotes before section breaks. By default, pending footnotes are printed before each `\subparagraph` or higher.
- Fix: Expansion in section name.
- Fix: Ignore spaces in tabular column specification.
- Fix: Tabular rules at bottom or when finishing incomplete rows.
- Fix: `\multicolumn` at/bang/before/after specifications, trim, and vertical rules.
- Fix: `supertabular` and `xtab` column misalignment.

math

- Fix: `equation*`.
- Fix: `svg` math in a section name.
- Fix: `\ref` and `\eqref` in `svg` math.

packages

- Added `todonotes` and `luatodonotes` (but only disabled).
- Added `breakurl`.
- `hyperref`: Fix: Several macros were made robust, `\Gauge` added.

v0.42:

Support TEX!

- Added TEX development support page, [Support TEX development](#).
- Improved assistance for word-processor conversions when boolean `FormatWP` is set true. See section 12.

word-processor conversion

- ⚠ name change
- ⚠ name change

- The boolean `FormatWordProcessor` has been renamed `FormatWP`.
- The boolean `HTMLMarkFloats` has been renamed `WMarkFloats`.
- New booleans control whether to place additional marks around mini-pages, at the table of contents, at the `LOF` and `LOT`, and whether to print math as L^AT_EX source for copy/paste into the *LibreOffice Writer TeXMaths* extension.
- Improved formatting for numerous objects. See section 12.

tabbing

overpic

math

- Add: `tabbing` environment.
- Add: `overpic` package. See section 352.
- Fix: Text copy/paste of \mathcal{AMS} math environment numbers and names.
- Improved `\ensuremath`.

- `MATHJAX` with `siunitx`: Updated script and documentation.
- `textcomp`: Improved `\textinterrobangdown`.
- `realscripts`: Fix for subscripts in a `lateximage`.
- `morewrites`: Enforces loading before `lwarp`.

v0.41:

- Added `tabular` vertical rules, subject to some limitations. See the rules section of section 9.10.1.
- Improved `booktabs`: Width and trim are honored.

- Added `\mcolrowcell` for empty cells inside a `\multicolumnrow`. **Use `\mcolrowcell` instead of `\mrowcell` for two-dimensional cells created by `\multicolumnrow`.** Continue to use `\mrowcell` for empty cells in a `\multirow`. See section 332.2 on page 817.
- Fix: Unfinished `tabular` rows are automatically filled.
- Fix for `tabular` column specifiers while using `babel-french`. (`\NoAutoSpacing` is activated then nullified inside the `tabular`, due to a conflict with the `tabular` column parsing code.)

v0.40:

- `graphics` and `graphicx` have been moved from the `lwarp` core, and are only loaded if requested with `\usepackage`.

- Improved `graphics \graphicspath` support. Multiple image directories may now be used. **Refer to `.pdf` files without a file extension** to allow the HTML version to use a `.svg`, `.png`, `.jpg`, or `.gif` version instead. See section 9.8.

- `grffile` is now directly supported instead of emulated.

- Fix for `bigdelim`, and improved documentation. See section 139.

- Improved `LATEX` and `textcomp` symbols.

- Fix for `LATEX` logos and `\InlineClass`, etc. inside a `lateximage`.

- Fix for `xltxtra` with `XƎLATEX`.

- Fixes for `tocbibind` with `\simplechapter`, etc.

- Fixes for `\multicolumnrow` and `\nullfont`s with older versions of `multirow` and `xparse`.

- Added `\underline`.

- Added `adjmulticol`.

- Added `cuted`, `midfloat`.

- Added `pfnote`, `fnpos`, `dblfnote`.

- Added `stabular`, `tabls`.

- Added `sectsty`, `anonchap`, `quotchap`.

margins

columns

footnotes

tabular

sectioning

graphics, graphicx

`\includegraphics path`

image file extensions

`bigdelim`

symbols

fixes

margins

columns

footnotes

tabular

sectioning

v0.39:

title pages

△ `\published and`
`\subtitle`
 △ `load order`

tabular

multi column/row cell

△ macros inside tabular

△ tabular defined inside
another environment

tabular

margins

page layout

- Improved the titlepage HTML code, `\thanks` notes, and `\maketitle`. `titling` is no longer required, but is still supported. The `\published` and `\subtitle` fields are no longer provided, but `\AddSubtitlePublished` replicates them using `titling`. See section 67.8. `authblk` is added, and should be loaded before `titling`. See section 67.
- `\multirow` now supports the new optional `vpos` argument.
- Added `\multicolumnrow` for combined `\multicolumn` and `\multirow`. See section 332.2.
- Tabular special cases:
 - Added `\TabularMacro` to mark custom macros inside tabular data cells, avoiding row corruption. See section 9.10.1.
 - Added `\ResumeTabular` for use when a tabular environment is defined inside another environment. See section 9.10.1.
- Added `supertabular`, `xtab`, `bigstrut`, `bigdelim`.
- Added `fullwidth`.
- Added `addlines`, `ansysize`, `a4`, `a4wide`, `a5comb`, `textarea`, `zwpagelayout`, `typearea`, `ebook`.

v0.38:

forced single-pass compile

starred sections

updated tutorial

packages

font size

page numbering

front & back matter

- Added `lwarpmk print1` and `lwarpmk html1` actions to force a compile of the project a single time. Useful when multiple passes are not needed, or changes were not detected.
- Added `\ForceHTMLPage` and `\ForceHTMLTOC` to force a starred sectional unit onto its own HTML page and with its own TOC entry. See section 9.6.2.
- Modified the tutorial to use the new `\ForceHTMLPage` and `\ForceHTMLTOC` macros.
- Added `appendix`, `tocbibind`, `fncychap`, `fix2col`.
- Added `relsize`, `scalefmt`.
- Added `realscripts`, `metalogo`, `xltxtra`.
- Added `grffile`, `romanbar`.
- Added `arabicfront`, `chappg`, `nonumonpart`, `nopageno`, `romanbarpagenumber`.
- Docs: Improved description of the use of front/back matter. See section 9.6.
- Fix: `color` requests `xcolor`.
- Fix: `\part` for article class.

v0.37:

`\include` for HTML
`latexmk`

accents and symbols

babel-french

- `\include` now maintains independent `.aux` files for HTML versions.
- `comment`, used by `lwarp`, now maintains independent cut files for print and HTML versions, helping `latexmk` to better know whether to recompile.
- Improved support for L^AT_EX accents, `textcomp`, `siunitx` symbols.
- Improved `babel-french` handling for `load order` and `~ tilde`.

v0.36:

- Recorganized the documentation section regarding special cases and limitations. (Section 9)
- Improved source formatting.
- `\fbox` and related now use `\fboxsep` and `\fboxrule`.
- `\makebox` and `\framebox` now use width and position.
- `\fcolorbox` and related now work inside a `lateximage`.
- `babel-french`: Improvements for French variants, load order, footnotes, ellipses.
- Improved footnote numbering. `lateximage` footnotes now appear as regular footnotes to match the numbering of the print version. Also fixed a regression with `MATHJAX`.
- Improved `siunitx` units.
- Fix for filenames while using `MATHJAX`.
- Fix for `\rule` when `xcolor` is not loaded.
- Added `transparent`, `upref`.

v0.35: Fix: `\textbf` and related.

v0.34:

- △ **Optional arguments**
 - `BlockClass`'s optional argument has been moved in front of the mandatory argument:


```
BlockClass[style]{class} (NEW)
```

 instead of:


```
BlockClass{class}[style] (OLD)
```

 This change makes it more consistent with \LaTeX standards, and avoids problems with space between arguments.
- △ **Optional arguments**
 - Likewise, `\InlineClass`'s optional argument now comes before the mandatory arguments:


```
\InlineClass[style]{class}{text}
```
- spans with minipages
 - Improved compatibility between spans, minipages, lists, frames, and math. Handles minipages and lists inside an `HTML` span, such as an `\fbox` containing a minipage, although with minimal `HTML` formatting. See section 9.3.3. `\fboxBlock` is added to frame minipages, tables, and lists with full `HTML` formatting but no longer inline, and behaves as `\fbox` for print output. The `fminipage` environment is added for framed minipages, as an environment with full `HTML` formatting, and draws a framed minipage in print output. See section 9.3.5. `\fbox` and minipages now often work in `svg` math and `lateximages`. `MATHJAX` supports `\fbox`, but not `\fboxBlock` nor `fminipage`.
- framing minipages
- lateximage, svg math, tabular
 - Improved compatibility between `lateximage` and `minipage`, `\parbox`, `\makebox`, `\fbox`, `\framebox`, `\raisebox`, `\scalebox`, `\reflectbox`, `tabular`, `booktabs`.
 - Improved font control for `lateximagees` and `svg math`.
- eqnarray
 - Added the `eqnarray` environments.
- verbatim packages
 - `fancyvrb` is no longer required (preloaded), but is still supported.

framing packages
list packages

- Added verbatim and moreverb.
- Added fancybox, boxedminipage2e and shadow.
- enumitem is no longer required, but is still supported.
- Added enumerate and paralist.
- titleps is no longer required, but is still supported.
- Added crop.
- Added rotfloat, marginfit, and several minor packages; see the change log.
- Adds fixed-width HTML spaces around punctuation when using babel-french. LuaTeX does not yet use the extra punctuation spacing.

babel-french

v0.33:

- Tabular @ and ! columns now have their own HTML columns.
- & catcode changes are localized, perhaps causing errors about the tab alignment character &, so any definitions of macros or environments which themselves contain tabular and & must be enclosed within \StartDefiningTabulars and \StopDefiningTabulars (previously called \EndDefiningTabulars. See section 44. This change is not required for the routine use of tables, but only when a table is defined inside another macro or environment, and while also using the & character inside the definition. This may include the use inside conditional expressions.
- Several math environments were incorrectly placed inline. Also, for amsmath with svg math, the fleqn option has been removed, resulting in improved spacing for aligned equations.
- Bug fixes; see the changelog.

v0.32: Bug fixes; no source changes needed:

- *lwarpmk* has been adjusted to work with the latest *luatex*.
- Spaces in the \usepackage and \RequirePackage package lists are now accepted and ignored.
- Fix for the glossaries package and \glo@name.

v0.31: Bug fix; no source changes needed:

- Improved compatibility with keyfloat, including the new keywrap environment.

v0.30:

⚠ lwarp-newproject

- lwarp-newproject has been removed, and its functions have been combined with lwarp.

To modify existing documents, remove from the document source:

```
\usepackage{lwarp-newproject}
```

The lwarp package now produces the configuration files during print output, and also accepts the option lwarpmk if desired.

- A number of macros related to HTML settings have been converted to options, and other macros and options have been renamed to create a consistent syntax:

⚠ HTML setup changes.

Old Macro	New Package Option
<code>\HomeHTMLFileName</code>	<code>HomeHTMLFilename</code>
<code>\HTMLFileName</code>	<code>HTMLFilename</code>
<code>\useLatexmk</code>	<code>latexmk</code>
<code>\warpOSWindows</code>	<code>OSWindows</code>

Old Package Option	New Package Option
<code>lwarpmklang</code> (new)	<code>xindyLanguage</code> <code>xindyStyle</code>

Old Macro	New Macro
<code>\MetaLanguage</code>	<code>\HTMLLanguage</code>
<code>\HTMLauthor</code>	<code>\HTMLAuthor</code>
<code>\NewHTMLdescription</code>	<code>\HTMLDescription</code>
<code>\SetFirstPageTop</code>	<code>\HTMLFirstPageTop</code>
<code>\SetPageTop</code>	<code>\HTMLPageTop</code>
<code>\SetPageBottom</code>	<code>\HTMLPageBottom</code>
<code>\NewCSS</code>	<code>\CSSFilename</code>

- Per the above changes, in existing documents, modify the package load of `lwarp`, such as:

```
\usepackage[
  HomeHTMLFilename=index,
  HTMLFilename={},
  xindyLanguage=english
]{lwarp}
```

- The file `lwarp_html.xdy` has been renamed `lwarp.xdy`. To update each document's project:
 1. Make the changes shown above.
 2. Recompile the document in print mode. This updates the project's configuration files, and also generates the new file `lwarp.xdy`.
 3. The old file `lwarp_html.xdy` may be deleted.
- The new `lwarp` package option `xindyStyle` may be used to tell `lwarpmk` to use a custom `.xdy` file instead of `lwarp.xdy`. See section 9.6.20.
- Improvements in index processing:
 - `xindy`'s language is now used for index processing as well as glossary.
 - Print mode without `latexmk` now uses `xindy` instead of `makeindex`.
 - `texindy/xindy` usage depends on `pdflatex` vs `xelatex`, `lualatex`.
 - For `pdflatex` and `texindy`, the `-C utf8` option is used. This is supported in modern distributions, but a customized `lwarpmk.lua` may need to be created for use with older distributions.

v0.29:

- Add: `lwarpmklang` option for `lwarp-newproject` and `lwarp`. Sets the language to use while processing the glossary. (As of v0.30, this has been changed to the `IndexLanguage` option.) (As of v0.54, this has been changed to the `xindyLanguage` option.)

- Fix: `\includegraphics` when no optional arguments.

v0.28:

- `\HTMLAuthor {<name>}` assigns HTML meta author if non-empty. Defaults to `\theauthor`.
- Boolean `HTMLDebugComments` controls whether HTML comments are added for closing `<div>s`, opening and closing sections, etc.
- Boolean `FormatEPUB` changes HTML output for easy EPUB conversion via an external program. Removes per-file headers, footers, and nav. Adds footnotes per chapter/section.
- Boolean `FormatWordProcessor` changes HTML output for easier conversion by a word processor. Removes headers and nav, prints footnotes per section, and also forces single-file output and turns off HTML debug comments. Name changed to `FormatWP` as of v0.42.
- Boolean `HTMLMarkFloats` adds text marks around floats only if the boolean `FormatWordProcessor` is true. These make it easier to identify float boundaries, which are to be manually converted to word-processor frames. Name changed to `WPMarkFloats` as of v0.42.
- Updated for the new MATHJAX CDN repository.
- Adds tabulary.
- Supports the options syntax for graphics.
- Improved index references, now pointing exactly to their target.
- Adds glossaries. *lwarpmk* is modified to add `printglossary` and `htmlglossary` actions.

3 Introduction

The `lwarp` project aims to allow a rich \LaTeX document to be converted to a reasonable `HTML5` interpretation, with only minor intervention on the user's part. No attempt has been made to force \LaTeX to provide for every `HTML`-related possibility, and `HTML` cannot exactly render every possible \LaTeX concept. Where compromise is necessary, it is desirable to allow the print output to remain typographically rich, and compromise only in the `HTML` conversion.

Several “modern” features of `HTML5`, `CSS3`, and `SVG` are employed to allow a fairly feature-rich document without relying on the use of `JAVASCRIPT`. Limited testing on older browsers shows that these new features degrade gracefully.

`lwarp` is a native \LaTeX package, and operates by either patching or emulating various functions. Source-level compatibility is a major goal, but occasional user intervention is required in certain cases.

As a package running directly in \LaTeX , `lwarp` has some advantages over other methods of `HTML` conversion. \TeX itself is still used, allowing a wider range of \TeX trickery to be understood. Lua expressions are still available with `LuaTeX`. Entire categories of \LaTeX packages work as-is when used with `lwarp`: definitions, file handling, utilities, internal data structures and calculations, specialized math-mode typesetting for various fields of science and engineering, and anything generating plain-text output. Blocks of `PDF` output may be automatically converted to `SVG` images while using the same font and spacing as the original print document, directly supporting `Tikz` and `picture`. Numerous packages are easily adapted for `HTML` versions, either by loading and patching the originals, or by creating nullified or emulated replacements, and all without resorting to external programming. As a result, several hundred packages have already been adapted (table 2), and an uncounted number more work as-is.

Packages have been selected according to several criteria: perceived importance, popularity lists, recent CTAN updates, CTAN topics, mention in other packages, support by other `HTML` conversion methods, and from sample documents taken from public archives. These include some “obsolete” packages as well.¹

Assistance is also provided for modifying the `HTML` output to suit the creation of `EPUB` documents, and for modifying the `HTML` output to ease import into a word processor.

`pdflatex`, `xelatex`, or `lualatex` may be used, allowing `lwarp` to process the usual image formats. While generating `HTML` output, `SVG` files are used in place of `PDF`. Other formats such as `PNG` and `JPG` are used as-is.

¹An amazing number of decades-old packages are still in use today.

SVG images may be used for math, and are also used for `picture`, `Tikz`, and similar environments. The `svg` format has better browser and e-book support than `MathML` (as of this writing), while still allowing for high-quality display and printing of images (again, subject to potentially bug-ridden² browser support).

Furthermore, `svg` images allow math to be presented with the same precise formatting as in the print version. Math is accompanied by `<alt>` tags holding the `LATEX` source for the expression, allowing it to be copy/pasted into other documents.³ Custom `LATEX` macros may be used as-is in math expressions, since the math is evaluated entirely inside `LATEX`. An MD5 hash is used to combine multiple instances of the same inline math expression into a single image file, which then needs to be converted to `svg` only a single time.

The `MATHJAX` JavaScript display engine may be selected for math display instead of using `svg` images. Subject to browser support and Internet access, `MATHJAX` allows an `HTML` page to display math without relying on a large number of external image files.⁴ `lwarp` maintains `LATEX` control for cross-referencing and equation numbering, and attempts to force `MATHJAX` to tag equations accordingly.

A `texlua` program called `lwarpmk` is used to process either the print or `HTML` version of the document. A few external utility programs are used to finish the conversion from a `LATEX`-generated `PDF` file which happens to have `HTML5` tags, to a number of `HTML5` plain-text files and accompanying images.

`lwarp` automatically generates the extra files necessary for the `HTML` conversion, such as `css` and `.xdy` files, and configuration files for the utility `lwarpmk`. Also included is a parallel version of the user's source document, `<sourcename>-html.tex`, which selects `HTML` output and then inputs the user's own source. This process allows both the printed and `HTML` versions to co-exist side-by-side, each with their own auxiliary files.

When requesting packages during `HTML` conversion, `lwarp` first looks to see if it has its own modified version to use instead of the standard `LATEX` version. These `lwarp-packageName.sty` files contain code used to emulate or replace functions for `HTML` output.

²`FIREFOX` has had an on-again/off-again bug for quite some time regarding printing `svgs` at high resolution.

³There seems to be some debate as to whether `MathML` is actually an improvement over `LATEX` for sharing math. The author has no particular opinion on the matter, except to say that in this case `LATEX` is much easier to implement!

⁴One `svg` image file per math expression, except that duplicate inline math expressions are combined into a single file according to the MD5 hash function of its contents. A common scientific paper can easily include several thousand files, and in one case the MD5 hash cut the number of files in half and the rendering time by 30%.

3.1 Typesetting conventions

Font weight, family, and style are used to indicate various objects:

Table 1: Typesetting conventions

<code>package</code>	L ^A T _E X package.
<i>program</i>	Program's executable name.
<code>option</code>	Program or package option.
<code>filename</code>	File name in the operating system.
<code>BRAND NAME</code>	Proper name for a program, operating system, etc.
commands	Commands to be entered by the user.
<code>code</code>	Program code.
<code>\macroname</code>	L ^A T _E X macro.
<code>environment</code>	L ^A T _E X environment.
<code>counter</code>	L ^A T _E X counter.
<code>boolean</code>	L ^A T _E X boolean.
<code><element></code>	HTML element.
<code>attribute</code>	HTML attribute.
User Interface	A user-interface item.
<code>ACRO</code>	Acronym.

3.2 Supported packages and features

Table 2 lists some of the various L^AT_EX features and packages which may be used. Many are tested to work as-is, some are patches for the original packages, and some are emulations written for source-level compatibility. Many are nullified as being irrelevant to HTML output.

Table 2: L^AT_EX lwarp package — Supported features

Category	Status and supported features.
Engines:	DVI L ^A T _E X, pdfL ^A T _E X, X _Y L ^A T _E X, LuaL ^A T _E X, upL ^A T _E X
Compiling:	latexmk, perltext, pythontex, <i>make</i> , etc.
Classes:	article, book, report, scrartcl, scrbook, screprt, memoir, CJK-related as listed below.
Koma-script:	scrextend, scrhack, sclayer. Others as listed below.
Memoir:	memhfixc
Languages:	babel, polyglossia. cjkpunct, xeCJK.
Chinese:	C _T E _X , ctex, upzhkinsoku, xpinyin, zhlineskip, zhspacing.
Japanese:	upL ^A T _E X, Lua _T E _X -ja, gentombow, lltjext, plarray, plarydshln, plautopatch, plect, plectarray, plectarydshln, plectcolortbl, plectdelarray, pxatbegshi, pxeveryshi, pxftnright, pxgentombow, pxjahyper, pxpdfpages, pxpgfrcs, pxpgfmark, tascmac, zxjatype. bxjsarticle and related, ltjsarticle and related, luatexja, luatexja-fontspec, ujarticle and related, utarticle and related.
Korean:	kotex, luatexko, xetexko.

lwarp Supported Functions — continued

Category	Status
Page layout:	2in1, 2up, a4, a4wide, a5comb, addlines, anysize, atbegshi, blowup, booklet, bophook, bounddvi, bxpapersize, canoniclayout, changelayout, changepage, chngpage, clrdblpg, continue, draftcopy, drafftfigure, draftwatermark, ebook, everyshi, fancyhdr, fancytabs, flippdf, fullminipage, fullpage, fwlw, geometry, gmeometric, grid, grid-system, gridset, layaureo, layout, layouts, leading, ltxgrid, nccfancyhdr, notespages, nowidow, pagegrid, pdfprivacy, pagesel, preview, rmpage, sclayer-scrpage, scrpage2, textarea, threadcol, thumb, thumbs, titles, tocenter, turnthepage, twoup, typearea, vmargin, watermark, widows-and-orphans, zwpagelayout. Tested to work as-is: underlin.
Sectioning:	Adds FileDepth for splitting the HTML output. Files may be numbered sequentially or named according to section name. Common short words and punctuation are removed from the filenames. anonchap, bsheaders, fncychap, indentfirst, quotchap, section, sectionbreak, sectsty, titlesec. Tested to work as-is: secdot.
Table of contents, figures, tables:	Supported, with hyperlinks. minitoc, multitoc, shorttoc, titletoc, tocbasic, tocbibind, tocdata, tocloft, tocstyle.
Title page:	\maketitle, titlepage, authblk, titling.
Front & back matter:	abstract, appendix.
Indexing:	<i>makeindex</i> and <i>xindy</i> are supported, with hyperlinks. idxlayout, imakeidx, index, makeidx, repeatindex, splitidx. Tested to work as-is: hvindex.
Glossary:	gloss, glossaries and <i>xindy</i> , nomencl.
Bibliography:	babelbib, backref, biblatex, bibunits, chapterbib, cite, hypernat, natbib, showtags. Tested to work as-is: notes2bib.
Cross-references:	bookmark, breakurl, cleveref, fancyref, hypdestopt, hyperref, perpage, prettyref, titleref, url, varioref, xr, xr-hyper, xurl.

lwarp Supported Functions — continued

Category	Status
Margin notes:	marginal, marginfit, marginfix, scrlayer-notecolumn, versonotes.
Footnotes:	Adds FootnoteDepth to print footnotes at section breaks. bigfoot, dblfnote, endheads, endnotes, fnbreak, fnpara, fnpos, footmisc, footnote, footnotebackref, footnoterange, footnpag, manyfoot, marginnote, pagenote, parnotes, pfnote, sidenote, tablefootnote. Tested to work as-is: fixfoot, nccfoots, sepfootnotes.
Math:	Converted to SVG images with HTML <code><alt></code> tags containing the L ^A T _E X source for the math expression. MATHJAX supported as an alternative. amsmath: \mathcal{AMS} environments are supported. User-defined macros are available during conversion, due to native L ^A T _E X processing.
Theorems:	Native L ^A T _E X theorems, amsthm, ntheorem, theorem.
Additional math:	Math fonts via SVG images, breqn, cases, mathtools, resizegather, autonum (ignored), xfakebold, xy. Tested to work as-is: amscd, bm, braket, delarray, guass, nicematrix, pb-diagram, tikz-cd, etc.
Display math with <code>\displaymath</code> or <code>\other</code> :	Complicated math objects in display math, such as tikz-cd, etc.
Units and fractions:	nicefrac, Slunits, siunitx, units, unitsdef, xfrac. Tested to work as-is: Slunits.
Floats:	Appear where declared. capt-of, caption, cutwin, dblfloatfix, endfloat, fix2col, flafter, float, floatflt, floatrow, fltrace, ftcap, hypcap, keyfloat, morefloats, multicap, newfloat, nonfloat, placeins, rotfloat, stfloats, subcaption, subfig, subfigure, subfloat, topcapt, trivfloat, wrapfig.
Tabular:	tabular environment, array, arydshln, bigdelim, booktabs, colortbl, ctable, diagbox, longtable, ltablex, ltxtable, multirow, supertabular, tabularx, tabulary, threeparttable, threeparttablex, xltabular, xtab.

lwarp Supported Functions — continued

Category	Status
Graphics:	<p>graphics and graphicx. <code>\includegraphics</code> supports width, height, origin, angle, and scale tags, and adds class. References to PDF files are changed to SVG, other image types are accepted as well. <code>\rotatebox</code> and <code>\scalebox</code> are supported as well as HTML can handle. rotating is emulated but all objects are unrotated. <code>picture</code>, <code>tikz</code>, and <code>xy</code> are converted to an SVG image.</p> <p>asymptote, epsfig, epstopdf, figsize, fitbox, grffile, overpic, psfrag, psfragx, pst-eps, pstool, pstricks, rviewport.</p> <p>Tested to work as-is: curves, eepic, tikz-3dplot.</p>
xcolor:	<p>Full package color names, any color models, and mixing. <code>\textcolor</code>, <code>\colorbox</code>, <code>\fcolorbox</code>.</p> <p>Enhanced for HTML compatibility.</p>
Lists:	<p>Standard L^AT_EX environments, enumerate, enumitem, eqlist, hang, listliketab, paralist.</p>
Environments:	<p>Standard L^AT_EX environments.</p>
minipage, \parbox:	<p>Some HTML5-imposed limitations. Nested minipages are supported. eqparbox, pbox.</p>
Quotations:	<p>copyrightbox, csquotes, epigraph, quoting, verse.</p>
Verbatim:	<p>fancyvrb, moreverb, shortvrb, verbatim.</p>
Frames:	<p>boxedminipage2e, fancybox, framed, mdframed, niceframe, shadow, vertbars.</p>
Multi-columns:	<p>adjmulticol, multicol, multicolrule, vwcol.</p>
Margins:	<p>fullwidth, hanging, midpage.</p>
Line numbering:	<p>fnlineno, lineno.</p>
Direct formatting:	<p><code>\emph</code>, <code>\textsuperscript</code>, <code>\textbf</code>, etc are supported. <code>\bfseries</code>, etc. are only supported in some cases. cancel, ellipsis, embrac, enparen, hyphenat, lettrine, lips, lua-check-hyphen, luacolor, magaz, pdfrender, realscripts, relsize, scalefnt, soul, soulpos, soulutf8, textfit, thinsp, trimclip, truncate, ulem, umoline, underscore, uspace, xellipsis.</p>
Acronyms:	<p>acro, acronym.</p>
Ordinals:	<p>engord, fmtcount, nth.</p>

lwarp Supported Functions — continued

Category	Status
Text ligatures:	Ligatures for symbols are supported. Ligatures for f, q, t are intentionally turned off because many simpler browsers do not display them correctly. Modern full-featured browsers re-create these ligatures on-the-fly.
Horizontal space:	HTML output for thin-unbreakable, unbreakable, \enskip, \quad, \qqquad, \hspace.
Rules:	\rule with width, height, raise, text color.
HTML reserved characters:	\&, \textless, and \textgreater are converted to HTML entities.
Fonts:	Used as-is. Appear in svg math expressions or embedded image environments.
Symbols:	Native L ^A T _E X diacriticals, academicons, bbding, chemgreek, dingbat, eurosym, fontawesome, fontawesome5, marvosym, metalogo, metalogox, pifont, textalpha, textcomp, textgreek, typicons, xunicode. Tested to work as-is: euro, gensymb.
Files:	attachfile, attachfile2, hyperxmp, inputtrc, intopdf, pdfpages, pdfx, xmpincl.
Science and engineering:	algorithm2e, algorithmicx, ar, axodraw2, bitpattern, bytefield, chemfig, chemformula, chemgreek, chemmacros, chemnum, karnaugh-map, listings, mhchem, phfqit, register, struktex. Tested to work as-is: askmaps, blochsphere, bodegraph, bohr, circuitikz, elements, engtlc, fast-diagram, hepnicensnames, heppennames, karnaughmap, linop, pgfgantt, physics, simpler-wick, slashed, structmech, tikz-karnaugh, tikzcodeblocks.
Arts and humanities:	foreign, forest, musicography, nameauth, octave, schemata, semantic-markup, vowel, xpiano. Tested to work as-is: phonrule, piano, tikz-dependency.
Admonitions:	notes.
Editorial:	changebar, changes, easy-todo, ed, errata, fixme, fixmetodonotes, pdfcomment, pdfmarginpar, todo, todonotes, tram, xexchangebar. Tested to work as-is: changelog, easyReview.

lwarp Supported Functions — continued

Category	Status
Accessibility:	accsupp, axessibility.
Debug:	chkfloat, cmdtrack, dprogress, lua-visual-debug, refcheck, srcltx, srctex, vpe, xbmks.
Working as-is:	Various utility, calculation, file, and text-only packages, such as calc, fileerr, somedefs, trace, xspace. Also, most math-only packages, including specialized typesetting for various fields of science and engineering.

4 Alternatives

Summarized below are several other ways to convert a \LaTeX or other document to HTML. Where an existing \LaTeX document is to be converted to HTML, `lwarp` may be a good choice. For new projects with a large number of documents, it may be worth investigating the alternatives before decided which path to take.

4.1 internet class

Cls internet The closest to `lwarp` in design principle is the `internet` class by Andrew Stacey—an interesting project which directly produces several versions of markdown, and also HTML and EPUB. <https://github.com/loopspace/latex-to-internet>

4.2 TEX4HT

Prog TeX4ht <http://tug.org/tex4ht/>
 Prog htlatex

This system uses native \LaTeX processing to produce a DVI file containing special commands, and then uses additional post-processing for the HTML conversion by way of numerous configuration files. In some cases `lwarp` provides a better HTML conversion, and it supports a different set of packages. `TeX4ht` produces several other forms of output beyond HTML, including ODT and a direct path to EPUB, and is still being developed.

4.3 Translators

These systems use external programs to translate a subset of \LaTeX syntax into HTML. Search for each on CTAN (<http://ctan.org>).

Prog Hevea **H^Ev^Ea**: <http://hevea.inria.fr/> (not on CTAN)
 Prog TtH **T_TH**: <http://hutchinson.belmont.ma.us/tth/>
 Prog GELLMU **GELLMU**: <http://www.albany.edu/~hammond/gellmu/>
 Prog LaTeXML **LaTeXML**: <http://dlmf.nist.gov/LaTeXML/>
 Prog Plastex **PlasTeX**: <https://github.com/tiarno/plastex>
 Prog LaTeX2HTML **LaTeX2HTML**: <http://www.latex2html.org/>
 and <http://ctan.org/pkg/latex2html>.
 Prog TeX2page **TeX2page**: <http://ds26gte.github.io/tex2page/index.html>

Finally, `GladTeX` may be used to directly insert \LaTeX math into HTML:

Prog GladTeX **GladTeX**: <http://humenda.github.io/GladTeX/>

4.4 ASCII DOC and ASCIIDOCTOR

AsciiDoc is one of the most capable markup languages, providing enough features to produce the typical technical-writing document with cross-references, and it writes L^AT_EX and HTML.

Prog AsciiDoc **Asciidoctor:** <http://asciidoctor.org/> (More active.)

Prog AsciiDoctor **AsciiDoc:** <http://asciidoc.org/> (The original project.)

4.4.1 ASCIIDOCTOR-L^AT_EX

The Asciidoctor-LaTeX project is developing additional L^AT_EX-related features.

Asciidoctor-LateX:

<http://www.noteshare.io/book/asciidoctor-latex-manual>

Prog AsciiDoctor-LaTeX <https://github.com/asciidoctor/asciidoctor-latex>

4.5 PANDOC

Prog Pandoc A markup system which also reads and writes L^AT_EX and HTML.

Pandoc: <http://pandoc.org/>

(Watch for improvements in cross-references to figures and tables.)

4.6 Word processors

Prog Word It should be noted that the popular word processors have advanced through the years
 Prog LibreOffice in their abilities to represent math with a L^AT_EX-ish input syntax, unicode math fonts,
 Prog OpenOffice and high-quality output, and also generate HTML with varying success. See recent
 developments in MICROSOFT[®] *Word*[®] and LIBREOFFICE[™] *Writer*.

4.7 Commercial systems

Prog Adobe Likewise, several professional systems exist whose abilities have been advancing
 Prog FrameMaker in the areas of typesetting, cross-referencing, and HTML generation. See ADOBE[®]
 Prog InDesign *FrameMaker*[®], ADOBE *InDesign*[®], and MADCAP *Flare*[™].

Prog Flare

Prog Madcap

4.8 Comparisons

AsciiDoc, Pandoc, and various other markup languages typically have a syntax which tries to be natural and human-readable, but the use of advanced features tends to

require many combinations of special characters, resulting in a complicated mess of syntax. By contrast, \LaTeX spells things out in readable words but takes longer to type, although integrated editors exist which can provide faster entry and a graphic user interface. For those functions which are covered by the typical markup language it is arguable that \LaTeX is comparably easy to learn, while \LaTeX provides many more advanced features where needed, along with a large number of pre-existing packages which provide solutions to numerous common tasks.

Text-based document-markup systems share some of the advantages of \LaTeX vs. a typical word processor. Documents formats are stable. The documents themselves are portable, work well with revision control, do not crash or become corrupted, and are easily generated under program control. Formatting commands are visible, cross-referencing is automatic, and editing is responsive. Search/replace with regular expressions provides a powerful tool for the manipulation of both document contents and structure. Markup systems and some commercial systems allow printed output through a \LaTeX back end, yielding high-quality results especially when the \LaTeX template is adjusted, but they lose the ability to use \LaTeX macros and other \LaTeX source-document features.

The effort required to customize the output of each markup system varies. For print output, \LaTeX configuration files are usually used. For HTML output, a CSS file will be available, but additional configuration may require editing some form of control file with a different syntax, such as XML. In the case of `lwarp`, CSS is used, and much HTML output is adjusted through the usual \LaTeX optional macro parameters, but further customization may require patching \LaTeX code.

The popular word processors and professional document systems each has a large base of after-market support including pre-designed styles and templates, and often include content-management systems for topic reuse.

5 Installation

Table 3 shows the tools which are used for the L^AT_EX to HTML conversion. In most cases, these will be available via the standard package-installation tools.

Detailed installation instructions follow.

Table 3: Required software programs

Provided by your L^AT_EX distribution:

From T_EXLive: <http://tug.org/texlive/>.

L^AT_EX: *pdflatex*, *xelatex*, or *lua_latex*.

The lwarp package: This package.

The *lwarpmk* utility: Provided along with this package. This should be an operating-system executable in the same way that *pdflatex* or *latexmk* is. It is possible to have the lwarp package generate a local copy of *lwarpmk* called *lwarpmk.lua*. See table 4.

***luatex*:** Used by the *lwarpmk* program to simplify and automate document generation.

***xindy*:** The *xindy* program is used by lwarp to create indexes. On a MiK_TE_X system this may have to be acquired separately, but it is part of the regular installer as of mid 2015.

***latexmk*:** Optionally used by *lwarpmk* to compile L^AT_EX code. On a MiK_TE_X system, *Perl* may need to be installed first.

***pdfcrop*:** Used to pull images out of the L^AT_EX PDF.

POPPLER PDF utilities:

***pdftotext*:** Used to convert PDF to text.

***pdfseparate*:** Used to pull images out of the L^AT_EX PDF.

***pdftocairo*:** Used to convert images to SVG.

These might be provided by your operating-system package manager, and MiK_TE_X provides *miktex-poppler-bin-** packages.

From POPPLER: poppler.freedesktop.org.

For MACOS[®], see <https://brew.sh/>, install *Homebrew*, then

```
Enter ⇒ brew install poppler
```

For WINDOWS, see MiK_TE_X *miktex-poppler-bin-**, or:

<https://sourceforge.net/projects/poppler-win32/> and:

<http://blog.alivate.com.au/poppler-windows/>

Perl:

This may be provided by your operating-system package manager, and may be required for some of the POPPLER PDF utilities.

strawberryperl.com (recommended), perl.org

Automatically downloaded from the internet as required:

MATHJAX: Optionally used to display math. From: mathjax.org

5.1 Installing the lwarp package

There are several ways to install lwarp. These are listed here with the preferred methods listed first:

Pre-installed: Try entering into a command line:

```
Enter ⇒ kpsewhich lwarp.sty
```

If a path to lwarp.sty is shown, then lwarp is already installed and you may skip to the next section.

TEX Live: If using a TEX Live distribution, try installing via *tlmgr*:

```
Enter ⇒ tlmgr install lwarp
```

MiKTeX:

1. For newer versions of MiKTeX, install or update lwarp using the *MiKTeX Console* program.
2. For older versions of MiKTeX, to install lwarp the first time, use the *MiKTeX Package Manager (Admin)*. To update lwarp, use *MiKTeX Update (Admin)*.
3. Either way, also update the package miktex-misc, which will install and update the *lwarpmk* executable.

Operating-system package: The operating-system package manager may already have lwarp, perhaps as part of a set of TEX-related packages.

CTAN TDS archive: lwarp may be downloaded from the Comprehensive TEX Archive:

1. See <http://ctan.org/pkg/lwarp> for the lwarp package.
2. Download the TDS archive: lwarp.tds.zip
3. Find the TEX local directory:

TEX Live:

```
Enter ⇒ kpsewhich -var-value TEXMFLOCAL
```

MiKTeX:

In the **Settings** window, **Roots** tab, look for a local TDS root.

This should be something like:

```
/usr/local/texlive/texmf-local/
```

4. Unpack the archive in the TDS local directory.
5. Renew the cache:

```
Enter ⇒ mktexlsr
```

— or —

```
Enter ⇒ texhash
```

Or, for WINDOWS MiKTeX, start the program called

MiKTeX Settings (Admin) and click on the button called **Refresh FNDB**.

CTAN .dtx and .ins files: Another form of TEX package is .dtx and .ins source files. These files are used to create the documentation and .sty files.

1. See <http://ctan.org/pkg/lwarp> for the lwarp package.
2. Download the zip archive `lwarp.zip` into your own lwarp directory.
3. Unpack `lwarp.zip`.
4. Locate the contents `lwarp.dtx` and `lwarp.ins`
5. Create the `.sty` files:
 Enter ⇒ **pdflatex lwarp.ins**
6. Create the documentation:

```
pdflatex lwarp.dtx (several times)
makeindex -s gglo.ist -o lwarp.gls lwarp.glo
makeindex -s gind.ist lwarp.idx
pdflatex lwarp.dtx (several times)
```

7. Copy the `.sty` files somewhere such as the T_EX Live local tree found in the previous CTAN TDS section, under the subdirectory:
 `<texlocal>/tex/latex/local/lwarp`
8. Copy `lwarp_baseline_marker.png` and `lwarp_baseline_marker.eps` to the same place as the `.sty` files.
9. Copy the documentation `lwarp.pdf` to a source directory in the local tree, such as:
 `<texlocal>/doc/local/lwarp`
10. Renew the cache:
 Enter ⇒ **mktxlsr**
 — or —
 Enter ⇒ **texhash**
 Or, for WINDOWS MiK_TE_X, start the program called *MiKTeX Settings (Admin)* and click on the button called **Refresh FNDB**.
11. See section 5.2.1 to generate your local copy of *lwarpmk*.
12. Once the local version of `lwarpmk.lua` is installed, it may be made available system-wide as per section 5.2.

Project-local CTAN `.dtx` and `.ins` files: The `.dtx` and `.ins` files may be downloaded to a project directory, then compiled right there, alongside the document source files. The resultant `*.sty` and `lwarpmk.lua` files may be used as-is, so long as they are in the same directory as the document source. The files `lwarp_baseline_marker.png` and `lwarp_baseline_marker.eps` must also be copied as well. This approach is especially useful if you would like to temporarily test lwarp before deciding whether to permanently install it.

Just testing!

5.2 Installing the *lwarpmk* utility

(Note: If *lwarpmk* is not already installed, it is easiest to use a local copy instead of installing it system-wide. See section 5.2.1.)

After the lwarp package is installed, you may need to setup the *lwarpmk* utility:

1. At a command line, try executing `lwarpmk`. If the `lwarpmk` help message appears, then `lwarpmk` is already set up. If not, it is easiest to generate and use a local copy. See section 5.2.1.
2. For MiKTeX, try updating the `miktex-misc` package. This may install the `lwarpmk` executable for you.

Otherwise, continue with the following:

3. Locate the file `lwarpmk.lua`, which should be in the `scripts` directory of the TDS tree. On a TeX Live or MiKTeX system you may use

```
Enter ⇒ kpsewhich lwarpmk.lua
```

(If the file is not found, you may also generate a local copy and use it instead. See section 5.2.1.)

4. Create `lwarpmk`:

Unix: Create a symbolic link and make it executable:

- (a) Locate the TeX Live binaries:

```
Enter ⇒ kpsewhich -var-value TEXMFROOT
```

This will be something like:

```
/usr/local/texlive/<year>
```

The binaries are then located in the `bin/<arch>` directory under the root:

```
/usr/local/texlive/<year>/bin/<architecture>/
```

In this directory you will find programs such as `pdf \flat tex` and `makeindex`.

- (b) In the binaries directory, create a new symbolic link from the binaries directory to `lwarpmk.lua`:

```
Enter ⇒ ln -s <path to lwarpmk.lua> lwarpmk
```

- (c) Make the link executable:

```
Enter ⇒ chmod 0755 lwarpmk
```

WINDOWS TeX Live: Create a new `lwarpmk.exe` file:

- (a) Locate the TeX Live binaries as shown above for UNIX.
- (b) In the binaries directory, make a *copy* of `runscript.exe` and call it `lwarpmk.exe`. This will call the copy of `lwarpmk.lua` which is in the `scripts` directory of the distribution.

WINDOWS MiKTeX: Create a new `lwarpmk.bat` file:

- (a) Locate the MiKTeX binaries. These will be in a directory such as:

```
C:\Program Files\MiKTeX 2.9\miktex\bin\x64
```

In this directory you will find programs such as `pdf \flat tex.exe` and `makeindex.exe`.

- (b) Create a new file named `lwarpmk.bat` containing:

```
texlua "C:\Program Files\MiKTeX 2.9\scripts\lwarp\lwarp.texlua" %*
```

This will call the copy of `lwarpmk.lua` which is in the `scripts` directory of the distribution.

5.2.1 Using a local copy of *lwarpmk*

It is also possible to use a local version of *lwarpmk*:

1. When compiling the tutorial in section 6, use the `lwarpmk` option for the `lwarp` package:

```
\usepackage[lwarpmk]{lwarp}
```

2. When the tutorial is compiled with *pdf_latex*, the file `lwarpmk.lua` will be generated along with the other configuration files.
3. `lwarpmk.lua` may be used for this project:

Unix:

- (a) Make `lwarpmk.lua` executable:

```
Enter ⇒ chmod 0755 lwarpmk.lua
```

- (b) Compile documents with

```
Enter ⇒ ./lwarpmk.lua html
```

```
Enter ⇒ ./lwarpmk.lua print
```

etc.

- (c) It may be useful to rename or link to a version without the `.lua` suffix.

WINDOWS:

Compile documents with either of the following, depending on which command shell is being used:

```
Enter ⇒ texlua lwarpmk.lua html
```

```
Enter ⇒ texlua lwarpmk.lua print
```

etc.

Or:

```
Enter ⇒ lwarpmk html
```

```
Enter ⇒ lwarpmk print
```

etc.

5.3 Installing additional utilities

To test for the existence of the additional utilities:

Enter the following in a command line. If each programs' version is displayed, then that utility is already installed. See table 3 on page 88.

```
Enter ⇒ luatex --version
```

```
Enter ⇒ xindy --version
```

```
Enter ⇒ latexmk --version
```

```
Enter ⇒ perl --version
```

```
Enter ⇒ pdftocrop --version
```

```
Enter ⇒ pdftotext -v
```

```
Enter ⇒ pdfseparate --version
```

```
Enter ⇒ pdftocairo -v
```

To install *xindy*, *latexmk*, and *pdfcrop*:

The T_EX utilities *xindy*, *latexmk*, and *pdfcrop* may be installed in *TeXLive* with *tlmgr*, installed by *MiKTeX*, provided by your operating system's package manager, or downloaded from the CTAN archive:

<http://ctan.org/pkg/xindy>
<http://ctan.org/pkg/latexmk>
<http://ctan.org/pkg/pdfcrop>

To install the POPPLER utilities to a UNIX/LINUX system:

The tools from the POPPLER project should be provided by your operating system's package manager.

To install the POPPLER utilities to a MACOS machine:

1. Install *Homebrew* from <https://brew.sh/>:

```
/usr/bin/ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"
```

2. Install the POPPLER utilities:

```
Enter ⇒ brew install poppler
```

To install the POPPLER utilities to a WINDOWS machine:

If using MikT_EX, install a miktex-poppler-bin-* package. Otherwise:

1. See table 3 on page 88.
2. Download and extract the POPPLER utilities *pdftotext*, *pdfseparate*, and *pdfseparate* to a directory, such as Poppler.
3. In the **Start** window, type "Path" to search for results related to Path. Or, open the control panel and search for "Path".
4. Choose **Edit the system environment variables** in the control panel.
5. Choose the **Environment Variables** button.
6. Choose the **Path** variable, then the **Edit** button.
7. Choose the **New** button to make an additional entry.
8. Enter the bin directory of the POPPLER utilities, such as:

```
C:\Users\<myname>\Desktop\Poppler\poppler-0.5_x86\poppler-0.5\bin
```

Be sure to include \bin.

9. Click **Ok** when done.

To install PERL to a WINDOWS machine:

1. Download and install a version of PERL, such as STRAWBERRY PERL, to a directory without a space in its name, such as C:\Strawberry.
2. Edit the **Path** as seen above for the POPPLER utilities.
3. Enter the bin directory of the *perl* utility, such as:

```
C:\Strawberry\perl\bin
```

Be sure to include \bin.
4. Click **Ok** when done.

Any utilities installed by hand must be added to the PATH.

6 Tutorial

This section shows an example of how to create an lwarp document.

Need help?

See the [General Index](#) for “how-to”, and the [Troubleshooting Index](#) if something doesn’t work. The [Index of Objects](#) contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category. A [Troubleshooting](#) section is also available.

6.1 Starting a new project

1. Create a new project directory called `tutorial`.

File `tutorial.tex`

2. Inside the `tutorial` directory, create a new file called `tutorial.tex`. This may be done several ways:

Copy from the documentation PDF:

A listing is in [fig. 1](#), which may be copied/pasted from the figure directly into your own editor, depending on the quality of the PDF viewer and editor, or:

Copy from the lwarp documentation directory:

Another copy may be found by entering into a command line:

Enter ⇒ `texdoc -l lwarp_tutorial.txt`

This should be in the `doc/latex/lwarp/` directory along with this PDF documentation. Copy `lwarp_tutorial.txt` directly into your `tutorial` directory, renamed as `tutorial.tex`.

File `lwarp_tutorial.txt`

⚠ Note: `.txt` suffix!

⚠ Bad formatting!

When using WINDOWS, use an editor other than NOTEPAD, since NOTEPAD does not accept the end-of-line from a UNIX text file.

3. Compile the project:

Enter ⇒ `pdflatex tutorial.tex`

(several times)

(*xelatex* or *lualatex* may be used as well. lwarp also supports DVI *latex* for use with `.eps` images.)

4. View the resulting `tutorial.pdf` with a PDF viewer.

A number of new files are created when `tutorial.tex` is compiled, as shown in [table 4](#). These files are created by the lwarp package.

(Two of the new files are configuration files for the helper program *lwarpmk*. Whenever a print version of the document is created, the configuration files for *lwarpmk* are updated to record the operating system, L^AT_EX engine (*latex*, *pdflatex*, *xelatex*, or *lualatex*), the filenames of the source code and HTML output, and whether the additional helper program *latexmk* will be used to compile the document.)

Figure 1: tutorial.tex listing

Note: There are two pages!

```
% Save this as tutorial.tex for the lwarp package tutorial.

\documentclass{book}

\usepackage{iftex}

% --- LOAD FONT SELECTION AND ENCODING BEFORE LOADING LWARP ---

\ifPDFTeX
\usepackage{lmodern}           % pdflatex or dvi latex
\usepackage[T1]{fontenc}
\usepackage[utf8]{inputenc}
\else
\usepackage{fontspec}         % XeLaTeX or LuaLaTeX
\fi

% --- LWARP IS LOADED NEXT ---
\usepackage[
% HomeHTMLFilename=index,      % Filename of the homepage.
% HTMLFilename={node-},        % Filename prefix of other pages.
% IndexLanguage=english,      % Language for xindy index, glossary.
% latexmk,                     % Use latexmk to compile.
% OSWindows,                   % Force Windows. (Usually automatic.)
% mathjax,                      % Use MathJax to display math.
]{lwarp}
% \boolfalse{FileSectionNames} % If false, numbers the files.

% --- LOAD PDFLATEX MATH FONTS HERE ---

% --- OTHER PACKAGES ARE LOADED AFTER LWARP ---
\usepackage{makeidx} \makeindex
\usepackage{xcolor}   % (Demonstration purposes only.)
\usepackage{hyperref,cleveref} % LOAD THESE LAST!

% --- LATEX AND HTML CUSTOMIZATION ---
\title{The Lwarp Tutorial}
\author{Some Author}
\setcounter{tocdepth}{2}      % Include subsections in the \TOC.
\setcounter{secnumdepth}{2}  % Number down to subsections.
\setcounter{FileDepth}{1}    % Split \HTML\ files at sections
\booltrue{CombineHigherDepths} % Combine parts/chapters/sections
\setcounter{SideTOCDepth}{1} % Include subsections in the side\TOC
\HTMLTitle{Webpage Title}    % Overrides \title for the web page.
\HTMLAuthor{Some Author}     % Sets the HTML meta author tag.
\HTMLLanguage{en-US}        % Sets the HTML meta language.
\HTMLDescription{A description.} % Sets the HTML meta description.
\HTMLFirstPageTop{Name and \fbox{HOMEPAGE LOGO}}
\HTMLPageTop{\fbox{LOGO}}
\HTMLPageBottom{Contact Information and Copyright}
\CSSFilename{lwarp_sagebrush.css}
```

```

\begin{document}

\maketitle           % Or titlepage/titlingpage environment.

% An article abstract would go here.

\tableofcontents    % MUST BE BEFORE THE FIRST SECTION BREAK!
\listoffigures

\chapter{First chapter}

\section{A section}

This is some text which is indexed.\index{Some text.}

\subsection{A subsection}

See \cref{fig:withtext}.

\begin{figure}\begin{center}
\fbbox{\textcolor{blue!50!green}{Text in a figure.}}
\caption{A figure with text\label{fig:withtext}}
\end{center}\end{figure}

\section{Some math}

Inline math:  $r = r_0 + vt - \frac{1}{2}at^2$ 
followed by display math:
\begin{equation}
a^2 + b^2 = c^2
\end{equation}

\begin{warpprint} % For print output ...
\cleardoublepage % ... a common method to place index entry into TOC.
\phantomsection
\addcontentsline{toc}{chapter}{\indexname}
\end{warpprint}
\ForceHTMLPage % HTML index will be on its own page.
\ForceHTMLTOC % HTML index will have its own toc entry.
\printindex

\end{document}

```


Table 4: Configuration files created by print version

- tutorial.pdf:** The PDF output from L^AT_EX. The print version of the document.
- tutorial_html.tex:** A small .tex file used to create a parallel HTML version of the document, which co-exists with usual the PDF version, and which will have its own auxiliary files. In this way, both PDF and HTML documents may co-exist side-by-side.
- Auxiliary files:** The usual L^AT_EX files .aux, .log, .out, .toc, .lof, .idx. When an HTML version of the document is created, _html versions of the auxiliary files will also be generated.
- lwarpmk.conf:** A configuration file for *lwarpmk*, which is used to automate the compilation of PDF or HTML versions of the document.
- tutorial.lwarpmkconf:** Another configuration file used by *lwarpmk*, which is only useful if you wish to have several projects residing in the same directory.
- .css files:** *lwarp.css*, *lwarp_formal.css*, *lwarp_sagebrush.css* These files are standard for *lwarp*, and are not meant to be modified by the user.
- sample_project.css:** An example of a user-customized css file, which may be used for project-specific changes to the *lwarp* defaults.
- lwarp.ist:** Used by *lwarp* while creating an index using *makeindex*. This file should not be modified by the user. A custom file may be used instead, if necessary.
- lwarp.xdy:** Used by *lwarp* while creating an index using *xindy*. This file should not be modified by the user. A custom file may be used instead, if necessary.
- lwarp_one_limage.txt:** For WINDOWS only. Used to process svg images in the background. Copied to *lwarp_one_limage.cmd* when images are generated.
- lwarp_mathjax.txt:** Inserted into the HTML files when MATHJAX is used to display math. This file should not be modified by the user.
- comment.cut:** A temporary file used by *lwarp* to conditionally process blocks of text. This file may be ignored.

When the *lwarpmk* option is given to the *lwarp* package:

lwarpmk.lua: A local copy of the *lwarpmk* utility.

On UNIX-related operating systems this file must be made executable:

```
chmod u+x lwarpmk.lua
```

This may be useful to have to archive with a project for future use.

6.2 Compiling the print version with *lwarpmk*

The *lwarpmk* utility program is used to compile either the printed or the HTML version of the document.

`lwarpmk print` is used to recompile a printed version of the document.

1. Re-compile the print version:

Enter ⇒ **lwarpmk print**

lwarpmk prints an introduction then checks to see if the document must be recompiled. If it seems that the files are up-to-date, then *lwarpmk* informs you of that fact and then exits.

2. Make a small change in the original document, such as adding a space character.
3. Recompile again.

Enter ⇒ **lwarpmk print**

The document is recompiled when a change is seen in the source. Several compilations may be necessary to resolve cross-references.

4. Force a recompile to occur.

Enter ⇒ **lwarpmk again**

Enter ⇒ **lwarpmk print**

`lwarpmk again` updates the date code for the file, triggering a recompile the next time the document is made.⁵

5. Process the index.^{6 7}

Enter ⇒ **lwarpmk printindex**

6. Recompile again to include the index.

Enter ⇒ **lwarpmk print**

7. To force a single recompile when needed, even if no changes were detected:

Enter ⇒ **lwarpmk print1**

Note that the HTML customization commands are ignored while making the print version.

⁵Although, when using the utility *latexmk* (introduced later), the changed date is ignored and an actual change in contents must occur to cause a recompile.

⁶The command `lwarpmk printglossary` is also available to process a glossary produced with the `glossaries` package. See section 9.6.11.

⁷Also see section 9.6.14 for index options.

6.3 Compiling the HTML version with *lwarpmk*

`lwarpmk html` is used to recompile an HTML version of the document.

1. Compile the HTML version:

```
Enter ⇒ lwarpmk html
```

- (a) *lwarpmk* uses L^AT_EX to process `tutorial_html.tex` to create `tutorial_html.pdf`.
- (b) *pdftotext* is then used to convert to the file `tutorial_html.html`. This file is a plain-text file containing HTML tags and content for the entire document.
- (c) *lwarpmk* manually splits `tutorial_html.html` into individual HTML files according to the HTML settings. For this tutorial, the result is `tutorial.html` (the home page), along with `First-chapter.html`⁸, `Some-math.html`, and the document's index in `_Index.html`.⁹

2. View the HTML page in a web browser.

Open the file `tutorial.html` in a web browser.

math

Note that `math` is still displayed as its `alt` tag, which is the plain-text L^AT_EX source, until the images of the math expressions have been generated. Math may be displayed as SVG images or by a MATHJAX script, as seen in sections 6.4 and 6.5.

3. Force a recompile:

```
Enter ⇒ lwarpmk again
```

```
Enter ⇒ lwarpmk html
```

```
Enter ⇒ lwarpmk print
```

4. Process the HTML index and recompile:¹⁰¹¹

```
Enter ⇒ lwarpmk htmlindex
```

```
Enter ⇒ lwarpmk html
```

`_Index.html` is updated for the new L^AT_EX index.

5. Reload the web page to see the added index.

6. To force a single recompile when needed, even if no changes were detected:

```
Enter ⇒ lwarpmk html1
```

⁸`First-chapter.html` also contains the first section, even though the second section is its own HTML page. This behavior is controlled by the boolean `CombineHigherDepths`.

⁹`index.html` is commonly used as a homepage, so the document index is in `_Index.html`.

¹⁰The command `lwarpmk htmlglossary` is also available to process a glossary produced with the `glossaries` package. See section 9.6.11.

¹¹Also see section 9.6.14 for index options.

6.4 Generating the svg images

math as svg images By default `lwarp` represents math as svg images, with the \LaTeX source included in `alt` attributes. In this way, the math is displayed as it was drawn by \LaTeX , and the \LaTeX source may be copied and pasted into other documents.

picture and Tikz `lwarp` uses the same mechanism for `picture` and `Tikz` environments.

1. Create the svg images:

```
Enter ⇒ lwarpmk limages
```

```
Enter ⇒ lwarpmk html
```

2. Move to the tutorial's HTML math page and reload the document in the browser.
3. The math images are displayed using the same font and formatting as the printed version.
4. Copy/paste a math expression into a text editor to see the \LaTeX source.

△ adding/removing When a math expression, `picture`, or `Tikz` environment is added or removed, the svg images must be re-created by entering **lwarpmk limages** to maintain the proper image-file associations. Inline svg math may be hashed and thus not need to be recreated, but display math and objects such as `Tikz` may move to new image numbers when the document is changed.

recompile first Before attempting to create the svg image files, `lwarpmk` verifies that the HTML version of the document exists and has correct internal image references.¹² If it is necessary to recompile the document's HTML version one more time, `lwarpmk` usually will inform the user with an error message, but there are some conditions which cannot be detected, so the user should watch for the \LaTeX recompile warnings.

△ HTML instead of images If HTML appears where an svg image should be, recompile the document one more time to get the page numbers back in sync, then remake the images one more time.

△ page counter Incorrect svg images will also occur if the document changes the page counter:

```
\setcounter{page}{<value>}
```

The page counter must *not* be adjusted by the user.

△ Lots of files! Expressing math as svg images has the advantage of representing the math exactly as \LaTeX would, but has the disadvantage of requiring an individual file for each math expression. For inline math, and some other objects, `lwarp` uses an MD5 hash on its \LaTeX source to combine multiple instances of identical inline expressions into a single image file, but display math and other environments such as `picture` and `Tikz` require one image file each. For a document with a large amount of math, see section 6.5 to use `MATHJAX` instead.

¹²This becomes important when dealing with a document containing thousands of images.

6.5 Using MATHJAX for math

math with MATHJAX Math may also be represented using the MATHJAX JAVASCRIPT project.


1. In the tutorial's source code, uncomment the `mathjax` package option for `lwarp`:

```
mathjax, % Use MathJax to display math.
```

2. Recompile

```
Enter ⇒ lwarpmk html
```

3. Reload the math page.

 **MATHJAX requirements** MATHJAX requires web access unless a local copy of MATHJAX is available, and it also requires that JAVASCRIPT is enabled for the web page. The math is rendered by MATHJAX. Right-click on math to see several options for rendering, and for copying the L^AT_EX source.

While using MATHJAX has many advantages, it may not be able to represent complex expressions or spacing adjustments as well as L^AT_EX, and it may not support some math-related packages.

6.6 Changing the css style

For a formal css style, add to the preamble:

```
\usepackage{lwarp}  
...  
\CSSFilename{lwarp_formal.css}  
...  
\begin{document}
```

For a modern css style, `lwarp_sagebrush.css` is also provided:

```
\CSSFilename{lwarp_sagebrush.css}
```

See section [8.5](#) for more information about modifying the css styling of the document.

6.7 Customizing the HTML output

A number of settings may be made to control the HTML output, including filename generation, automatic compilation, math output, document splitting, meta data, and page headers and footers.

See section [8.4](#) for more information.

6.8 Using *latexmk*

latexmk is a L^AT_EX utility used to monitor changes in source files and recompile as needed.

1. In the tutorial's source code uncomment the `latexmk` option for the `lwarp` package:

```
latexmk, % Use latexmk to compile.
```

2. Recompile the printed version of the document.

```
Enter ⇒ lwarpmk print
```

`lwarp` updates its own configuration files (`lwarpmk.conf` and `tutorial.lwarpmkconf`) whenever the printed version of the document is compiled. These configuration files remember that *lwarpmk* should use *latexmk* to compile the document.

3. Recompile the document.

```
Enter ⇒ lwarpmk print
```

and/or

```
Enter ⇒ lwarpmk html
```

Changes are detected by comparing checksums rather than modification times, so `lwarpmk` again will not trigger a recompile, but *latexmk* has a much better awareness of changes than the *lwarpmk* utility does and it is likely to correctly know when to recompile. A recompile may be forced by making a small change to the source, and a single recompile may be forced with:

```
Enter ⇒ lwarpmk print1
```

and/or

```
Enter ⇒ lwarpmk html1
```

[forced single-pass recompile](#)

6.9 Using Xe_{La}TeX or Lua_{La}TeX

Xe_{La}TeX or Lua_{La}TeX may be used instead of \LaTeX .

1. Remove the auxiliary files for the project:

```
Enter ⇒ lwarpmk cleanall
```

2. Use *xelatex* or *lualatex* to compile the printed version a single time.

```
Enter ⇒ xelatex tutorial.tex
```

-or-

```
Enter ⇒ lualatex tutorial.tex
```

When the compile occurs, the configuration files for *lwarpmk* are modified to remember which TeX engine was used. Xe_{La}TeX or Lua_{La}TeX will be used for future runs of *lwarpmk*.

3. To recompile the document:

```
Enter ⇒ lwarpmk print
```

-and-

```
Enter ⇒ lwarpmk html
```

4. Also remember to update the indexes and recompile again:

```
Enter ⇒ lwarpmk htmlindex
```

```
Enter ⇒ lwarpmk html
```

```
Enter ⇒ lwarpmk printindex
```

```
Enter ⇒ lwarpmk print
```

6.10 Using DVI \LaTeX


Traditional DVI \LaTeX may also be used along with *.eps* image files. An SVG version of each image must also be provided. *lwarpmk* may be used to convert image formats.

To convert EPS files to PDF:

```
Enter ⇒ lwarpmk epstopdf *.eps (or a list of files)
```

To convert PDF files to SVG:

```
Enter ⇒ lwarpmk pdftosvg *.pdf (or a list of files)
```

 **bitmapped fonts** See section 8.2 regarding font selection to avoid the use of bitmapped fonts.

6.11 Using a glossary

lwarp supports the `gloss` and `glossaries` packages, although this tutorial does not supply an example.

6.11.1 `gloss` package

See section [9.6.10](#).

6.11.2 `glossaries` package

To process the glossary for the print version:

```
Enter ⇒ lwarpmk printglossary
```



(If `makeglossaries` is not found, see section [9.6.11](#).)

To process the glossary for the HTML version:

```
Enter ⇒ lwarpmk htmlglossary
```

In each case, the document will have to be recompiled afterwards:

```
Enter ⇒ lwarpmk html1
```

```
Enter ⇒ lwarpmk html
```

```
Enter ⇒ lwarpmk print1
```

```
Enter ⇒ lwarpmk print
```

See section [9.6.11](#) to set options for processing glossaries.

6.12 Cleaning auxiliary files

To remove the auxiliary files `.aux`, `.toc`, `.lof`, `.lot`, `.idx`, `.ind`, `.log`, and `.gl*`:

```
Enter ⇒ lwarpmk clean
```

6.13 Cleaning auxiliary and output files

To remove the auxiliary files, and also remove the `.pdf` and `.html` files:

```
Enter ⇒ lwarpmk cleanall
```

6.14 Cleaning the images from the `<project>-images` directory

The `<project>-images` directory contains SVG images automatically generated for inline and display math, tikz, etc. To remove all the images from the `lateximages` directory:

```
Enter ⇒ lwarpmk cleanimages
```

6.15 Converting PDF or EPS images to SVG

HTML cannot display PDF or EPS images, so any external PDF graphics images must be converted to SVG format. `pdftocairo` and `epstopdf` may be used one image at a time, but `lwarpmk` also provides a way to convert PDF or EPS images in bulk:

```
Enter ⇒ lwarpmk epstopdf *.eps      (or a list of files)
```

```
Enter ⇒ lwarpmk pdftosvg *.pdf      (or a list of files)
```

Be sure to always provide SVG files for HTML output.

6.16 Creating HTML from an incomplete compile

During testing it may be useful to finish the HTML conversion even when the document had errors and did not compile successfully. To attempt an HTML conversion of an incomplete document:

```
Enter ⇒ lwarpmk pdftohtml [-p project]
```

6.17 Processing multiple projects in the same directory

It is possible to have several projects in the same directory. `lwarpmk` has an optional parameter which is the document to compile.

To create each project:

```
Enter ⇒ pdflatex project_a
```

```
Enter ⇒ pdflatex project_b
```

Each project is given its own configuration file:

```
project_a.lwarpmkconf, project_b.lwarpmkconf
```

To compile each project with `lwarkmk`:

```
Enter ⇒ lwarpmk print -p project_a
```

```
Enter ⇒ lwarpmk html -p project_b
```

6.18 Using the *make* utility

lwarpmk has an action which may be useful for integration with the common *make* utility:

```
lwarpmk pdftohtml [-p project]
```

make may be used to compile the code to PDF with HTML tags (`project_html.pdf`), then *lwarpmk* may be used to convert each target to HTML files.

7 Converting an existing document

To convert an existing document for use with lwarp:

1. Arrange the document in the following order:

- (a) Declare the `\documentclass`.
- (b) Load text fonts.
- (c) Load `inputenc` or `inputenx`, `fontenc`, and/or `fontspec`.
- (d) Load lwarp.
- (e) Load remaining packages.

2. Modify the document:

- (a) If using named HTML files, in section names use paren math `\(x+y\)` instead of dollar math `$x+y$`. (Dollar math works, but appears in the filename.) Or, use a short name for the toc entry without the math, or use `\texorpdfstring`:

```
\section{A name with math
\texorpdfstring{$1+2=3$}{text description}}
```

- (b) Avoid using the `\includegraphics` `scale` option. Change:

```
\includegraphics[scale=<xx>]{ . . . }
```

to:

```
\includegraphics[width=<yy>\linewidth]{ . . . }
```

- (c) Possible changes to tabular environments include: `* columns`, `multirow`, `longtable`, `supertabular`, `xtab`, `bigdelim`. See section 9.10.1.
- (d) Possible option clashes with `memoir`. See section 9.13.
- (e) If using indexes, see section 9.6.14.
- (f) If using many indexes, glossaries, `.aux` files, etc., see section 9.6.14 regarding `morewrites`. If `morewrites` is already used, be sure to add the setup with `allocate=10`.
- (g) Other changes as per **Special cases and limitations**, section 9.

3. Convert any PDF images to SVG. See section 9.8.

4. Manually compile the print version with `latex`, `pdflatex`, `lualatex`, or `xelatex`.

5. `lwarpmk print` to finish the print version.

6. `lwarpmk html` to create the HTML version.

7. `lwarpmk limages` to create the SVG images of any `svg math`, `lateximage`, `Tikz`, etc.

See the **General Index** for “how-to”, and the **Troubleshooting Index** if something doesn’t work. The **Index of Objects** contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category. A **Troubleshooting** section is also available.

Need help?

⚠ math in section names


⚠ scale

8 Additional details

8.1 Shell escape

`Opt --shell-escape` Some documents require the use of an external program, which is allowed when using the `--shell-escape` command-line option. When the document is first compiled manually, and also whenever the print version is recompiled, `lwarp` detects and remembers whether shell escape is enabled. If so, it will also be enabled when the document is recompiled with `lwarpmk`.

8.2 Font and UTF-8 support

 **type 3 bitmapped fonts** `lwarp` uses `pdftotext` to convert PDF output into UTF-8-encoded text. This process requires that UTF-8 information be embedded in the PDF file, which may prevent the use of older “type 3” bit-mapped fonts, and of older packages such as `ae`. The `lwarp` option `pdftotextEnc` may be useful in some situations. See section 8.3.

vector fonts While using DVI `latex` or PDF `pdflatex`, if no font-related package is specified then the default Computer Modern font is used, which may be a “type 3” bit-mapped font which may not convert well to plain text. A “type 1” vector font is required.

Computer Modern

 `pdflatex`

 `DVI latex`

Pkg `cm-super`

Pkg `lmodern`

To use the updated `cm-super`’s type 1 fonts instead of Computer Modern, install the `cm-super` font package.

To use Latin Modern instead, add

```
usepackage{lmodern}
```


to the preamble.

Pkg `dejavu`


Another useful option is the Deja Vu series of fonts, which have an increased coverage of language and glyphs:

```
\usepackage{dejavu}
```

latex, pdflatex, T1, UTF8 While using DVI `latex` or PDF `pdflatex`, `lwarp` automatically loads `fontenc` with T1 encoding. `fontenc` may be loaded with an additional encoding after `lwarp`. `inputenc` is automatically loaded with UTF8 encoding if it has not yet been loaded, but may also be specified with another encoding such as `latin1`. See the next section regarding index encoding.

 **xelatex and luatex** Xe_LTeX and Lua_LTeX users must use the `fontspec` package. Do NOT use `fontenc`!

Place `fontspec` or `fontenc`, `xunicode`, and other font and UTF-8 related commands after the `\documentclass` command and before `\usepackage{lwarp}`.

 **package conflicts** In some cases, a package conflict may require that a font package be loaded after `lwarp`, which should work as well:

1. `documentclass{article/book/report}` comes first, followed by any of:

2. Font and UTF-8 related commands:

- For X_YLaTeX or LuaLaTeX:

Pkg fontspec

ligatures

- fontspec and font choices

lwarp sets the following to turn off TeX ligatures during the generation of HTML tags, and turn off common ligatures in regular text, since older browsers may not display them correctly and newer browsers can automatically re-create them.

```
\defaultfontfeatures[\rmfamily]{Ligatures={NoCommon,TeX}}
\defaultfontfeatures[\sffamily]{Ligatures={NoCommon,TeX}}
\defaultfontfeatures[\ttfamily]{Ligatures=NoCommon}
```

- For *pdf_latex*:

Pkg lmodern

Pkg fontenc

Pkg inputenc

Pkg inputenx

Pkg newunicodechar

File glyphtounicode.tex

- (a) `\usepackage{lmodern}`, or other font-related packages
- (b) `\usepackage[T1]{fontenc}`
- (c) `\usepackage[utf8]{inputenc}`, or `latin1`, etc. Or use `inputenx`.
- (d) `\usepackage{newunicodechar}` along with related definitions.
- (e) To assist with the PDF-HTML conversion:
 - i. `\input glyphtounicode.tex`
 - ii. `\input glyphtounicode-cmr.tex`% from the pdfx package
 - iii. `\pdfgentounicode=1`
- (f) Another option to assist with the PDF-HTML conversion:
 - `\usepackage{cmap}`
- (g) `\usepackage{textcomp}`

3. `\usepackage{lwarp}` (section 8.3) goes after any of the above, followed by:

4. `\usepackage{newtxmath}` or other math-related font packages. Many of these load `amsmath`, which must be loaded after `lwarp`, so they must also be loaded after `lwarp`.

5. `\setmonofont{TeX Gyre Cursor}` or similar may be required if using X_YLaTeX or LuaLaTeX and `fontspec` along with traditional font packages such as `txfonts`, `newtxtext`, etc. This is required to turn off the monospaced font's ligatures with `fontspec` after loading the traditional font packages. Monospaced output ligatures must be turned off to produce the correct HTML characters.

6. ... the rest of the preamble and the main document.

⚠ **fontspec with traditional font packages**

⚠ **UTF-8 locale** In some cases, an external program may require a UTF-8 “locale”. See section 10.8.

8.2.1 Indexes, glossaries, and encoding

lwarp uses the *xindy* program to processes indexes. *xelatex* and *lualatex* use *xindy* and *pdf_latex* uses *texindy*.

The `lwarp` option `xindyLanguage` may be used to set the language option for *xindy*, and the `xindyCodepage` option may be used to set the codepage option for *xindy*. These are used for index generation.

8.3 lwarp package loading and options

lwarp supports book, report, and article classes, as well as the equivalent Koma-script classes and memoir, and various CJK-related classes and packages.

Load the lwarp package immediately after the font and UTF-8 setup commands.

Package options may be set while loading lwarp, or later with

```
\lwarpsetup{<key=value, . . . >}
```

Pkg lwarp lwarp package options are as follows:

Opt mathsvg	mathsvg, mathjax: For math display, select mathsvg (default) or mathjax. For more information about the math options, see section 9.7.
Opt mathjax	
Opt latexmk Default: false	latexmk: Tells <i>lwarpmk</i> to use <i>latexmk</i> to recompile the document several times if necessary. Otherwise, <i>lwarpmk</i> attempts to determine for itself whether to recompile. See section 8.4.
Opt dvips Default: false	dvips: Tells <i>lwarpmk</i> to use <i>dvips</i> and <i>ps2pdf</i> to convert DVI output to PDF.
Opt dvipdfm Default: false	dvipdfm: Tells <i>lwarpmk</i> to use <i>dvipdfm</i> to convert DVI output to PDF.
Opt dvipdfmx Default: false	dvipdfmx: Tells <i>lwarpmk</i> to use <i>dvipdfmx</i> to convert DVI output to PDF.
Opt HomeHTMLFilename Default: {}	HomeHTMLFilename: See section 8.4.
Opt HTMLFilename Default: {}	HTMLFilename: See section 8.4.
Opt PrintLatexCmd Default: <automatic>	PrintLatexCmd: Sets the shell commands executed by lwarpmk print . If not specified, will automatically be set according to the detected L ^A T _E X engine and the use of <code>--shell-escape</code> .
Opt HTMLLatexCmd Default: <automatic>	HTMLLatexCmd: Sets the shell commands executed by lwarpmk html . If not specified, will automatically be set according to the detected L ^A T _E X engine and the use of <code>--shell-escape</code> .
Opt makeindex Default: makeindex	makeindex: Sets <code>PrintIndexCmd</code> , <code>HTMLIndexCmd</code> , and <code>LatexmkImageCmd</code> to use <i>makeindex</i> when generating indexes with lwarpmk printindex , lwarpmk htmlindex , or <i>latexmk</i> . If neither <code>makeindex</code> nor <code>xindy</code> is used, <code>makeindex</code> is assumed.
Opt xindy Default: makeindex	xindy: Sets <code>PrintIndexCmd</code> , <code>HTMLIndexCmd</code> , and <code>LatexmkImageCmd</code> to use <i>xindy</i> when generating indexes with lwarpmk printindex , lwarpmk htmlindex , or <i>latexmk</i> .
Opt makeindexStyle Default: lwarp.ist	makeindexStyle: If you wish to use a custom <code>.ist</code> file for index generation, see section 29.
Opt xindyStyle Default: lwarp.xdy	xindyStyle: If you wish to use a custom <code>.xdy</code> file for index generation, see section 29.
Opt xindyLanguage Default: english	xindyLanguage: If using an index or glossary, see section 29.
Opt xindyCodepage Default: utf8	xindyCodepage: If using an index, see section 29.
Opt PrintIndexCmd Default: <automatic>	PrintIndexCmd: Sets the shell commands executed by lwarpmk printindex . If not specified, will be set by the selection of <code>makeindex</code> or <code>xindy</code> . May be used to specify the creation of multiple indexes. See section 9.6.14.

Table 5: lwarp package options

Option	Description
mathsvg	Show math using SVG images.
mathjax	Show math using MATHJAX.
latexmk	Use <i>latexmk</i> for compiling documents.
dvips	Use <i>dvips</i> and <i>ps2pdf</i> to convert DVI documents.
dvipdfm	Use <i>dvipdfm</i> to convert DVI documents.
dvipdfmx	Use <i>dvipdfmx</i> to convert DVI documents.
HomeHTMLFilename	The filename of the home page.
HTMLFilename	A prefix for the filenames of the remaining web pages.
PrintLatexCmd	The shell commands for lwarpmk print .
HTMLLatexCmd	The shell commands for lwarpmk html .
For indexing (section 9.6.14) and glossaries (section 9.6.11):	
makeindex	Use <i>makeindex</i> to generate indices.
xindy	Use <i>xindy</i> to generate indices.
makeindexStyle	Set a custom style for <i>makeindex</i> .
xindyStyle	Set a custom style for <i>xindy</i> .
xindyLanguage	The <i>xindy</i> language option used for index generation.
xindyCodepage	The <i>xindy</i> codepage option used for index generation.
PrintIndexCmd	Shell commands executed by lwarpmk printindex .
HTMLIndexCmd	Shell commands executed by lwarpmk htmlindex .
LatexmkIndexCmd	Shell commands executed by <i>latexmk</i> .
GlossaryCmd	Shell command executed by lwarpmk printglossary and lwarpmk htmlglossary .
Seldom necessary:	
OSWindows	Force compatibility with MS-WINDOWS.
pdftotextEnc	Set the encoding for <i>pdftotext</i> .
lwarpmk	Generate a local copy of <code>lwarpmk.lua</code> .
Used internally by lwarp:	
warpprint	Generate print output, and also generate configuration files.
warpHTML	Generate HTML output.
BaseJobname	The <code>\jobname</code> to use. Set to the <code>\jobname</code> of the printed version even while generating HTML.

Examples:

```
makeindex -s lwarp.ist projectname.idx (makeindex)
xindy -M lwarp.xdy -L english -C utf8 projectname.idx (xindy)
```

automatic setting

The use of the `makeindex` or `xindy` options sets `PrintIndexCmd` to sensible values for each of those programs while compiling a single index. `lwarp`'s `makeindexStyle`, `xindyStyle`, `xindyLanguage`, and `xindyCodepage` options will be used if specified.

⚠ xindy

If specifying `PrintIndexCmd` manually, be sure to assign an *xindy* language and codepage with the `-L` and `-C` *xindy* options, as the `lwarp xindyLanguage` and `xindyCodepage` options are not used for the `PrintIndexCmd` option when it is set manually.

This option is stored in the configuration files `lwarpmk.conf` and `*.lwarpmkconf`, and is then passed by the `lwarpmk printindex` command to the operating system to compile the print indexes. Since the command string is parsed by `TEX`, written to a file, read from the file by `LuaTEX`, and finally passed to the operating system, any attempt at quoting will be problematic. For complicated commands, it would be best to create a shell script, and simply refer to the script with the `lwarp PrintIndexCmd` option.

Opt HTMLIndexCmd

Default: <automatic>

HTMLIndexCmd: Sets the shell commands executed by `lwarpmk htmlindex`. If not specified, will be set by the selection of `makeindex` or `xindy`. May be used to specify the creation of multiple indexes. See section 9.6.14.

⚠ filenames

Example settings are similar to `PrintIndexCmd`, but append `_html` to the filenames:

```
makeindex -s lwarp.ist projectname_html.idx (makeindex)
xindy -M lwarp.xdy -L english -C utf8 projectname_html.idx (xindy)
```

automatic setting

The use of the `makeindex` or `xindy` options sets `HTMLIndexCmd` to sensible values for each of those programs while compiling a single index. `lwarp`'s `makeindexStyle`, `xindyStyle`, `xindyLanguage`, and `xindyCodepage` options will be used if specified.

⚠ xindy

If specifying `HTMLIndexCmd` manually, be sure to assign an *xindy* language and codepage with the `-L` and `-C` *xindy* options, as the `lwarp xindyLanguage` and `xindyCodepage` options are not used for the `HTMLIndexCmd` option when it is set manually.

As with `PrintIndexCmd`, to generate complicated indexes it may be worthwhile to use a shell script, then refer to that script with `HTMLIndexCmd`.

Opt LatexmkIndexCmd

Default: <automatic>

LatexmkIndexCmd: Sets the shell commands executed by `latexmk`. Unlike `PrintIndexCmd` and `HTMLIndexCmd`, `LatexmkIndexCmd` does not include any filenames, which will be provided instead by `latexmk`. See section 9.6.14.

Example settings are similar to `PrintIndexCmd`, but without a filename:

```
makeindex -s lwarp.ist (makeindex)
xindy -M lwarp.xdy -L english -C utf8 (xindy)
```

automatic setting

The use of the `makeindex` or `xindy` options sets `LatexmkIndexCmd` to either of the two settings show above. `lwarp`'s `makeindexStyle`, `xindyStyle`, `xindyLanguage`, and `xindyCodepage` options will be used if specified. Unlike `PrintIndexCmd` and `HTMLIndexCmd`, `latexmk` uses either of the single-line settings of `LatexmkIndexCmd` shown above to compile each of multiple indexes if necessary.

⚠ xindy

If specifying `LatexmkIndexCmd` manually, be sure to assign an *xindy* language

and codepage with the `-L` and `-C xindy` options, as the `lwarp xindyLanguage` and `xindyCodepage` options are not used for the `LatexmkIndexCmd` option when it is set manually.

- Opt `GlossaryCmd` **GlossaryCmd:** Sets the shell command executed by `lwarpmk printglossary` and `lwarpmk htmlglossary`. The print or HTML glossary filename is appended to this command. See section 9.6.11.
 Default: `makeglossaries`
- Opt `OSWindows` **OSWindows:** `lwarp` attempts to automatically sense `WINDOWS`, but it may be forced with this option. See section 8.6.
- Opt `pdftotextEnc` **pdftotextEnc:** Used to specify the encoding used by `pdftotext` during the PDF-HTML conversion. In most situations, the default is the correct choice.
 Default: `UTF-8`
- Opt `lwarpmk` **lwarpmk:** If you wish to have `lwarp` generate a local copy of `lwarpmk.lua` for archival or local-installation purposes, compile the print version with the `lwarpmk` option set. See section 29.

The following options are used internally by `lwarp`, and usually are not used in the user's document:

- Opt `warpprint` **warpprint and warpHTML:** Usually controlled by `lwarpmk`, and not set in the document. Select the `warpprint` option to generate print output (default), or the `warpHTML` option to generate HTML5 output. The default is print output, so the print version may be compiled with the usual `pdflatex`, etc. When `lwarp` is loaded in print mode, it creates `<project>_html.tex`, which sets the `warpHTML` option before calling the user's source code `<project>.tex`. In this way, `<project>.tex` can `\usepackage{lwarpmk}` without any options to create a printed version, while `<project>_html.tex` will create an HTML version.
- Opt `BaseJobname` **BaseJobname:** Not intended for the user. Used internally by `lwarp` when creating the `*_html.tex` file used to compile the HTML version. See section 29.
 Default: `\jobname`

8.4 Customizing the HTML output

⚠ Placement!

Table 6 shows several settings may be used to customize the HTML output. Watch for the correct placement of each!

⚠ Changes!

Note that if changes are made, it is best to first:

1. Clear all the HTML, PDF, and auxiliary files:

Enter ⇒ `lwarpmk clearall`

2. Recompile the print version in order to recreate the configuration files for *lwarpmk*:

Enter ⇒ `lwarpmk print`

3. Finally, recompile the HTML version with the new settings:

Enter ⇒ `lwarpmk html`

Options for the lwarp package:

Use the following as options for `\usepackage[<options>]{lwarp}`:

Opt HomeHTMLFilename
Default: `\BaseJobname`

HomeHTMLFilename: Filename of the homepage, without the “.html” suffix. Defaults to the `\BaseJobname`. A common setting is:

`HomeHTMLFilename=index`

filename underscores

causing the homepage to be the file `index.html`. Underscores are allowed in `HomeHTMLFilename` and `HTMLFilename` options, but may need to be escaped elsewhere, such as when appearing in a list:

`\item [\href{file_name.pdf}{text}] \`

See section 8.4.1 for examples of naming and numbering HTML files.

Opt HTMLFilename
Default: `<empty>`

HTMLFilename: A filename prefix for the rest of the HTML web pages. Useful for numbered web pages with a common prefix. May be empty. See section 8.4.1 for examples of naming and numbering HTML files.

Opt latexmk
Default: `false`

latexmk: Controls whether *lwarp* uses *latexmk* to compile the document. This setting is written to *lwarpmk*'s configuration files.

Opt mathsvg
Default: `true`

mathsvg: Selects SVG display for math output. (The default.)

Opt mathjax
Default: `false`

mathjax: Selects MATHJAX for math output.

Opt makeindex
Default: `makeindex`

makeindex: Selects *makeindex* for index generation by *lwarpmk*.

Opt xindy

xindy: Selects *xindy* for index generation by *lwarpmk*.

Default: `makeindex`

Placed in the preamble before `\begin{document}`:

`\linkhomename`
Default: `Home`

\linkhomename: Name of the link to the home page. Paragraphs are allowed. Redefine with `\renewcommand`.

Table 6: HTML settings

Macro/Cntr/Bool	Description
<code>\linkhomename</code>	Name of the link to the homepage.
<code>SideTOCDepth</code>	Sectioning depth of the sideroc.
<code>\sidetocname</code>	Name of the sideroc.
<code>FileDepth</code>	Sectioning depth of the file splits.
<code>CombineHigherDepths</code>	Combine higher section levels.
<code>FileSectionNames</code>	Use section names for file names, else use numbers.
<code>\FilenameLimit</code>	Maximum length of the generated filenames.
<code>FootnoteDepth</code>	Sectioning depth of footnotes.
<code>\abstractname</code>	The name of the abstract.
<code>\mathimagenam</code>	The svg math image lateximage alt tag.
<code>\packagediagramname</code>	The suffix for a package's lateximage alt tags.
<code>\CSSFilename</code>	The css for the following files.
<code>\MathJaxFilename</code>	The MathJax script for the following files.
<code>\HTMLLanguage</code>	The HTML lang tag.
<code>\HTMLTitle</code>	The homepage's <title>, overriding \title.
<code>\HTMLTitleBeforeSection</code>	Set subpage <title>s to <code>\HTMLTitle - sectionname</code>
<code>\HTMLTitleAfterSection</code>	Set subpage <title>s to <code>sectionname - \HTMLTitle</code>
<code>\HTMLAuthor</code>	The HTML author meta tag, overriding \author.
<code>\HTMLDescription</code>	The HTML description meta tag.
<code>\HTMLFirstPageTop</code>	Heading for the home page.
<code>\HTMLPageTop</code>	Heading for the other pages.
<code>\HTMLPageBottom</code>	Footing for all pages.
<code>HTMLDebugComments</code>	Boolean to generate HTML comments.

Ctrl `tocdepth` **tocdepth:** Sectioning depth of the table of contents. See section 17 for a list of \LaTeX stack depths.

Ctrl `SideTOCDepth` **SideTOCDepth:** Sectioning depth of the sideroc. Defaults to 1, causing the sideroc to show sections but not subsections.

Default: 1

`sideroc`

Each subpage of the website has its own small table of contents on the side (the “sideroc”). Its depth is set by `SideTOCDepth`. This sideroc is only shown if the web page is wide enough. When using a narrow web browser window, “responsive web design” is used to show the sideroc at the top of the page and a link back to **Home** at the bottom.

It is recommended to set:

```
SideTOCDepth=FileDepth
```

or

```
SideTOCDepth=FileDepth+1
```

⚠ inaccessible pages

If `SideTOCDepth < FileDepth`, web pages will be inaccessible via the sideroc.

`\sidedtocname`
Default: Contents

\sidedtocname: Name of the sideroc. Paragraphs are allowed. Redefine with `\renewcommand`.

Ctrl `FileDepth`
Default: -5

FileDepth: Sectioning depth of file splits. Defaults to -5, causing the entire HTML website to be one single file.

- To place the entire file into one HTML page, use:
`\setcounter{FileDepth}{-5}`
- To split the HTML file at `\section` depth, use:
`\setcounter{FileDepth}{1}`
- To ensure that the HTML pages/files are accessible:
Place a `\tableofcontents` somewhere before the first section break (therefore in the “home page”), and set
`tocdepth >= FileDepth`

⚠

Bool `CombineHigherDepths`
Default: true

CombineHigherDepths: Combine a higher section with its first lower subsections, down to the `FileDepth`. Defaults to true. Set to false to simulate the concept of a chapter opening on its own page, for example.

The file splits are controlled by the counter `FileDepth` and the boolean `CombineHigherDepths`. Setting `FileDepth` to 0 splits the file at chapters, 1 at sections, etc. `CombineHigherDepths` controls whether to combine pages at levels higher than the chosen `FileDepth`, such as in this tutorial where the page which opens the chapter also contains the first section. Be careful to set `tocdepth` and `SideTOCDepth` to allow access to each page of the website. Set `tocdepth` and `SideTOCDepth` to be greater than or equal to `FileDepth`.

⚠ Inaccessible pages!

⚠ Lost in an old page!

When making changes to the file structure, it is possible to end up with the web browser pointing to an old file which is no longer in use. When this occurs, changes to the web site will not appear in the browser, even if reloading the page, because that page is no longer in use. It is best to return to the home page, clean the files (`lwarpmk cleanall`), change `FileDepth`

and/or `CombineHigherDepths`, then finally recompile and renavigate to the desired page using the new file structure.

Bool	<code>FileSectionNames</code> Default: <code>true</code>	FileSectionNames: If true, web page filenames are derived from a sanitized version of the section names. If false, web pages are numbered. Either way, the <code>HTMLFilename</code> option is used as a prefix. See section 8.4.1 for examples of naming and numbering HTML files. The user must ensure that filenames are unique after begin sanitized. For example, <code>math</code> in the section name is removed before creating the filename, so the rest of the filename must be sufficiently unique to avoid name collisions.
⚠	Unique filename!	
	<code>\FilenameLimit</code> Default: <code>80</code>	\FilenameLimit: The maximum length of the filenames generated by <code>lwarp</code> . “.html” is added to this length. Redefine with <code>\renewcommand</code> .
Ctrl	<code>FootnoteDepth</code> Default: <code>3</code>	FootnoteDepth: Determines where to place pending footnotes. 3 places footnotes before each break down to the <code>\subsubsection</code> level. 1 places footnotes before each <code>\section</code> break. Any pending footnotes are also placed at the bottom of each page before each file break.
Bool	<code>HTMLDebugComments</code> Default: <code>false</code>	HTMLDebugComments: Set true to generate HTML comments, such as which section or <code><div></code> is being opened or closed.
	<code>\abstractname</code> Default: <code>Abstract</code>	\abstractname: The name of the abstract. This may also be over-written by the <code>babel</code> package. Defaults to “Abstract”. Redefine with <code>\renewcommand</code> .

Placed before `\begin{document}`, or before any sectioning command which causes a file break:

	<code>\CSSFilename</code> Default: <code>lwarp.css</code>	\CSSFilename: <code>{\filename.css}</code> Sets the css file to use for the following files. May be changed before each each sectioning command which would cause a file split. The css styles of the web pages are set by the <code>\CSSFilename</code> command. If <code>\CSSFilename</code> is not used, a default plain style is used to mimic printed L ^A T _E X output. <code>lwarp_sagebrush.css</code> is a semi-fancy colored style as shown in this tutorial. Change it to <code>lwarp_formal.css</code> for a more formal look, or comment out the <code>\CSSFilename</code> command to see the default. <code>\CSSFilename</code> may be used before each file break to set the css for individual pages of the website.
	<code>\MathJaxFilename</code> Default: <code>lwarp_mathjax.txt</code>	\MathJaxFilename: <code>{\filename}</code> Sets the MathJax script file to use for the following files. May be changed before each each sectioning command which would cause a file split. The MathJax script file is copied into the head of each HTML file. This may be used to point to a local repository, add extensions, or change the script somewhere in the middle of the document. <code>\MathJaxFilename</code> may be used before each file break to set the script file for individual pages of the website.
	<code>\HTMLLanguage</code> Default: <code>en-US</code>	\HTMLLanguage: <code>{\languauge}</code> The HTML file’s HTML lang meta tag. Defaults to en-US.
	<code>\HTMLTitle</code> Default: <code>\thetitle</code>	\HTMLTitle: <code>{\title}</code> Overrides <code>\title</code> for the HTML header’s meta title. De-

faults to `\thetitle`, which is set by `\title`, or empty otherwise. Unlike the author, `\thetitle` is set by `\title` even if not using the titling package.

<code>\HTMLTitleBeforeSection</code> Default: <code>\HTMLTitleBeforeSection</code>	\HTMLTitleBeforeSection: Sets subpage <code><title></code> tags to show the website title followed by the section name.
<code>\HTMLTitleAfterSection</code>	\HTMLTitleAfterSection: Sets subpage <code><title></code> tags to show the section name followed by the website title.
<code>custom <title></code>	To customize subpage <code><title></code> s, redefine <code>\theHTMLTitleSection</code> , which defaults to: <pre> \def\theHTMLTitleSection{% \theHTMLTitle\theHTMLTitleSeparator\theHTMLSection% } </pre>
<code>\HTMLAuthor</code> Default: <code>\theauthor</code>	\HTMLAuthor: <code>{\langle author \rangle}</code> The HTML header's meta author. Defaults to <code>\theauthor</code> , which is set by <code>\author</code> if using the titling package, but is empty otherwise. There are several ways to represent the author and affiliations, especially if using the <code>authblk</code> package, most of which do not result in a sensible <code>\theauthor</code> , so <code>\HTMLAuthor</code> is useful to create a list of authors without their affiliations.
<code>\HTMLDescription</code> Default: <code><empty></code>	\HTMLDescription: <code>{\langle description \rangle}</code> Sets the HTML description tag for the following files. May be changed before each each sectioning command which would cause a file split.
<code>\HTMLFirstPageTop</code> Default: <code><empty></code>	\HTMLFirstPageTop: <code>{\langle contents \rangle}</code> A user-definable custom action applied to the top of the home page. Useful for logos, etc. Defaults empty. Ignored in print output.
<code>\HTMLPageTop</code> Default: <code><empty></code>	\HTMLPageTop: <code>{\langle contents \rangle}</code> A user-definable custom action applied to the top of pages other than the home page. Useful for logos, etc. Defaults empty. <code>\LinkHome</code> may be used to place a link back to the homepage. Ignored in print output.
<code>\HTMLPageBottom</code> Default: <code><empty></code>	\HTMLPageBottom: <code>{\langle contents \rangle}</code> A user-definable custom action applied to the bottom of each web page. Useful for authors, copyright notices, contact information, etc. Defaults empty. <code>\LinkHome</code> may be used to place a link back to the homepage. Ignored in print output.

Placed in the home page before the first sectioning command which causes a file break:

<code>\tableofcontents</code> △ TOC on the homepage!	\tableofcontents: Used to place a table of contents on the home page. This command must be used before the first file split, so that a way is available to navigate to other files from the homepage. Links to each chapter/section are provided, as selected by <code>tocdepth</code> .
---	--

Placed in the document wherever necessary:

<code>\mathim名称</code> Default: <code>math image</code>	\mathim名称: Redefine with <code>\renewcommand</code> . When creating an SVG math image, its <code>alt</code> tag may be set to the math expression, which may be hashed
--	---

for image reuse. In the case of `\ensuremath` or after `\inlinemathother`, where the contents require a unique image for each instance of the same expression, the `alt` tag is set to `\mathim名称`, and the image is not reused.

This expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is “math image”, and it may be changed according to the document’s language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following SVG math images.

`\packagediagramname`
Default: `diagram`

\packagediagramname: Redefine with `\renewcommand`. For many packages, the output is placed inside a `lateximage` with an HTML `alt` tag set to the package name followed by `\packagediagramname`. For example:

`(-xy- diagram)`

This expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is “diagram”, and may it be changed according to the document’s language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following `lateximages`.

Env `warpprint`

warpprint: An environment which is only used while generating print output. Place inside anything which does not apply to HTML and which may cause problems with `lwarp`. If `lwarp` knows about and emulates or supports a package then its related macros, lengths, counters, etc. probably won’t have to be placed inside a `warpprint` environment, but unknown packages may cause problems which may be isolated from `lwarp` using this environment.



Do not place anything else on the same line as `\end{warpprint}`.

Env `warpHTML`

warpHTML: An environment which is only used while generating HTML output. This is useful for website logos and other items which have no purpose in printed output.



Do not place anything else on the same line as `\end{warpHTML}`.

`\warpprintonly`

\warpprintonly: `{\langle contents \rangle}` A macro version of the `warpprint` environment.

`\warpHTMLonly`

\warpHTMLonly: `{\langle contents \rangle}` A macro version of the `warpHTML` environment.

8.4.1 Example HTML file naming

Examples of ways to name or number HTML files:

Numbered HTML nodes:

Example: Homepage `index.html`, and `node-1`, `node-2`.¹³

¹³See `\SetHTMLFileNumber` to number in groups by chapter, for example.

```

\usepackage[
  HomeHTMLFilename=index,
  HTMLFilename={node-}
]{lwarp}
\boolfalse{FileSectionNames}

```

Named HTML sections, no prefix:

Example: index.html, and About.html, Products.html

```

\usepackage[
  HomeHTMLFilename=index,
  HTMLFilename={}
]{lwarp}
\booltrue{FileSectionNames}

```

Named HTML sections, with prefix:

Example: Homepage mywebsite.html, and additional pages such as mywebsite-About.html, mywebsite-Products, etc.

```

\usepackage[
  HomeHTMLFilename=mywebsite,
  HTMLFilename={mywebsite-}
]{lwarp}
\booltrue{FileSectionNames}

```

8.5 Customizing the css

`\CSSFilename` $\{ \langle filename \rangle \}$
 Default: `lwarp.css`

`\CSSFilename` may be used to choose which .css file is used to display each page of the web site. Use `\CSSFilename` before `\begin{document}` to assign the style of the home page. If different parts of the website should have different styles, call `\CSSFilename` again before each section heading which creates a new file. This may be changed numerous times throughout the file, resulting in different HTML pages having different css files assigned:

```

...
\CSSFilename{myCSS.css}
\chapter{Another Chapter}
...

```

The styles provided by `lwarp` include:


lwarp.css: A default style if `\CSSFilename` is not used. This style is comparable to a plain L^AT_EX document. To set this style, you may use `\CSSFilename{lwarp.css}`, or no `\CSSFilename` call at all.

lwarp_formal.css: A formal style with a serif fonts and a traditional look.

lwarp_sagebrush.css: A style with muted colors, gradient backgrounds, additional borders, and rounded corners.

To see each style in use, change the `\CSSFilename` entry in the tutorial, `lwarpmk.html` again, and then reload the tutorial webpage.

Custom css A customized style may also be created. For each new project a file called `sample_project.css` is generated. This may be renamed to `<project>.css` then used by assigning `\CSSFilename{<project>.css}`.

 **Rename it!** Note that `sample_project.css` is overwritten whenever `lwarp` is loaded in print mode. It is therefore important to rename the file to something like `<project>.css` before using it, so that your own changes are not overwritten.

`<project>.css` has an entry which loads `lwarp.css`, and this entry may be changed to load `lwarp_formal.css` or `lwarp_sagebrush.css` if desired. Additional changes to the css may be made by making entries later in the `<project>.css` file.

File `lwarp.css` It is best to make a local project-specific css file such as `project.css`, containing only things which are different from `lwarp.css`. The file `project.css` should refer to `lwarp.css` as follows:

```
/* ( --- Start of project.css --- ) */
/* ( --- A sample project-specific CSS file for lwarp --- ) */

/* Uncomment one of the following: */
@import url("lwarp.css") ;
/* @import url("lwarp_formal.css") ; */
/* @import url("lwarp_sagebrush.css") ; */

/* Project-specific CSS setting follow here. */
/* . . . */

/* ( --- End of project.css --- ) */
```

Finally use `\CSSFilename{<project>.css}` in the document to activate the custom css.

8.6 Selecting the operating system

Prog Unix `lwarp` tries to detect which operating system is being used. UNIX / MAC OS / LINUX is the default (collectively referred to as “UNIX” in the configuration files), and MS-WINDOWS is supported as well.

Prog Mac OS

Prog Linux

Prog MS-Windows If MS-WINDOWS is not correctly detected, use the `lwarp` option `OSWindows`.

Prog Windows

Opt OSWindows When detected or specified, the operating-system path separator used by `lwarp` is modified, and the boolean `usingOSWindows` is set true. This boolean may be tested by the user for later use.

8.7 Selecting actions for print or HTML output

The following environments and macros are used to select actions which only apply to either traditional L^AT_EX print-formatted PDF generation, or to HTML generation.

For most of built-in L^AT_EX and many additional packages there is user-level source code support or emulation, so no special handling will be required. For those cases which lwarp does not handle by itself, the following environments and macros may be used to isolate sections of code for print-only or HTML-only.

These environments are also useful for creating a special version of the titlepage for print and another for HTML.

Env `warpHTML` Anything which is to be done only for HTML5 output is surrounded by a `warpHTML` environment:

```
\begin{warpHTML}
... something to be done only during \HTML\ generation
\end{warpHTML}
```

⚠ `\end{warpHTML}` Do *not* place anything else on the same line as `\end{warpHTML}`. The exact phrase is used to mark the end of the environment.

Env `warpprint` Anything which is to be done only for print output is surrounded by a `warpprint` environment:

```
\begin{warpprint}
... something to be done only during traditional \PDF\ generation
\end{warpprint}
```

⚠ `\end{warpprint}` As above, do not place anything else on the line with `\end{warpprint}`.

Env `warpall` Anything which is to be done for any output may be surrounded by a `warpall` environment. Doing so is optional.

```
\begin{warpall}
... something to be done during print \PDF\ or \HTML\ output
\end{warpall}
```

As above, do not place anything else on the line with `\end{warpall}`.

Macros are also provided for print-only or HTML-only code:

`\warpprintonly` $\langle actions \rangle$

Performs the given actions only when print output is being generated.

`\warpHTMLonly` $\{\langle actions \rangle\}$

Performs the given actions only when HTML output is being generated.

8.8 Commands to be placed into the warpprint environment

Certain print-related commands should always be placed inside a warpprint environment, or may need other special handling. These are unrelated to HTML output, but are hard to isolate automatically. For example:

- Paragraph formatting: `\parindent` `\parskip`
- Manual page positions such as the `textpos` package, which is emulated but only in a limited way.
- Anything changing the page counter. `lwarp` requires that the page counter not be adjusted during HTML output.

Some packages require additional setup commands. Where these packages are emulated for HTML, setup commands may work for the emulated HTML output as well as for print output. See the details for each package in this document for more information.

Also see section 14: [Troubleshooting](#).

8.9 Title page

In the preamble, place an additional block of code to set the following:

```
\title{Document Title} % One line only
\author{Author One\affiliation{Affiliation One} \and
  Author Two\affiliation{Affiliation Two} }
\date{Optional date}
```

The title is used in the meta tags in the HTML files, unless overridden by `\HTMLTitle`, and the rest are used in `\maketitle`. To use a `\subtitle` or `\published` field, see section 67.8.

`\maketitle` Use `\maketitle` just after the `\begin{document}`, as this will establish the title of the homepage. Optionally, use a `titlepage` environment instead.

Env `titlepage` The `titlepage` environment may be used to hold a custom title page. The `titlepage` will be set in a `<div>` class `titlepage`, and `\printtitle`, etc. may be used inside this environment.

Env `titlingpage` Another form of custom title page, where `\maketitle` is allowed, and additional information may be included as well.

`\title` $\{\langle title \rangle\}$

△ **newlines** Avoid newlines in the `\title`; these will interfere with the file break and CSS detection. Use a `\subtitle` command instead (section 67.8). The title will appear in the document `\maketitle` as a heading `<h1>`. The HTML meta title tag will also have this title, unless `\HTMLTitle` is used to set the meta title to something else instead.

`\author` `{\langle author \rangle}`

In `\author`, `\protect` may be needed before some formatting commands. In HTML, the author will appear in a `<div>` of class `author` in the `\maketitle`. If the `titling` package is used, the author will also appear in a HTML meta tag, but `\HTMLAuthor` may be necessary to create a plain list of names if `\author` had affiliations added. `\affiliation` is a new addition to `lwarp`.

`\date` `{\langle date \rangle}`

`\date` works as expected. In HTML, this will appear in a `<div>` class `titledate`.

`\thanks` `{\langle text \rangle}`

`\thanks` are allowed in the titlepage fields, and will be rendered as HTML notes at the bottom of the title page.

8.10 HTML page meta descriptions

`\HTMLDescription` `{\langle A description of the web page. \rangle}`

Default: (none)

limitations

Each page of HTML output should have its own HTML meta description, which usually shows up in web search results, is limited to around 150 characters in length, and should not include the ASCII double quote character (`"`).

placement

Use `\HTMLDescription` just before `\begin{document}` to set the description of the home page, and also just before each sectioning command such as `\chapter` or `\section` where a new file will be generated, depending on `FileDepth`. For example, if `FileDepth` is 1, use `\HTMLDescription` just before each `\section` command, and that description will be placed inside the HTML page for that `\section`. The same description will be used for all following HTML files as well, until reset by a new `\HTMLDescription`. It is best to use a unique description for each HTML file.

disabling

To disable the generation of HTML description meta tags, use:

```
\HTMLDescription{}
```

8.11 HTML homepage meta title

`\HTMLTitle` `{\langle title \rangle}`

Default: `\HTMLtitle{\thetitle}`

Sets the contents of the web page `<meta name="title">` element. May be set empty to cancel the meta title tag.

See section 8.4 for `\HTMLTitleBeforeSection` and `\HTMLTitleAfterSection`, used to set the title for HTML subpages.

8.12 HTML page meta author

`\HTMLAuthor` $\{\langle author \rangle\}$

Default: `\HTMLAuthor{\theauthor}`

Sets the contents of the web page `<meta name="author">` element. May be set empty to cancel the meta author tag.

`\author` may be used to create a list of authors and their affiliations, in several formats if using `authblk`, and these may not successfully parse properly into a sensible list for `\theauthor`. `\HTMLAuthor` may be used to set the meta tag to a simple list of names.

9 Special cases and limitations

Some commonly-used \LaTeX expressions should be modified as follows to allow for a smooth conversion to both HTML and print-formatted outputs.

Need help?

See the [General Index](#) for “how-to”, and the [Troubleshooting Index](#) if something doesn’t work. The [Index of Objects](#) contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category. A [Troubleshooting](#) section is also available.

9.1 Things to avoid

In the document, avoid the following:

page counter: Do not adjust the page counter. If doing so is required for the print version, place the adjustment inside a `warpprint` environment.

Custom math environment macros: Do not use expressions such as `\beq` as a replacement for `\begin{equation}`.

Custom macros in section, figure, table names: Custom macros which appear in sectioning commands or float captions then appear in the `.toc`, `.lof`, and `.lot` lists, and should be made robust using `\newrobustcmd` or `\robustify` from `etoolbox`, `xparse`, etc.

When setting `FileSectionNames` to `true` to name the HTML files from the section names, the file names are created from sanitized versions of the chapter or section names, but the section names must be plain text or something which expands into plain text. Robust macros will not work at the sectioning level which is used for file names, but a robust macro or other complicated name may be used for the mandatory argument of `\chapter`, `\section`, etc., if a plain-text version is also included in the optional argument:


```
\chapter[Plain Name]{\ARobustMacro{Fancy Name}}
```


9.1.1 Invalid HTML

Additionally, some objects are valid \LaTeX , but invalid HTML. An example is a tabular inside `\textbf`, since HTML does not allow a table inside a span. `lwarp` will create the table, and the browser may support it, but the result is technically invalid.

9.2 Formatting

9.2.1 Text formatting

 `\bfseries`, etc. `\textbf`, etc. are supported, but `\bfseries`, etc. work only in some situations.

 **HTML special chars** `&`, `<`, and `>` have special meanings in HTML. If `\&`, `\textless`, and `\textgreater` are used, proper HTML entities will be used, but there may be HTML parsing problems if these special characters occur unescaped in program listings or other verbatim text.

program listings For program listings, the `listings` package is supported, and its `literate` option is used to convert `&`, `<`, and `>` to proper HTML entities.

verbatim The various `verbatim`-related environments do not convert `&`, `<`, and `>`, so care must be taken to avoid accidentally including valid HTML code inside these environments. Adding a space on either side may be sufficient.

9.2.2 Horizontal space


`\hspace` `\hspace` is converted to an inline HTML span of the given width, except that `0` width is ignored, a width of `.16667em` is converted to an HTML thin breakable space (`U+2009`), and a `\fill` is converted to a `\quad`.

`\`, `~` and `\,` are converted to HTML entities.

`\kern` `\kern` and `\hskip` are entered into the HTML PDF output as-is, then interpreted by `pdftotext`, and thus usually appear as a single space.

9.2.3 Text alignment

Use the environments `center`, `flushright`, `flushleft` instead of the macros `\centering`, `\raggedright`, `\raggedleft`.

 **figure & table alignment** `\centering`, etc. are honored in a figure or table if they are the first command inside the float:


```
\begin{table*}
\centering
\caption{A Table}
...
```

9.2.4 Accents

Native L^AT_EX accents such as `\` will work, but many more kinds of accents are available when using Unicode-aware X_YL^AT_EX and LuaL^AT_EX.

9.2.5 `textcomp` package

Pkg `textcomp` Some `textcomp` symbols do not have Unicode equivalents, and thus are not supported.

 **missing symbols** Many `textcomp` symbols are not supported by many system / browser fonts. In the css try referencing fonts which are more complete, but expect to see gaps in coverage.

9.2.6 Superscripts and other non-math uses of math mode

Use `x` instead of $\text{\$}^{\text{x}}\text{\$}$

9.2.7 Empty `\item` followed by a new line of text or a nested list:

[lists](#) Use a trailing backslash: `\item[Label] \`

9.2.8 Filenames and URLs in lists or footnotes

[filename underscore](#) Escape underscores in the filenames:


```
\item[\href{file\_name.pdf}{text}]
```

9.2.9 `relsize` package

Pkg `relsize` For HTML, only the inline macros are supported: `\textlarger`, `\textsmaller`, and `\textscale`. Each becomes an inline span of a modified font-size.

`\relsize`, `\larger`, `\smaller`, and `\relscale` are ignored.

While creating SVG math for HTML, the original definitions are temporarily restored, and so should work as expected.

 **not small** The HTML browser's setting for minimum font size may limit how small the output will be displayed.

9.3 Boxes and minipages

9.3.1 `Marginpars`

`\marginpar` [*left*] [*right*] `\marginpar` may contains paragraphs, but in order to remain

inline with the surrounding text `lwarp` nullifies block-related macros inside the `\marginpar`. Paragraph breaks are converted to `
` tags.

`\marginparBlock` [*left*] [*right*] To include block-related macros, use `\marginparBlock`, which takes the same arguments but creates a `<div>` instead of a ``. A line break will occur in the text where the `\marginBlock` occurs.

9.3.2 Save Boxes

⚠ **boxes** T_EX boxes are placed inline and do not allow line breaks, so boxes with long contents may overflow the line during HTML conversion. `lwarp` uses methods which help avoid this problem.

⚠ **minipage, \parbox** `\savebox` and related do not (yet) support `minipage` or `\parbox`.

9.3.3 Minipages

⚠ **inline** A line of text with an inline `minipage` or `\parbox` will have the `minipage` or `\parbox` placed onto its own line, because a paragraph is a block element and cannot be made inline-block.

placement `minipages` and `\parboxes` will be placed side-by-side in HTML unless you place a `\newline` between them.

side-by-side Side-by-side `minipages` may be separated by `\quad`, `\qqquad`, `\enskip`, `\hspace`, `\hfill`, or a `\rule`. When inside a `center` environment, the result is similar in print and HTML. Paragraph tags are suppressed between side-by-side `minipages` and these spacing commands, but not at the start or end of the paragraph.

⚠ **minipage in a span** There is limited support for `minipages` inside an HTML ``. An HTML `<div>` cannot appear inside a ``. While in a ``, `minipages`, and `\parboxes`, and any enclosed lists have limited HTML tags, resulting in an “inline” format, without markup except for HTML breaks. Use `\newline` or `\par` for an HTML break.

⚠ **minipage size** When using `\linewidth`, `\textwidth`, and `\textheight`, widths and heights in HTML are scaled proportionally to a 6×9 inch text area, and inside a `multicols` `\linewidth` is divided by the specified number of columns.

if width is \linewidth If a `minipage` or `\parbox` is assigned a width of exactly `\linewidth`, in HTML it is automatically given no HTML width, thus allowed to fill the line as needed, similar to how it appears in print output.

full-width if HTML A new macro `\minipagefullwidth` requests that, during HTML output, the next single `minipage` or `\parbox` be generated without an HTML width attribute, allowing it to be the full width of the display rather than the declared print-output width. This may be useful where the printed version's width makes no sense in HTML.

⚠ **tabular, multicols** Inside a `tabular` or `multicols` environment, where the width depends on the browser window, `\minipagefullwidth` is effectively used by default for every `minipage` or

`\parbox` inside the environment. `\UseMinipageWidths` may be used to tell `lwarp` to `\IgnoreMinipageWidths`

honor the specified widths of all following minipages and `\parboxes` until the end of the local scope, and `\IgnoreMinipageWidths` may be used to tell `lwarp` to ignore the specified widths.

- ⚠ **text alignment** Nested minipages adopt their parent’s text alignment in HTML, whereas in regular L^AT_EX PDF output they do not. Use a `flushleft` or similar environment in the child minipage to force a text alignment.

9.3.4 Side-by-side minipages

Place side-by-side minipages inside a `center` environment, with horizontal space between them, such as `\quad`, `\qqquad`, `\hspace`, or `\hfill`. The result is similar in print and HTML. Do not use space commands at the start or end of the line.

9.3.5 Framed minipages and other environments

`\fbox` can only be used around inline `` items during HTML output, but HTML cannot place a block element such as a `<div>` for a minipage or a list inside of a ``. Several options are provided for framing an object, depending on which kind of object and which packages are loaded:

`\fbox`
`\fboxBlock`
 Env `fminipage`

For a framed object, options include:

To remove the frame in HTML output: Place the `\fbox` command and its closing brace inside `warpprint` environments. This will nullify the frame for HTML output.

For inline text:

To frame the contents inline with some formatting losses in HTML: This is the default action of `\fbox` when enclosing a minipage. During HTML output, `\fbox` nullifies the HTML tags for `minipage`, `\parbox`, and lists. The contents are included as inline text inside the `\fbox`’s `` of class `framebox`. For lists, line breaks are converted to HTML breaks. The result is a plain-text inline version of the contents, framed inline with the surrounding text, but lacking any extra HTML markup.

For inline minipage and lists:

To frame the contents on their own line with improved formatting in HTML: A new command `\fboxBlock` is included, intended to be a direct replacement for `\fbox` for cases where the `\fbox` surrounds a minipage, table, or list. For print output, this behaves as `\fbox`. For HTML output, the contents are placed inside an HTML `<div>` with the class `framed`, resulting in the contents being placed on their own line with a frame surrounding them. The contents preserve their HTML formatting, so lists and minipages look nicer, and valid HTML is created for a `tabular`. While an `\fbox` containing a `tabular` is valid L^AT_EX code, the result in HTML is problematic since a table is a `<div>` not a ``, so use `\fboxBlock` around a `tabular`, or else place the `tabular` inside a minipage, or use `fminipage`, described next. Also see below regarding the “Misplaced alignment tab character &.” error.

For display `tabular`, minipages, and lists:

To create a framed minipage in both print and HTML: A new environment `fminipage` is included. For print output, this is identical to `minipage`, except that it is also

framed. For HTML output, this forms a `<div>` of class `framed`, the contents preserve their HTML formatting, and valid HTML is created for a `tabular`. Also see section 86 for a new environment `fcolorminipage`. Also see below regarding the “Misplaced alignment tab character &.” error.

colored boxes and frames: **To create colored frames and boxes:** See section 501 for `xcolor`’s `\colorbox` and `\fcolorbox`, and `lwarp`’s additional `\colorboxBlock` and `\fcolorboxBlock`.

⚠ **Misplaced alignment tab character &**

To frame tables or verbatim environments: Place the contents inside a `fminipage`, or perhaps a `\fboxBlock` for a `tabular`. Also, if using `\fboxblock` with `tabular`, you will have to use `\StartDefiningTabulars` before the start of the macro which uses `\fboxBlock` and the `tabular`, and `\StopDefiningTabulars` afterwards. Also see the `lwarp` documentation for the `fancybox` package.

To frame equations: See section 217 for the `fancybox` package.

For fancy framed minipages: See packages `boxedminipage`, `shadow`, `fancybox`, `framed`, `mdframed`.

Custom environments: Use a custom environment to create a sidebar, containing a `BlockClass` environment with custom CSS formatting, and `\warpprintonly{\hrule}` command:

```
\begin{BlockClass}{frameminipage}% ignored in print output
  % use \CSS\ to format div class ``framedminipage''
  \warpprintonly{\hrule} % only appears in print output
  Contents
  \warpprintonly{\hrule} % only appears in print output
\end{BlockClass}
```

9.3.6 fancybox package

Pkg `fancybox`
framed equation example

`fancybox`’s documentation has an example `FramedEqn` environment which combines `math`, `\Sbox`, a `minipage`, and an `\fbox`. This combination requires that the entire environment be enclosed inside a `lateximage`, which is done by adding `\lateximage` at the very start of `FramedEqn`’s beginning code, and `\endlateximage` at the very end of the ending code. Unfortunately, the HTML `alt` attribute is not used here.


```
\newenvironmentFramedEqn
{
  \lateximage% NEW
  \setlength{\fboxsep}{15pt}
  . . . }{ . . .
  \[\fbox{\TheSbox}\]
  \endlateximage% NEW
}
```

framing alternatives `\fbox` works with `fancybox`. Also see `lwarp`’s `\fboxBlock` macro and `fminipage` environment for alternatives to `\fbox` for framing environments.

framed table example The `fancybox` documentation’s example framed table using an `\fbox` containing a `tabular` does not work with `lwarp`, but the `FramedTable` environment does work if

`\fbox` is replaced by `\fboxBlock`. This method loses HTML formatting. A better method is to enclose the table's contents inside a `fminipage` environment. The caption may be placed either inside or outside the `fminipage`:

```
\begin{table}
\begin{fminipage}{\linewidth}
\begin{tabular}{lr}
. . .
\end{tabular}
\end{fminipage}
\end{table}
```

 **framed verbatim** `lwarp` does not support the `verbatim` environment inside a `span`, `box`, or `fancybox`'s `\Sbox`, but a `verbatim` may be placed inside a `fminipage`. The `fancybox` documentation's example `FramedVerb` may be defined as:

```
\newenvironment{FramedVerb}[1] % width
{
\VerbatimEnvironment
\fminipage{#1}
\beginVerbatim
}{
\endVerbatim
\endfminipage
}
```

framed \VerbBox `fancybox`'s `\VerbBox` may be used inside `\fbox`.

indented alignment `LVerbatim`, `\LVerbatimInput`, and `\LUseVerbatim` indent with horizontal space which may not line up exactly with what *pdf_totext* detects. Some lines may be off slightly in their left edge.

9.3.7 mdframed package

Pkg `mdframed` Most basic functionality is supported, including frame background colors and single-
support border colors and thickness, title and subtitle background colors and borders and thickness, border radius, and shadow. CSS classes are created for `mdframed` environments and frame titles.

 **loading** When used, `lwarp` loads `mdframed` in HTML with `framemethod=none`.

font For title font, use

```
frametitlefont=\textbf,
```

instead of

```
frametitlefont=\bfseries,
```

where `\textbf` must appear just before the comma and will receive the following text as its argument (since the text happens to be between braces in the `mdframed` source).

Since `lwarp` does not support `\bfseries` and friends, only one font selection may be made at a time.

theoremtitlefont `theoremtitlefont` is not supported, since the following text is not in braces in the `mdframed` source.

ignored options `userdefinedwidth` and `align` are currently ignored.

css classes Environments created or encapsulated by `mdframed` are enclosed in a `<div>` of class `mdframed`, and also class `md<environmentname>` for new environments.

Frame titles are placed in a `<div>` of class `[mdframedtitle]`. Subtitles are in a `<div>` of class `[mdframedsubtitle]`, and likewise for subsubtitles.

9.4 Section names

If using named HTML files, by selecting `\booltrue{FileSectionNames}`, the generated filenames may be simplified by using `\FilenameSimplify` and `\FilenameNullify`:


```
\FilenameSimplify {<text>}
```

To remove common short words from the automatically-generated filenames, replacing each with a single hyphen “-”, use `\FilenameSimplify`:


```
\FilenameSimplify*{-in-}
\FilenameSimplify*{A-}
```

The first example removes the word “in” in the middle of a filename, and the second example removes “A” at the start of the filename. The star forces the arguments to be detokenized, which is required for a plain-text comparison. (The unstarred form is used for a token-sensitive comparison, which is seldom required by the user.) After simplification, repeated hyphen characters will be further simplified to a single hyphen “-”. Finally, single hyphens at the start or end of the filename are removed.

```
\FilenameNullify {<macros>}
```

 **macros in section names** Macro names may appear in the automatically-generated file names. To remove these, create *non-robust* nullified versions of the macros, ensuring that each line ends with a percent character `%` as shown below. These are placed inside `\FilenameNullify`, which adds them to the list of macros which are nullfied during filename generation. Low-level macros such as `\begingroup` will cause problems when nullfied. Many macros such as `\textbf` are already nullfied. `lwarp` also already nullifies built-in symbol and `textcomp` macros, including if defined by `xunicode`, but not all `xunicode` macros. See the definition of `\LWR@nullfonts` for a complete list.

```
\FilenameNullify{%
  \renewcommand*{\macroname}[1]{#1}%
  \renewcommand*{\anothermacro}{}%
}
```

 **duplicate filename** Avoid duplicate file names. Section names at levels which result in HTML file splits must be unique. `lwarp` will generate an error if a duplicate HTML filename is generated.

Use the optional TOC caption entry parameter for formatting. Remember to `\protect` L^AT_EX commands which appear in section names and TOC captions.

- ⚠ **math in section names** If using named HTML files, in section names use paren math `\(x+y\)` instead of dollar math `$x+y$`. (Dollar math works, but appears in the filename.) Or, use a short name for the TOC entry without the math, or use `\texorpdfstring`:

```
\section{A name with math
\texorpdfstring{$1+2=3$}{text description}}
```

9.5 Cross-references

- labels** Labels with special characters may be a problem. It is best to stick with alpha-numeric, hyphen, underscore, and perhaps the colon (if not French).

⚠ **label characters**

- \nameref** `\nameref` refers to the most recently-used section where the `\label` was defined. If no section has been defined before the `\label`, the link will be empty. Index entries also use `\nameref` and have the same limitation.

⚠ **empty link**

9.5.1 Page references

- ⚠ **L^AT_EX page numbers** The printed page does not translate to the HTML page, so `\pageref` references are converted to parentheses containing `\pagerefPageFor`, which defaults to “see”, followed by a hyperlink to the appropriate object.

Ex:

```
\ref{sec:name} on page \pageref{sec:name}
```

in HTML becomes:

```
“Sec. 1.23 on page (see sec. 1.23)”.
```

`\pagerefPageFor` may be redefined to “page for”, empty, etc. See page 468.

9.5.2 cleveref and varioref packages

- Pkg cleveref** `cleveref` and `varioref` are supported, but printed page numbers do not map to HTML, so a section name or a text phrase are used for `\cpageref` and `\cpagerefrange`. This phrase includes `\cpagerefFor`, which defaults to “for”.

Pkg varioref

⚠ **cleveref page numbers**

Ex:

```
\cpageref{tab:first,tab:second}
```

in html becomes:

```
“pages for table 4.1 and for table 4.2”
```

See `\cpagerefFor` at page 541 to redefine the message which is printed for page number references.

9.5.3 Hyperlinks, hyperref, and url

Pkg `hyperref` lwarp emulates `hyperref`, including the creation of active hyperlinks, but does not require that `hyperref` be loaded by the document.

Pkg `url`

⚠ **comments between arguments** Do not place a comment with a % character between arguments for `\hyperref`, etc., as it is neutralized for inclusion in HTML URLs.

lwarp can also load `url`, but `url` should not be used at the same time as `hyperref`, since they both define the `\url` command. lwarp does not (yet) attempt to convert `url` links into hyperlinks during HTML output, nor does the print version of `url` create hyperlinks.

⚠ **backref** When generating HTML, lwarp's emulation of `hyperref` does not automatically load `backref`, so `backref` must be loaded explicitly.

9.5.4 Footnotes and page notes

lwarp uses native L^AT_EX footnote code, although with its own `\box` to avoid the L^AT_EX output routine. The usual functions mostly work as-is.

footnote numbering To have footnote numbers reset each time footnotes are printed:

```
\setcounter{footnoteReset}{1}
```

For `bigfoot`, `manyfoot`, or `perpage`:

```
\MakePerPage{footnoteX}
```

— or —

```
\MakeSortedPerPage{footnoteX}
```

The footnotes are reset when they are printed, according to section level as set by `FootnoteDepth`, which is not necessarily by HTML page. This is recommended for `\alph`, `\Alph`, or `\fnsymbol` footnotes, due to the limited number of symbols which are available.

footmisc The `footmisc stable` option is emulated by lwarp.

⚠ **sectioning commands** When using footnotes in sectioning commands, to generate consistent results between print and HTML, use the `footmisc` package with the `stable` option, provide a short TOC entry, and `\protect` the `\footnote`:




```
\usepackage[stable]{footmisc}
...
\subsection[Subsection Name]
{Subsection Name\protect\footnote{A footnote.}}
```

memoir with footmisc If using `memoir` class, with which lwarp preloads `footmisc`, the `stable` option must be declared before lwarp is loaded:

⚠ **memoir**

```
\PassOptionsToPackage{stable}{footmisc}
\usepackage{lwarp}
...
```

Do not use a starred sectioning command. As an alternative, it may be possible to adjust `\secnumdepth` instead.

 **fancybox, fancyvrb**
 `\VerbatimFootnotes`
 sectioning or
displaymath

If using `fancybox` or `fancyvrb` with `\VerbatimFootnotes`, and using footnotes in a sectioning command or display math, use `\footnotemark` and `\footnotetext`:


```
\subsection[Subsection Name]
  {Subsection Name\protect\footnotemark}
\footnotetext{A footnote with \verb+verbtim+.}
```

and likewise for equations or display math.

At present there is a bug such that paragraph closing tags are not present in footnotes when `\VerbatimFootnotes` are selected. The browser usually compensates.

 **pfnote**
 **pfnote numbers**

While emulating `pfnote`, `lwarp` is not able to reset HTML footnote numbers per page number to match the printed version, as HTML has no concept of page numbers. `lwarp` therefore uses continuous footnote numbering even for `pfnote`.

bigfoot, manyfoot
 **verbatim**

`Verbatim` footnotes are not yet supported.

If using the `bigfoot` package, and possibly also `manyfoot`, problems may occur with counter allocation because `lwarp` uses many counters, and there is a difference in how counters numbered 256 and up are handled in `pdfLATEX`. With `bigfoot` this has been known to show up as an error related to one footnote insert being forbidden inside another. Another problem showed up as a input stack error, and which of these problems occurred depended on how many counters were allocated.

As a possible solution, try creating several new counters before defining `bigfoot` or `manyfoot` footnotes, hoping to shift the problematic counter above the 256 threshold. It may instead be necessary to use `XYLATEX` or `LuaLATEX` instead of `pdfLATEX`.

9.6 Front and back matter

9.6.1 Custom classes with multiple authors and affiliations

Some classes allow multiple authors and affiliations. Often it is possible to emulate these using a standard class along with `authblk`:

```
%\documentclass{customclass} % for print document
\documentclass{article} % for html document

\usepackage{lwarp}
\begin{warpHTML}
\usepackage{authblk}
\let\affiliation\affil % maybe required
\end{warpHTML}
```


9.6.2 Starred chapters and sections

The following describes `\ForceHTMLPage` and `\ForceHTMLTOC`, which may be used for endnotes, glossaries, `tocbibind`, bibliographies, and the index. See the following sections where applicable. Continue here if interested in the reason for adding these commands to `lwarp`.

Some packages use `\chapter*` or `\section*` to introduce reference material such as notes or lists, often to be placed in the back matter of a book. These starred sections are placed inline instead of on their own HTML pages, and they are not given TOC entries.

`lwarp` provides a method to cause a starred section to be on its own HTML page, subject to `FileDepth`, and also a method to cause the starred section to have its own TOC entry during HTML output.


`\ForceHTMLPage` To place a starred section on its own HTML page, use `\ForceHTMLPage` just before the `\chapter*` or `\section*`. `lwarp` will create a new page for the starred sectional unit.

A starred sectional unit does not have a TOC entry unless one is placed manually. The typical method using `\phantomsection` and `\addcontentsline` works for inline text but fails when the new starred section is given its own webpage after the TOC entry is created, or when creating an EPUB where the TOC entry will point to the page before the starred section. If the starred section has its own HTML page but no correct TOC entry pointing to that page, the page will be inaccessible unless some other link is created.

`\ForceHTMLTOC` To automatically force the HTML version of the document to have a TOC entry for a starred section, use `\ForceHTMLTOC` just before the `\chapter*` or `\section*`, and place `\phantomsection` and `\addcontentsline` inside a `warpprint` environment.


For print output, `\ForceHTMLTOC` and `\ForceHTMLPage` have no effect.

9.6.3 abstract package

Pkg abstract
 missing TOC If using the number option with file splits, be sure to place the table of contents before the abstract. The number option causes a section break which may cause a file split, which would put a table of contents out of the home page if it is after the abstract.

9.6.4 titling and authblk

Pkg titling
 Pkg authblk `lwarp` supports the native L^AT_EX titling commands, and also supports the packages `authblk` and `titling`. If both are used, `authblk` should be loaded before `titling`.

package support
 load order If using the `titling` package, additional titlepage fields for `\published` and `\subtitle` may be added by using `\AddSubtitlePublished` in the preamble. See section 67.8.
`\published` and `\subtitle`

9.6.5 tocloft package

Opt [tocloft] titles If using tocloft with tocbibind, anonchop, fncychap, or other packages which change chapter title formatting, load tocloft with its `titles` option, which tells tocloft to use standard L^AT_EX commands to create the titles, allowing other packages to work with it.

Pkg tocloft

Pkg tocloft

⚠ tocloft & other packages

9.6.6 appendix package

Pkg appendix During HTML conversion, the option `toc` without the option `page` results in a TOC link to whichever section was before the `appendices` environment. It is recommended to use both `toc` and also `page` at the same time.

⚠ incorrect TOC link

9.6.7 pagenote package

Pkg pagenote pagenote works as-is, but the `page` option is disabled.

9.6.8 endnotes package

Pkg endnotes To place the endnotes in the TOC, use:

table of contents

```
\usepackage{endnotes}
\appto\noteheading{\addcontentsline{toc}{section}{\notesname}}
\renewcommand*{\notesname}{Endnotes} % optional
```

HTML page To additionally have the endnotes on their own HTML page, if `FileDepth` allows:

```
\ForceHTMLPage
\theendnotes
```

9.6.9 B_IB_TE_X

`\etalchar` Displays a superscript “+” to indicate “and others”.

⚠ Modify *.bib When enough authors are cited for a source, B_IB_TE_X may use the `\etalchar` command to display a math superscript with a + character to indicate “and others”. Without modification, this will result in an “Improper `\prevdepth`” error. At present, lwarp requires that `\etalchar` be replaced by a text superscript. To do so, add to the start of the `.bib` file the following:

```
@PREAMBLE{"\let\etalchar\relax \newcommand{\etalchar}[1]{\textsuperscript{#1}}"}

```

9.6.10 gloss package

Pkg gloss To process the HTML glossary:
 △ **compiling** `bibtex <projectname>_html.gls`

9.6.11 glossaries package

Pkg glossaries *lwarp*mk has the commands `lwarpmk printglossary` and `lwarpmk htmlglossary`,
 processing glossaries which process the glossaries created by the `glossaries` package using that package's
 Opt GlossaryCmd *makeglossaries* program.
 Default: `makeglossaries`
 Opt [lwarpmk] `printglossary` The shell command to execute is set by the `lwarp` option `GlossaryCmd`, which de-
 Opt [lwarpmk] `htmlglossary` faults to **makeglossaries**. The print or HTML glossary filename is appended to this
 command.

△ **makeglossaries not found** In some situations it may be required to modify the default command, such as to add the `perl` command in front:

```
\usepackage[
  GlossaryCmd={perl makeglossaries},
] {lwarp}
```

xindy language To set the language to use for processing glossaries with *xindy*:

```
\usepackage[
  GlossaryCmd={makeglossaries -L english},
] {lwarp}
```

Other options for *makeglossaries* may be set as well.

placement and toc options The glossaries may be placed in a numbered or unnumbered section, given a toc entry, and placed inline or on their own HTML page:

Numbered section, on its own HTML page:

```
\usepackage[xindy,toc,numberedsection=noLabel]{glossaries}
...
\printglossaries
```


Unnumbered section, inline with the current HTML page:

```
\usepackage[xindy,toc]{glossaries}
...
\printglossaries
```

Unnumbered section, on its own HTML page:

```
\usepackage[xindy,toc]{glossaries}
...
\ForceHTMLPage
\printglossaries
```

△ **glossary style** The default `style=item` option for glossaries conflicts with `lwarp`, so the style is forced to `index` instead.

 **number list** The page number list in the printed form would become `\namerefs` in HTML, which could become a very long string if many items are referenced. For now, the number list is simply turned off.

print/HTML versions The print and HTML versions of the glossary differ in their internal page numbers. Separate commands for generating print and HTML glossaries are used, even though the page number is currently ignored.

9.6.12 **nomenc1 package**

Pkg `nomenc1` To process the HTML nomenclature:

```
makeindex <project>_html.nlo -s nomenc1.ist -o <project>_html.nls
```

9.6.13 **Indexing overview**

There are many ways to process indexes for a L^AT_EX document, including native L^AT_EX capabilities, a number of packages and classes, the possible availability of shell escape and *latexmk*, and the need to process print and HTML versions. *lwarp* attempts to provide easy recompilation of indexes along with the rest of the document, but the various indexing options must be set correctly. Numerous examples are given below. Some differ in minor details, so the important parts are highlighted in red, and options are in green.

Once set up properly, the entire document may be recompiled with `lwarpmk print` and `lwarpmk html`. In some cases, it will also be necessary to compile the indexes with `lwarpmk printindex` and `lwarpmk htmlindex`. A recompile may then be forced with `lwarpmk print1` and `lwarpmk html1`.

manual processing The user may continue to process indexes manually or by shell script without the use of *lwarpmk*, but adjustments will be required to process HTML indexes as well. In general, `*.idx` and `*.ind` files will be accompanied by `*_html.idx` and `*_html.ind` files.

custom index style If using a custom indexing style file, see sections 9.6.19 and 9.6.20.

source code See section 77 for *lwarp*'s core index and glossary code, section 281 for `index`, section 430 for `splitidx`, section 280 for `imakeidx`, section 464 for `toctibind`, and section 519.17 for *memoir*'s indexing patches.

9.6.14 **Indexing with basic L^AT_EX and makeidx**

lwarpmk processing The following allow the user to process indexes automatically, or using *lwarpmk*'s commands:

```
Enter ⇒ lwarpmk printindex
```

```
Enter ⇒ lwarpmk htmlindex
```

For a single index using *makeindex*:

```
\usepackage[makeindex,latexmk]{lwarp}
```

The usual `.idx` and `.ind` files will be used, along with the new `lwarp.ist` style file. When creating the HTML index, “`_html`” is automatically appended to each of the names.

lwarpmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

```
Enter ⇒ lwarpmk printindex
```

```
Enter ⇒ lwarpmk htmlindex
```

to compile the indexes.

For a single index using *xindy*:

```
\usepackage[
  xindy,
  xindyLanguage=english,           <optional>
  xindyCodepage=utf8,             <optional>
  latexmk                          <optional>
]{lwarp}
```

The usual `.idx` and `.ind` files will be used, along with the new `lwarp.xdy` style file.

lwarpmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

```
Enter ⇒ lwarpmk printindex
```

```
Enter ⇒ lwarpmk htmlindex
```

to compile the indexes.

9.6.15 Indexing with index

lwarp is told how to use *makeindex* using the `PrintIndexCmd` and `HTMLIndexCmd` options. The file `lwarp.ist` is specified, which generates index letter heads for print output and also allows special HTML formatting for HTML output.

For multiple indexes using *makeindex* and *index*:

(Assuming that the second index has file extensions *.sist* and *.sind*)

```
\usepackage[
  makeindex, latexmk,
  PrintIndexCmd={
    makeindex -s lwarp.ist <projectname>.idx ;
    makeindex -s lwarp.ist
      -o <projectname>.sind <projectname>.sidx
  },
  HTMLIndexCmd={
    makeindex -s lwarp.ist <projectname>_html.idx ;
    makeindex -s lwarp.ist
      -o <projectname>_html.sind <projectname>_html.sidx
  }
]{lwarp}
\usepackage{index}
...
\makeindex
\newindex{secondname}{sidx}{sind}{Second Index}
```

WINDOWS

For *WINDOWS*, replace the two “;” characters with “&”.

When creating the HTML index, “_html” is automatically appended to the index filenames.

Use

```
Enter ⇒ lwarpmk printindex
```

```
Enter ⇒ lwarpmk htmlindex
```

to compile the indexes.

If the *latexmk* option is selected for *lwarp*, *latexmk* will compile the document but will *not* compile the indexes. **lwarpmk printindex** and **lwarpmk htmlindex** will still be required.

9.6.16 Indexing with *splitidx*

lwarp is told how to use *splitindex* using the *PrintIndexCmd* and *HTMLIndexCmd* options. The file *lwarp.ist* is specified, which generates index letter heads for print output and also allows special HTML formatting for HTML output.

If the *latexmk* option is selected for *lwarp*, *latexmk* will compile the document but will *not* compile the indexes. **lwarpmk printindex** and **lwarpmk htmlindex** will still be required.

\thepage

When using *\AtWriteToIndex* or *\AtNextWriteToIndex*, the user must not refer to *\thepage* during HTML output, as the concept of a page number is meaningless. Instead, do

```
\addtocounter{LWR@autoindex}{1}
\LWR@new@label{LWRindex-\arabic{LWR@autoindex}}
```

where the `\index`-like action occurs, and then refer to `\arabic{LWR@autoindex}` instead of `\thepage` where the reference should occur.

See section 519.17 in the `lwarp-patch-memoir` package for the `\@@wrsindexhyp` macro as an example.

For multiple indexes using *makeindex* and *splitidx*:

```
\usepackage[
  makeindex, latexmk,
  PrintIndexCmd={
    splitindex <projectname> -- -s lwarp.ist
  },
  HTMLIndexCmd={
    splitindex <projectname>_html -- -s lwarp.ist
  }
]{lwarp}
\usepackage{splitidx}
...
\makeindex
\newindex[Second Index]{secondname}
```

When creating the HTML index, “_html” is automatically appended to each of the names.

Use

```
Enter ⇒ lwarpmk printindex
```

```
Enter ⇒ lwarpmk htmlindex
```

to compile the indexes.

For multiple indexes using *xindy* and *splitidx*:

```
\usepackage[
  xindy, latexmk,
  PrintIndexCmd={
    splitindex -m xindy <projectname> -- -M lwarp.xdy
    -L english -C utf8 <optional>
  },
  HTMLIndexCmd={
    splitindex -m xindy <projectname>_html -- -M lwarp.xdy
    -L english -C utf8 <optional>
  }
]{lwarp}
\usepackage{splitidx}
...
\makeindex
\newindex[Second Index]{secondname}
```

When creating the HTML index, “_html” is automatically appended to each of the names.

Use

```
Enter ⇒ lwarpmk printindex
```

Enter ⇒ **lwarpmk htmlindex**
to compile the indexes.

9.6.17 Indexing with imakeidx

Due to the number of methods which may be used to process multiple indexes, the options for style file and *xindy* language and codepage must be specified in one of several different ways. These are described in detail later in this section, but are summarized here.

If shell escape is used, *imakeidx* will automatically compile the indexes by itself. Options specifying a custom style file and *xindy* language and codepage must be specified for each `\makeindex` command using its `options=` option, which must include *lwarp*'s special `lwarp.ist` or `lwarp.xdy` file, or a file based on them. If using a custom indexing style file, see sections 9.6.19 and 9.6.20. The `splitindex` option is also available of shell escape is used, in which case the `splitidx` package and *splitindex* program will also be used.

If shell escape is not possible, *latexmk* may be used to automatically compile the indexes. The style, language, and codepage options are specified with *lwarp*'s `makeindexStyle`, `xindyStyle`, `xindyLanguage`, and `xindyCodepage` options. These are passed to *latexmk* by *lwarpmk*'s `lwarpmk printindex` and `lwarpmk htmlindex` commands.

Where shell escape and *latexmk* are not possible, *lwarpmk* may be used to manually compile the indexes. *lwarp*'s `PrintIndexCmd` and `HTMLIndexCmd` options are used.

For a single or multiple indexes using *makeindex* and *imakeidx*:

The index style `lwarp.ist` is automatically used for HTML output. This file turns on letter headings, so it may be desirable to specify it as an option, in which case it will also be used for print output, which will help match the print and HTML output.

```
\usepackage[makeindex,latexmk] {lwarp}
\usepackage[makeindex]{imakeidx}
...
\makeindex[options={-s lwarp.ist}]
\makeindex[name=secondname,options={-s lwarp.ist}]
```

imakeidx will automatically compile the indexes. Shell escape is not required while using *makeindex*. *latexmk* may be specified, and if so it will be used for `lwarpmk print` and `lwarpmk html`, but *imakeidx* will actually create the indexes.

For a single or multiple indexes using *makeindex* and *splitindex* with *imakeidx*:

The index style `lwarp.ist` is automatically used for HTML output. This file turns on letter headings, so it may be desirable to specify it as an option, in which case it will also be used for print output, which will help match the print and HTML output.


```

\usepackage[makeindex,latexmk] {lwarp}
\usepackage[makeindex,splitindex]{imakeidx}
. . .
\makeindex[options={-s lwarp.ist}]
\makeindex[name=secondname,options={-s lwarp.ist}]

```

⚠ enable shell escape

Shell escape is required while using *splitindex*. For the first compile, use

```
Enter ⇒ pdflatex --shell-escape projectname.tex
```

```
Enter ⇒ pdflatex --enable-write18 projectname.tex (MiKTeX)
```

or similar with *xelatex* or *lualatex*. *lwarp* will remember that shell escape was used.

imakeidx will automatically execute *splitindex*, and will also use *makeindex* to compile the indexes.

latexmk may be specified, and if so it will be used for *lwarpmk print* and *lwarpmk html*, but *imakeidx* will actually create the indexes.

For multiple indexes using *xindy* and *imakeidx*, using shell escape:

Options may be given to *imakeidx*'s `\makeindex` command. The style file `lwarp.xdy` is automatically used for HTML output, and is not necessary for print output since the output will be similar. If language or codepage must be set, they should be specified as options for `\makeindex`, since *imakeidx* will process the indexes.

```

\usepackage[xindy,latexmk] {lwarp}
\usepackage[xindy,splitindex]{imakeidx}
. . .
\makeindex[
  options={ -M lwarp.xdy -L english -c utf8 }
]
\makeindex[
  name=secondname,
  options={ -M lwarp.xdy -L english -c utf8 }
]

```

⚠ enable shell escape

For the first compile, use

```
Enter ⇒ pdflatex --shell-escape projectname.tex
```

```
Enter ⇒ pdflatex --enable-write18 projectname.tex (MiKTeX)
```

or similar with *xelatex* or *lualatex*. *lwarp* will remember that shell escape was used.

imakeidx will automatically execute *splitindex* if selected, and will also use *xindy* to compile the indexes.

If selected, *latexmk* will automatically recompile the entire document as necessary.

For indexes using *xindy* and *imakeidx*, without shell escape, but *with latexmk*:

lwarp's options are used, and are passed to *latexmk*.

```

\usepackage[
  xindy,
  xindyLanguage=english,           <optional>
  xindyCodepage=utf8,             <optional>
  latexmk,
]{lwarp}
\usepackage[xindy]{imakeidx}
...
\makeindex
\makeindex[name=secondname]

```

latexmk will create the indexes automatically when `lwarpmk print` and `lwarpmk html` are executed.

For indexes using *xindy* and *imakeidx*, without shell escape, and *without latexmk*:

lwarpmk must be told how to create the indexes:

```

\usepackage[
  xindy,
  PrintIndexCmd={
    xindy -M lwarp.xdy -L english -C utf8
    <projectname>.idx ;
    xindy -M lwarp.xdy -L english -C utf8
    secondname.idx
  },
  HTMLIndexCmd={
    xindy -M lwarp.xdy -L english -C utf8
    <projectname>_html.idx ;
    xindy -M lwarp.xdy -L english -C utf8
    secondname_html.idx
  }
]{lwarp}
\usepackage[xindy]{imakeidx}
...
\makeindex
\makeindex[name=secondname]

```

⚠ WINDOWS

For WINDOWS, replace the two “;” characters with “&”.

<projectname> is the \jobname: if compiling “name.tex”, use the filenames name.idx and name_html.idx.

Use

```
Enter ⇒ lwarpmk printindex
```

```
Enter ⇒ lwarpmk htmlindex
```

to compile the indexes.

9.6.18 Indexes with memoir

For a single index with memoir and makeindex:

```
\documentclass{memoir}
\usepackage[makeindex,latexmk]{lwarp}
...
\makeindex
```

The usual `.idx` and `.ind` files will be used, along with the `lwarp.ist` style file.

lwarpmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

```
Enter ⇒ lwarpmk printindex
```

```
Enter ⇒ lwarpmk htmlindex
```

to compile the indexes.

For multiple indexes with memoir and makeindex, using latexmk:

lwarp's options are used, and are passed to *latexmk*.

```
\documentclass{memoir}
\usepackage[makeindex,latexmk]{lwarp}
...
\makeindex
\makeindex[secondname]
```

lwarpmk will use *latexmk* to create the indexes automatically when the user executes **lwarpmk print** and **lwarpmk html**.

For multiple indexes with memoir and makeindex, *without* latexmk:

lwarpmk must be told how to create the indexes:

```
\documentclass{memoir}
\usepackage[
  makeindex,
  PrintIndexCmd={
    makeindex -s lwarp.ist <projectname>.idx ;
    makeindex -s lwarp.ist secondname.idx
  },
  HTMLIndexCmd={
    makeindex -s lwarp.ist <projectname>_html.idx ;
    makeindex -s lwarp.ist secondname_html.idx
  }
]{lwarp}
...
\makeindex
\makeindex[secondname]
```

WINDOWS

For WINDOWS, replace the two “;” characters with “&”.

<projectname> is the `\jobname`: if compiling “name.tex”, use the filenames `name.idx` and `name_html.idx`.

Use

```
Enter ⇒ lwarpmk printindex
```

```
Enter ⇒ lwarpmk htmlindex
```

to compile the indexes.

For a single index with memoir and xindy:

```

\documentclass{memoir}
\usepackage[
  xindy,
  xindyLanguage=english,           <optional>
  xindyCodepage=utf8,             <optional>
  latexmk                           <optional>
]{lwarp}
...
\xindyindex
\makeindex

```

The usual `.idx` and `.ind` files will be used, along with the `lwarp.xdy` style file.

lwarpmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

For multiple indexes with memoir and xindy, using latexmk:

lwarp's options are used, and are passed to *latexmk*.

```

\documentclass{memoir}
\usepackage[
  xindy,
  xindyLanguage=english,           <optional>
  xindyCodepage=utf8,             <optional>
  latexmk
]{lwarp}
...
\xindyindex
\makeindex
\makeindex[secondname]

```

lwarpmk will use *latexmk* to create the indexes automatically.

For multiple indexes with memoir and xindy, *without* latexmk:

lwarpmk must be told how to create the indexes:

```

\documentclass{memoir}
\usepackage[
  xindy,
  PrintIndexCmd={
    xindy -M lwarp.xdy -L english -C utf8
    <projectname>.idx ;
    xindy -M lwarp.xdy -L english -C utf8
    secondname.idx
  },
  HTMLIndexCmd={
    xindy -M lwarp.xdy -L english -C utf8
    <projectname>_html.idx ;
    xindy -M lwarp.xdy -L english -C utf8
    secondname_html.idx
  }
]{lwarp}
...
\xindyindex
\makeindex
\makeindex[secondname]

```

⚠ WINDOWS

For *WINDOWS*, replace the four “;” characters with “&”.

<projectname> is the \jobname: if compiling “name.tex”, use the filenames name.idx and name_html.idx.

Use

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

9.6.19 Using a custom *makeindex* style file

Prog	makeindex	When using <i>makeindex</i> , <i>lwarpmk</i> uses the file <code>lwarp.ist</code> to process the index. This
File	lwarp.ist	file is over-written by <i>lwarp</i> whenever a print version of the document is processed.

To use a custom *makeindex* style file:

1. Copy `lwarp.ist` to a new filename such as `projectname.ist`
2. Make changes to `projectname.ist`. Keep the lines which refer to `\hyperindexref`. These lines creates the hyperlinks for the HTML index. During print output `\hyperindexref` becomes a null function.

Opt	makeindexStyle	3. In the document source use the <code>makeindexStyle</code> option for <i>lwarp</i> :
-----	----------------	---

```

\usepackage[
  ... other options ...

```

```

\textred{makeindexStyle=projectname.ist},
]{lwarp}

```

Likewise, refer to the custom style file if using `\PrintIndexCmd`, `\HTMLIndexCmd`, or `\LatexmkIndexCmd`.

4. Recompile the print version, which causes `lwarp` to rewrite the `lwarpmk.conf` configuration file. This tells `lwarpmk` to use the custom `projectname.ist` file instead of `lwarp.ist`.

9.6.20 Using a custom *xindy* style file

Prog	<code>xindy</code>	When using <i>xindy</i> , <code>lwarpmk</code> uses the file <code>lwarp.xdy</code> to process the index. This file is
File	<code>lwarp.xdy</code>	over-written by <code>lwarp</code> whenever a print version of the document is processed.

To use a custom *xindy* style file:

1. Copy `lwarp.xdy` to a new filename such as `projectname.xdy`
2. Make changes to `projectname.xdy`.

Keep the lines which refer to `\hyperindexref`:

```

(define-attributes (("hyperindexref")))
(markup-locref :open "\hyperindexref{" :close "}")
...
(markup-locref :open "\textit{\hyperindexref{" :close "}}" :attr "textit")

```

These lines create the hyperlinks for the HTML index. During print output `\hyperindexref` becomes a null function.

To create custom styles, refer to the lines for `\textbf` and `\textit`.

Opt	<code>xindyStyle</code>	3. In the document source use the <code>xindyStyle</code> option for <code>lwarp</code> :
-----	-------------------------	---

```


\usepackage[
... other options ...
\textred{xindyStyle=projectname.xdy},
]{lwarp}

```


Likewise, refer to the custom style file if using `\PrintIndexCmd`, `\HTMLIndexCmd`, or `\LatexmkIndexCmd`.

4. Recompile the print version, which causes `lwarp` to rewrite the `lwarpmk.conf` configuration file. This tells `lwarpmk` to use the custom `projectname.xdy` file instead of `lwarp.xdy`.

9.6.21 Additional indexing limitations

 **xindy with hyperref** *xindy* and `hyperref` may not work well together for print output with “see”, “see also”, reference ranges, or stylized index references. It may be necessary to turn off hyper-referencing for indexes:

```
\usepackage[hyperindex=false]{hyperref}
```

 **empty index** If an HTML index is empty, it may be necessary to add the following before lwarp is loaded:

```
\usepackage{morewrites}
\morewritessetup{allocate=10}
. . .
\usepackage{lwarp}
```

makeindex custom display styles When using *makeindex*, custom display styles are possible:

```
\begin{warpprint}
\newcommand{\notesstyle}[1]{#1nn}
\end{warpprint}

\begin{warpHTML}
\makeatletter
\newcommand{\notesstyle}[1]{\LWR@doindexentry{#1} notes }
\makeatother
\end{warpHTML}
. . .
A sentence.\index{key|notesstyle}
```

xindy custom display styles For custom styles with *xindy*, see `lwarp.xdy` for `\textbf` and `\textit` as examples.

9.6.22 Index positions, roc, tocibind

placement and roc options An index may be placed inline with other HTML text, or on its own HTML page:

Pkg `makeidx` **Inline, with a manual roc entry:**

```
A commonly-used method to introduce an index in a LATEX document:
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname}% or chapter
\printindex
```

Pkg `makeidx` **On its own HTML page, with a manual roc entry:**

```
\begin{warpprint}
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname}% or chapter
\end{warpprint}
\ForceHTMLPage
\ForceHTMLTOC
\printindex
```

Pkg `tocbibind` **Inline, with an automatic roc entry:**

The `tocbibind` package may be used to automatically place an entry in the roc.

```

\usepackage[nottoc]{tocbibind}
. . .
\cleardoublepage
\phantomsection % to fix print-version index link
\printindex

```

Pkg `tocbibind` **On its own HTML page, with an automatic toc entry:**

```

\usepackage[nottoc]{tocbibind}
. . .
\cleardoublepage
\phantomsection % to fix print-version index link
\ForceHTMLPage
\printindex

```

Opt [`tocbibind`] `numindex` Use the `tocbibind numindex` option to generate a numbered index. Without this option, the index heading has no number.

[numbered index section](#)

Other packages, such as `imakeidx`, may also have options for including the index in the Table of Contents.

Pkg `tocloft`



[tocloft & other packages](#)

If using `tocloft` with `tocbibind`, `anonchp`, `fncychap`, or other packages which change chapter title formatting, load `tocloft` with its `titles` option, which tells `tocloft` to use standard L^AT_EX commands to create the titles, allowing other packages to work with it.

9.7 Math

9.7.1 Math in section names



[math in section names](#)

If using named HTML files, in section names use paren math `\(x+y\)` instead of dollar math `$x+y$`. (Dollar math works, but appears in the filename.) Or, use a short name for the toc entry without the math, or use `\texorpdfstring`:

```

\section{A name with math
\texorpdfstring{$1+2=3$}{text description}}

```

9.7.2 Rendering tradeoffs

[Math rendering](#)

Math may be rendered as SVG graphics or using the MATHJAX JavaScript display engine.

[SVG files](#)

Rendering math as images creates a new SVG file for each expression, except that an MD5 hash is used to combine identical duplicates of the same inline math expression into a single file, which must be converted to SVG only once. Display math is still handled as individual files, since it may contain labels or references which are likely to change.

[SVG inline](#)

The SVG images are currently stored separately, but they could be encoded in-line directly into the HTML document. This may reduce the number of files and potentially speed loading the images, but slows the display of the rest of the document before the images are loaded.

PNG files Others L^AT_EX-to-HTML converters have used PNG files, sometimes pre-scaled for print resolution but displayed on-screen at a scaled down size. This allows high-quality print output at the expense of larger files, but SVG files are the preferred approach for scalable graphics.

MathML Conversion to MathML might be a better approach, among other things allowing a more compact representation of math than SVG drawings. Problems with MathML include limited browser support and some issues with the fine control of the appearance of the result. Also see section 11 regarding EPUB output with MATHJAX.

9.7.3 SVG option

SVG math option For SVG math, math is rendered as usual by L^AT_EX into the initial PDF file using the current font¹⁴, then is captured from the PDF and converted to SVG graphics via a number of utility programs. The SVG format is a scalable-vector web format, so math may be typeset by L^AT_EX with its fine control and precision, then displayed or printed at any size, depending on (sometimes broken) browser support. An HTML alt attribute carries the L^AT_EX code which generated the math, allowing copy/paste of the L^AT_EX math expression into other documents.


SVG image font size For the lateximage environment, the size of the math and text used in the SVG image may be adjusted by setting \LateximageFontSizeName to a font size name — *without the backslash*, which defaults to:

```
\renewcommand{\LateximageFontSizeName}{normalsize}
```

For inline SVG math, font size is instead controlled by \LateximageFontScale, which defaults to:

```
\newcommand*{\LateximageFontScale}{.75}
```

SVG math copy/paste For SVG math, text copy/paste from the HTML <alt> tags lists the equation number or tag for single equations, along with the L^AT_EX code for the math expression. For AMS environments with multiple numbers in the same environment, only the first and last is copy/pasted, as a range. No tags are listed inside a starred AMS environment, although the \tag macro will still appear inside the L^AT_EX math expression.

 **SVG math in T_EX boxes** SVG math does not work inside T_EX boxes, since a \newpage is required before and after each image.

9.7.4 MATHJAX option

MATHJAX math option The popular MATHJAX alternative (mathjax.org) may be used to display math.

Prog MathJax

When MATHJAX is enabled, math is rendered twice:

1. As regular L^AT_EX PDF output placed inside an HTML comment, allowing equation numbering and cross referencing to be almost entirely under the control of L^AT_EX, and

¹⁴See section 506 regarding fonts and fractions.

- As detokenized printed L^AT_EX commands placed directly into the HTML output for interpretation by the MATHJAX display scripts. An additional script is used to pre-set the equation number format and value according to the current L^AT_EX values, and the MATHJAX cross-referencing system is ignored in favor of the L^AT_EX internal system, seamlessly integrating with the rest of the L^AT_EX code.

9.7.5 Customizing MATHJAX

MATHJAX does not have preexisting support every possible math function. Additional MATHJAX function definitions may be defined. These will be declared at the start of each HTML page, and thus will have a global effect.

Examples:

```
\CustomizeMathJax{
  \newcommand{\expval}[1]{\langle#1\rangle}
  \newcommand{\abs}[1]{\lvert#1\rvert}
}
\CustomizeMathJax{\newcommand{\arsinh}{\text{arsinh}}}
\CustomizeMathJax{\newcommand{\arcosh}{\text{arcosh}}}
\CustomizeMathJax{\newcommand{\NN}{\mathbb{N}}}
```

9.7.6 MATHJAX limitations

MATHJAX limitations

Prog MathJax

Limitations when using MATHJAX include:

subequations

- MATHJAX itself does not support subequations. This may be improved by parsing the L^AT_EX math expression to manually insert tags, but this has not yet been done.

footnotes in math

- Footnotes inside equations are not yet supported while using MATHJAX.

lateximage

- Math appearing inside a lateximage, and therefore also inside a Tikz or picture environment, is rendered as SVG math even if MATHJAX is used in the rest of the document.

siunitx

- Usage of siunitx inside a math equation is supported via a third-party MATHJAX extension. While inside a math expression, do not use \SI or \si inside \text, where it will be rendered as normal text.

⚠ siunitx inside an equation

<https://github.com/burnpanck/MathJax-siunitx>

Also see section 9.7.11.

tabbing

- A tabbing environment is emulated using an HTML <pre>. While MATHJAX is enabled inside tabbing, the browser may not correctly render the horizontal alignment of the math and text following after on the same line.

⚠ other macros and packages

- Other math-related macros and packages are not supported by MATHJAX, including \ensuremath and bigdelim, along with occasionally-used macros such as \relax. lwarp emulates footnotes, units, and nicefrac for MathJax.

9.7.7 Catcode changes

preamble macros with math

The math shift character $\$$ is not set for HTML output until after the preamble. Macros defined in the preamble which contain $\$$ must be enclosed between `\StartDefiningMath` and `\StopDefiningMath` to temporarily change to the HTML meaning of $\$$:

```
\StartDefiningMath
\newcommand{. . .}
\StopDefiningMath
```

As an alternative, use `\(` and `\)` instead of $\$$, in which case `\StartDefiningMath` and `\StopDefiningMath` are not necessary.

If a package defines macros using $\$$, it may be necessary to use `\StartDefiningMath` and `\StopDefiningMath` before and after loading the package.

9.7.8 Complicated inline math objects

`\inlinemathnormal` `\inlinemathother`

An inline math expression is usually converted to a reusable hashed SVG math image, or a MathJax expression. The hash or expression depends on the contents of the math expression. In most cases this math expression is static, such as $\$x+1\$$, so the image can be reused for multiples instances of the same expression. In some cases, the math expression includes a counter or other object which may change between uses.

changing contents

complicated alt tag

Another problem is complicated contents which do not expand well in an alt tag. The macro `\inlinemathother` may be used before a dynamic math expression, and `\inlinemathnormal` after. Doing so tells `lwarp` to use an unhashed SVG math image, even if MathJax is in use. See section 45.

9.7.9 Complicated display math objects

`\displaymathnormal`

By default, or when selecting `\displaymathnormal`, `MATHJAX` math display environments print their contents as text into HTML, and SVG display math environments render their contents as SVG images and use their contents as the alt tag of HTML output. To do so, the contents are loaded into a macro for reuse. In some cases, such as complicated Tikz pictures, compilation will fail.

`\displaymathother` MathJax unsupported complicated alt tag

When selecting `\displaymathother`, it is assumed that the contents are more complicated than “pure” math. An example is an elaborate Tikz picture, which will not render in `MATHJAX` and will not make sense as an HTML alt tag. In this mode, `MATHJAX` is turned off, math display environments become SVG images, even if `MATHJAX` is selected, and the HTML alt tags become simple messages. The contents are internally processed as an environment instead of a macro argument, so complicated objects such as Tikz pictures are more likely to compile successfully.


9.7.10 ntheorem package

Pkg ntheorem

This conversion is not total. Font control is via CSS, and the custom \LaTeX font settings are ignored.




Font control


-  **Equation numbering** `ntheorem` has a bug with equation numbering in \mathcal{AMS} environments when the option `thref` is used. `lwarp` does not share this bug, so equations with `\split`, etc, are numbered correctly with `lwarp`'s HTML output, but not with the print output. It is recommended to use `cleveref` instead of `ntheorem`'s `thref` option.

9.7.11 `siunitx` package

Pkg `siunitx` Due to `pdftotext` limitations, fraction output is replaced by symbol output for `per-mode` and `quotient-mode`.
 Pkg `fractions`

-  **math mode required** Some units will require that the expression be placed inside math mode.


NOTE: As of this writing, the `siunitx` extension for `MATHJAX` is not currently hosted at any public CDN, thus `siunitx` is not usable with `MATHJAX` unless a local copy of this extension is created first. See `\MathJaxFileName` to select a custom `MathJax` script.

-  **tabular** `Tabular S` columns are rendered as simple `c` columns, and `tabular s` columns are not supported. These may be replaced by `c` columns with each cell contained in `\num` or `\si`.

9.7.12 `units` and `nicefrac` packages

Pkg `units` `units` and `nicefrac` work with `lwarp`, but `MATHJAX` does not have an extension for `units` or `nicefrac`. These packages do work with `lwarp`'s option `svgmath`.
 Pkg `nicefrac`

9.7.13 `newtxmath` package

- Pkg `newtxmath` The proper load order is:
 **loading sequence**
- ```

...
\usepackage{lwarp}
...
\usepackage{amsthm}
\usepackage{newtxmath}
...

```

## 9.8 Graphics

Pkg `graphics` Avoid using the `\includegraphics scale` option. Change:

Pkg `graphicx` `\includegraphics[scale=<xx>]{...}`

 **scale**

to:

```
\includegraphics[width=<yy>\linewidth]{...}
```

`\includegraphics file formats` For `\includegraphics` with `.pdf` or `.eps` files, the user must provide a `.pdf` or `.eps`

image file for use in print mode, and also a .svg, .png, or .jpg version of the same image for use in HTML.

```
\includegraphics{filename} % print:.pdf/.eps HTML:.svg, etc.
```

For print output, `lwarp` will automatically choose the .pdf or .eps format if available, or some other format otherwise. For HTML, one of the other formats is used instead.

If a .pdf or .eps image is referred to with its file extension, the extension will be changed to .svg for HTML:

```
\includegraphics{filename.pdf} % uses .svg in html
\includegraphics{filename.eps} % uses .svg in html
```

Prog `pdftocairo` To convert a PDF image to SVG, use the utility *pdftocairo*:

#### PDF to SVG

```
Enter ⇒ pdftocairo -svg filename.pdf
```

Prog `lwarpmk pdftosvg` For a large number of images, use *lwarpmk*:

```
Enter ⇒ lwarpmk pdftosvg *.pdf (or a list of filenames)
```

Prog `lwarpmk epstopdf` For EPS images converted to PDF using the package `epstopdf`, use

#### Prog `epstopdf` epstopdf package

```
Enter ⇒ lwarpmk pdftosvg *.PDF
```

to convert to SVG images.

**DVI latex** When using DVI *latex*, it is necessary to convert EPS to PDF and then to SVG:

```
Enter ⇒ lwarpmk epstopdf *.eps (or a list of filenames)
```

```
Enter ⇒ lwarpmk pdftosvg *.pdf (or a list of filenames)
```

**PNG and JPG** For PNG or JPG while using *pdflatex*, *lualatex*, or *xelatex*, the same file may be used in both print or HTML versions, and may be used with a file extension, but will also be used without the file extension if it is the only file of its base name.

**GIF** GIF files may be used for HTML, but another format must also be provided for print output.

**file extension priorities** If a file extension is not used, for HTML the file extension priorities are: SVG, GIF, PNG, then JPG.

⚠ **graphics vs. graphicx** If using the older `graphics` syntax, use both optional arguments for `\includegraphics`. A single optional parameter is interpreted as the newer `graphicx` syntax. Note that viewports are not supported by `lwarp` — the entire image will be shown.

⚠ **viewport**

⚠ **viewport  
units**


For `\includegraphics`, avoid `px` and `%` units for width and height, or enclose them inside `warpHTML` environments. For font-proportional image sizes, use `ex` or `em`. For fixed-sized images, use `cm`, `mm`, `in`, `pt`, or `pc`. Use the keys `width=.5\linewidth`, or similar for `\textwidth` or `\textheight` to give fixed-sized images proportional to a 6 by 9 inch text area. Do not use the `scale` option, since it is not well supported by HTML browsers.

**options** `\includegraphics` accepts width and height, origin, rotate and scale, plus new class and alt keys.


**HTML class** With HTML output, `\includegraphics` accepts an optional `class=xyz` keyval combination, and if this is given then the HTML output will include that class for the image. The class is ignored for print output.

**HTML alt tags** Likewise, the `\includegraphics alt` key adds an HTML alt tag to an image, and is ignored for print output. If not assigned, each image is given an alt tag of “(image)”.

**`\rotatebox`** `\rotatebox` accepts the optional origin key.

 **browser support** `\rotatebox`, `\scalebox`, and `\reflectbox` depend on modern browser support. The CSS3 standard declares that when an object is transformed the whitespace which they occupied is preserved, unlike L<sup>A</sup>T<sub>E</sub>X, so expect some ugly results for scaling and rotating.


### 9.8.1 tikz package

 **displaymath and matrices** Pkg `tikz` If using display math with `tikzpicture` or `\tikz`, along with matrices with the `&` character, the document must be modified as follows:

```
\usepackage{tikz}
\tikzset{every picture/.style={ampersand replacement=\&}}
```

and each instance of `&` in the `tikz` expression must be replaced with `\&`.

### 9.8.2 grffile package

 **matching PDF and SVG** Pkg `grffile` `grffile` is supported as-is. File types known to the browser are displayed, and unknown file types are given a link. Each PDF image for print mode should be accompanied by an SVG, PNG, or JPG version for HTML.

### 9.8.3 color package

Pkg `color` `color` is superseded by `xcolor`, and `lwarp` requires several of the features of `xcolor`. When `color` is requested, `xcolor` is loaded as well.


### 9.8.4 xcolor package

**`\colorboxBlock` and `\fcolorboxBlock`** Pkg `xcolor` `\colorboxBlock` and `\fcolorboxBlock` are provided for increased HTML compatibility, and they are identical to `\colorbox` and `\fcolorbox` in print mode. In HTML mode they place their contents into a `<div>` instead of a `<span>`. These `<div>`s are set to display: `inline-block` so adjacent `\colorboxBlock`s appear side-by-side in HTML, although text is placed before or after each.

Print-mode definitions for `\colorboxBlock` and `\fcolorboxBlock` are created by lwarp's core if `xcolor` is loaded.

|                                                 |                                                                                                                                                                              |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>background: none</code>                   | <code>\colorbox</code> and <code>\fcolorboxBlock</code> allow a background color of <code>none</code> , in which case only the frame is drawn, which can be useful for HTML. |
| <code>color support</code>                      | Color definitions, models, and mixing are fully supported without any changes required.                                                                                      |
| <code>colored tables</code>                     | <code>\rowcolors</code> is supported, except that the optional argument is ignored so far.                                                                                   |
| <code>colored text and boxes</code>             | <code>\textcolor</code> , <code>\colorbox</code> , and <code>\fcolorbox</code> are supported.                                                                                |
| <code>\color</code> and <code>\pagecolor</code> | <code>\color</code> and <code>\pagecolor</code> are ignored. Use <code>css</code> or <code>\textcolor</code> where possible.                                                 |

### 9.8.5 epstopdf package


 Pkg `epstopdf` Images with an `.eps` extension will be converted to `.pdf`. The HTML output uses the `.svg` version, so use

`convert to .svg`

Enter ⇒ `lwarpmk pdftosvg <ListofPDFfiles>`


to generate `.svg` versions.

### 9.8.6 pstricks package

 Pkg `pstricks` All `pstricks` content should be contained inside a `pspicture` environment.


`use pspicture`


### 9.8.7 pdftricks package

 Pkg `pdftricks` The `pdftricks` image files `<jobname>-fig*.pdf` must be converted to `.svg`, or else a missing file error will occur. The image files must also be converted again whenever they change. To convert the images:

Enter ⇒ `lwarpmk pdftosvg <jobname>-fig*.pdf`


### 9.8.8 psfrag package

 Pkg `psfrag` The `psfrags` environment is modified to use `lateximage` to encapsulate the image. Always use a `psfrags` environment to contain any local `\psfrag` macros and the associated `\includegraphics` or `\epsfig` calls. Outside of a `psfrags` environment, `psfrags` adjustments will not be seen by lwarp.

 Tip: Use a mono-spaced font for the tags in the EPS file.

### 9.8.9 pstool package

Pkg pstool \graphicspath is ignored, and the file directory must be stated.

 **path and filename** The filename must not have a file extension.

Use

```
Enter => lwarpmk html
```

followed by

```
Enter => lwarpmk limages
```

### 9.8.10 asymptote package

Pkg asymptote To compile:

```
pdflatex project.tex
asy project-*.asy
pdflatex project.tex

lwarpmk print
asy project-*.asy
lwarpmk print1
lwarpmk print1

lwarpmk html
asy project_html-*.asy
lwarpmk html1
lwarpmk html1
lwarpmk limages
```


### 9.8.11 overpic package

Pkg overpic The macros \overpicfontsize and \overpicfontskip are used during HTML generation. These are sent to \fontsize to adjust the font size for scaling differences between the print and HTML versions of the document. Renew these macros before using the overpic and Overpic environments.

 **scaling**

## 9.9 Tabbing

The tabbing environment works, except that `svg math` and `lateximages` do not yet work inside the environment.

 **math in tabbing** If math is used inside tabbing, place tabbing inside a `lateximage` environment, which



will render the entire environment as a single SVG image.

## 9.10 Tabular

### 9.10.1 tabular environment

Tabular mostly works as expected, but pay special attention to the following, especially if working with environments, macros inside tabulars, multirows, \* column specifiers, siunitx S columns, or the packages multirow, longtable, supertabular, or xtab.

#### Defining macros and environments:

⚠ Misplaced alignment  
tab character &

- When defining environments or macros which include tabular and instances of the & character, it may be necessary to make & active before the environment or macro is defined, then restore & to its default catcode after, using the following commands. These are ignored in print mode.

```
\StartDefiningTabulars
<define macros or environments using tabular and & here>
\StopDefiningTabulars
```

⚠ floatrow

This includes before and after defining any macro which used \ttabbox from floatrow.

⚠ tabular inside another  
environment

- When creating a new environment which contains a tabular environment, lwarp's emulation of the tabular does not automatically resume when the containing environment ends, resulting in corrupted HTML rows. To fix this, use \ResumeTabular as follows. This is ignored in print mode.

```
\StartDefiningTabulars % because & is used in a
definition
\newenvironment{outerenvironment}
{
\tabular{cc}
left & right \\
}
{
\TabularMacro\ResumeTabular
left & right \\
\endtabular
}
\StopDefiningTabulars
```

#### Cell contents:

⚠ macro in a table

- Using a custom macro inside a tabular data cell may result in an extra HTML data cell tag, corrupting the HTML table. To avoid this, use \TabularMacro just before the macro. This is ignored in print mode.

```
\TabularMacro\somemacro & more row contents \\
```

#### Column specifiers:

⚠ \* column specification

- \* in a column specification is not used (so far). Repeat the column type the correct number of times.

@ and !

- Only one each of @ and ! is used at each column, and they are used in that order.

\multirow

- In \multirow cells, the print version may have extra instances of <, >, @, and ! cells on the second and later rows in the \multirow which do not appear in the HTML version.

⚠ \newcolumntype

- \newcolumntype is ignored; unknown column types are set to l.

#### Rules:

vertical rules

- Doubled \hlines, \midrules, and vertical rules are supported.
- Vertical rules next to either side of an @ or ! column are displayed on both sides of the column.

width and trim

- Width options are honored. Trim options are converted to rounded top corners. Trim corners are not rounded with @ or ! columns, and full-width rules ignore trim.

full-width rules

- \toprule, \midrule, \bottomrule, and \hline ignore trim. When given an optional width, each cell is styled to create the custom border. Without an optional width, the entire row is given a class to assign the standard border.

combined rules

- If you wish to use \cmidrule followed by \bottomrule, it may be necessary to use:

```
\cmidrule{2-3} \[-2ex]
\bottomrule
```

The optional -2ex is ignored in HTML, but improves the visual formatting in the print output.

⚠ \warpprintonly

⚠ Misplaced \noalign

- For \toprule and \bottomrule, when combined with a warpprint or warpHTML environment, if a “Misplaced \noalign” error occurs, change

```
This & That \endhead
```

to

```
\warpprintonly{This & That \endhead}
```

and likewise with the other \end headings. Keep the \endfirsthead row unchanged, as it is still relevant to HTML output.

#### Other:

longtable headings

- tabularx ignores the width, but X columns do produce paragraph columns or multicolumns.

- For longtable, place headings and footings which do not apply to HTML inside \warpprintonly{ }.

⚠ S columns

- For S columns (from the siunitx package), while producing print output, anything non-numeric must be placed inside { } braces, including commands such as \multirow. While producing HTML output, though, anything placed inside braces is not seen by lwarp’s tabular handling algorithm. To resolve this problem, make a copy of the row, with one version for print output, containing the extra braces, and another version for HTML output, without the extra braces, such as:

```
\warpprintonly{1 & 2 & {\multirow{2}{2cm}{Text}} & 3 \\\}
\warpHTMLonly{1 & 2 & \multirow{2}{2cm}{Text} & 3 \\\}
```

### 9.10.2 multirow package

vposn

- Note that recent versions of multirow include a new optional vposn argument.

multirow cells

- For multirow, insert `\mrowcell` into any empty multi-row cells. This will be a null function for the print output, and is a placeholder for parsing the table for HTML output. An error is generated if this is missed.

```
... & \multirow{2}{.5in}{text} & ...
... & \mrowcell & ...
```

colored cells

- The multirow documentation regarding colored cells recommends using a negative number of rows. This will not work with lwarp, so `\warpprintonly` and `\warpHTMLonly` must be used to make versions for print and HTML.

with `\multicolumn`

⚠ `\multicolumn & \multirow`

- See section 332.2 for `\multicolumnrow`.

lwarp does not support directly combining `\multicolumn` and `\multirow`. Use `\multicolumnrow` instead. To create a 2 column, 3 row cell:

```
\multicolumnrow{2}{c}[c]{3}[0]{1in}[0pt]{Text}
```

The two arguments for `\multicolumn` come first, followed by the five arguments for `\multirow`, many of which are optional, followed by the contents.

⚠ skipped cells

As per `\multirow`, skipped cells to the right of the `\multicolumnrow` statement are not included in the source code on the same line. On the following lines, `\mcolrowcell` must be used for each cell of each column and each row to be skipped. An error is generated if this is missed.

⚠ empty cells

```
... & \multicolumnrow{2}{c}[c]{3}[0]{1in}[0pt]{Text} & ...
... & \mcolrowcell & \mcolrowcell & ...
... & \mcolrowcell & \mcolrowcell & ...
```

### 9.10.3 longtable package

Pkg longtable Use one of either `\endhead` or `\endfirsthead` for both print and HTML, and use a `\warpprintonly` macro to disable the other head phrase, and also the `\endfoot` and `\endfirstfoot` phrases. (See section 9.10.4 if using `threeparttable`.)

```
\begin{longtable}[column specifiers]
[...] \endfirsthead % or \endhead, for print and HTML
\warpprintonly{ % not used in HTML
[...] \endhead % or \endfirsthead
[...] \endfoot
[<lastfoot macros>] \endlastfoot
}
... table contents ...
\warpHTMLonly{
[<lastfoot macros>] % HTML last footer, without \endfoot
% or \endlastfoot.
}
\end{longtable}
```

⚠ **Misplaced `\noalign`** Use the `\warpprintonly` macro instead of the `warpprint` environment. Doing so helps avoid “Misplaced `\noalign`.” when using `\begin{warpprint}`.

⚠ **`\kill`** `\kill` is ignored, place a `\kill` line inside

```
\begin{warpprint} . . . \end{warpprint}
```

or place it inside `\warpprintonly`.

⚠ **lateximage** `longtable` is not supported inside a `lateximage`.

#### 9.10.4 threeparttablex package

Pkg `threeparttablex` `threeparttablex` is used with `longtable` and `booktabs` as follows:

```
\begin{longtable}[column specifiers] }
[. . .] \endfirsthead % or \endhead, for print and HTML
\warpprintonly{ % not used in HTML
[. . .] \endhead % or \endfirsthead
[. . .] \endfoot
\bottomrule \insertTableNotes \endlastfoot
}
. . . table contents . . .
\warpHTMLonly{ % HTML last footer
\bottomrule
\UseMinipageWidths % optional
\insertTableNotes
\endlastfoot
}
\end{longtable}
```

**table width** The table notes are created using a `\multicolumn`. By default the width is not specified to the browser, so long table notes can cause the table to be spread out horizontally. For HTML output, `lwarp` guesses the width of the table depending on the number of columns, then restricts its guess to a min/max range. To use this guess for the width of the table notes, use `\UseMinipageWidths` before `\insertTableNotes`. The width is then specified, and in many cases the result is an improvement in overall table layout.

#### 9.10.5 supertabular and xtab packages

Pkg `supertabular` For `\tablefirsthead`, etc., enclose them as follows:

Pkg `xtab`

⚠ **Misplaced alignment tab character &**

```
\StartDefiningTabulars
\tablefirsthead
. . .
\StopDefiningTabulars
```

See section 9.10.1.

⚠ **lateximage** `supertabular` and `xtab` are not supported inside a `lateximage`.

### 9.10.6 colortbl package

Pkg colortbl Only use `\rowcolor` and `\cellcolor` at the start of a row, in that order.

⚠ row/cell color colortbl ignores the overhang arguments.

### 9.10.7 ctable package

⚠ Misplaced alignment tab character & Use `\StartDefiningTabulars` before one or more `\ctables`, and `\StopDefiningTabulars` after. These change the meaning of the ampersand `&` character.

### 9.10.8 bigdelim package

Pkg bigdelim `\ldelim` and `\rdelim` use `\multirow`, so `\mrowcell` must be used in the proper number of empty cells in the same column below `\ldelim` or `\rdelim`, but not in cells which are above or below the delimiter:

⚠ use `\mrowcell`

---

```

\begin{tabular}{lll}
<empty> & a & b \\
\ldelim\{\}{3}{.25in}[left] & c & d \\
\mrowcell & e & f \\
\mrowcell & g & h \\
<empty> & i & j \\
\end{tabular}

```

---

```

<-> a b
 {
left { c d
 { e f
 { g h
<-> i j

```

---

## 9.11 Floats

### 9.11.1 Float contents alignment

⚠ figure & table alignment `\centering`, etc. are honored in a figure or table if they are the first command inside the float:

```

\begin{table*}
\centering
\caption{A Table}
...

```

### 9.11.2 float, trivfloat, and/or algorithmicx together

Pkg float If using `\newfloat`, `trivfloat`, and/or `algorithmicx` together, see section 475.1.

Pkg trivfloat

Pkg algorithmicx

#### ⚠ package conflicts

Pkg caption

To pass options to `caption`, select the options before loading `lwarp`:

Pkg subcaption

#### ⚠ options

```
\documentclass{article}
...
\PassOptionsToPackage{options_list}{caption}
...
\usepackage{lwarp}
...
\usepackage{caption}
```

#### ⚠ numbering

To ensure proper float numbering, set caption positions such as:

```
\captionsetup[figure]{position=bottom}
\captionsetup[subfigure]{position=bottom}
\captionsetup[table]{position=top}
\captionsetup[subtable]{position=top}
```

Similarly for `longtable`. These positions depend on where the user places the `\caption` command inside each float.

### 9.11.4 subfig package

Pkg subfig

#### ⚠ lof/lotdepth

At present, the package options for `lofdepth` and `lotdepth` are not working. These counters must be set separately after the package has been loaded.

In the document source, use `\hfill` and `\hspace* subfig>inline` between subfigures to spread them apart horizontally. The use of other forms of whitespace may cause paragraph tags to be generated, resulting in subfigures appearing on the following lines instead of all on a single line.

### 9.11.5 floatrow package

Pkg floatrow

Use `\StartDefiningTabulars` and `\StopDefiningTabulars` before and after defining macros using `\ttabbox` with a tabular inside. See section 9.10.1.

#### ⚠ Misplaced alignment tab character & subfig package


When combined with the `subfig` package, while inside a `subfloatrow` `\ffigbox` and `\ttabbox` must have the caption in the first of the two of the mandatory arguments.

#### ⚠ \FBwidth, \FBheight

The emulation of `floatrow` does not support `\FBwidth` or `\FBheight`. These values are pre-set to `.3\linewidth` and `2in`. Possible solutions include:

- Use fixed lengths. `lwarp` will scale the HTML lengths appropriately.
- Use `warpprint` and `warpHTML` environments to select appropriate values for each case.
- Inside a `warpHTML` environment, manually change `\FBwidth` or `\FBheight` before the `\ffigbox` or `\ttabbox`. Use `\FBwidth` or `\FBheight` normally afterwards; it will be used as expected in print output, and will use your custom-selected value in HTML output. This custom value will be used repeatedly, until it is manually changed to a new value.

### 9.11.6 keyfloat package

Pkg `keyfloat` If placing a `\keyfig[H]` inside a `keywrap`, use an absolute width for `\keyfig`, instead of  
 `keywrap` `lw`-proportional widths. (The `[H]` option forces the use of a `minipage`, which internally adjusts for a virtual 6-inch wide `minipage`, which then corrupts the `lw` option.)

## 9.12 KOMA-SCRIPT classes


Cls `komascript` Many features are ignored during the HTML conversion. The goal is source-level compatibility.

`\titlehead`, `\subject`, `\captionformat`, `\figureformat`, and `\tableformat` are not yet emulated.


 **Not fully tested!** [Please send bug reports!](#)

Some features have not yet been tested. Please contact the author with any bug reports.

## 9.13 MEMOIR class

Cls `memoir` While emulating `memoir`, `lwarp` pre-loads a number of packages (section 519.1). This  
 **options clash** can cause an options clash when the user's document later loads the same packages with options. To fix this problem, specify the options before loading `lwarp`:

```
\documentclass{memoir}
...
\PassOptionsToPackage{options_list}{package_name}
...
\usepackage{lwarp}
...
\usepackage{package_name}
```

 **version numbers** `memoir` emulates a number of packages, and declares a version date for each which often does not match the date of the corresponding freestanding package. This can cause warnings about incorrect version numbers. Since `lwarp` is intended to support the freestanding packages, which are often newer than the date declared by `memoir`, it is hoped that `memoir` will update and change its emulated version numbers to match.

`\verbfootnote` is not supported.

`\newfootnoteseries`, etc. are not supported.

`lwarp` loads `pagenote` to perform `memoir`'s `pagenote` functions, but there are minor differences in `\pagenotesubhead` and related macros.

Poem numbering is not supported.

The `verbatim` environment does not yet support the `memoir` enhancements. It is currently recommended to load and use `fancyvrb` instead.

The `memoir` glossary system is not yet supported by `lwarpmk`. The `glossaries` package may be used instead, but does require the glossary entries be changed from the `memoir` syntax to the `glossaries` syntax.

## 9.14 International languages



### section and file names

If using `pdf $\mathit{latex}$`  with the setting `\booltrue{FileSectionNames}`, non-ASCII text in section names can result in corrupted HTML file names. `pdf $\mathit{latex}$`  may be used if setting `\boolfalse{FileSectionNames}`, in which case HTML file numbers will be generated.

For correct HTML file names, use `x $\mathit{latex}$` , `l $\mathit{u}\mathit{a}\mathit{l}\mathit{a}\mathit{t}\mathit{e}\mathit{x}$` , or dedicated document classes / engines.

(As of this writing, this warning is only relevant to the `kotex` package.)

## 9.15 Miscellaneous packages

### 9.15.1 verse and memoir

`Pkg` `verse` When using `verse` or `memoir`, always place a `\\` after each line.

`Cls` `memoir`  
`\attrib` The documentation for the `verse` and `memoir` packages suggest defining an `\attrib` command, which may already exist in current documents, but it will only work for print output. `lwarp` provides `\attribution`, which works for both print and HTML output. To combine the two so that `\attrib` is used for print and `\attribution` is used for HTML:

```
\begin{warpHTML}
\let\attrib\attribution
\end{warpHTML}
```

`Len` `\vleftskip` These lengths are used by `verse` and `memoir` to control the left margin, and they may already be set by the user for print output. New lengths `\HTMLvleftskip` and `\HTMLleftmargini` are provided to control the margins in HTML output. These new lengths may be set by the user before any `verse` environment, and persist until they are manually changed again. One reason to change `\HTMLleftmargini` is if there is a wide `\fl $\mathit{a}\mathit{g}\mathit{v}\mathit{e}\mathit{r}\mathit{s}\mathit{e}$`  in use, such as the word “Chorus”, in which case the value of

`Len` `\leftmargini`

`Len` `\HTMLvleftskip`

`Len` `\HTMLleftmargini`



`\HTMLleftmargini` should be set to a wide enough length to contain “Chorus”. The default is wide enough for a stanza number.

- ⚠ **spacing** Horizontal spacing relies on *pdftotext*'s ability to discern the layout (`-layout` option) of the text in the HTML-tagged PDF output. For some settings of `\HTMLleftmargini` or `\HTMLleftskip` the horizontal alignment may not work out exactly, in which case a label may be shifted by one space.

### 9.15.2 newclude package

- Pkg `newclude` **newclude** modifies `\label` in a non-adaptive way, so **newclude** must be loaded before **lwarp** is loaded:

- ⚠ **loading**

```
\documentclass{article}
...
\usepackage{newclude}
\usepackage[warpHTML]{lwarp}
...
```

### 9.15.3 babel package

- Pkg `babel` When French is used, the caption separator is changed to a dash. The following may be used to restore it to a colon:

- ⚠ **\CaptionSeparator**

```
\renewcommand*{\CaptionSeparator}{:~}
```

- punctuation spaces** Also when French is used, **lwarp** creates fixed-width space around punctuation by patching `\FBcolonspace`, `\FBthinspace`, `\FBguillemet`, `\FBmedkern`, `\FBthickkern`, `\FBtextellipsis`, and the tilde. If the user's document also changes these parameters, the user's changes should be placed inside a `warpprint` environment so that the user's changes do not affect the HTML output.

- ⚠ **customized spacing**

### 9.15.4 polyglossia package

- Pkg `polyglossia` **lwarp** uses `cleveref`, which has some limitations when using `polyglossia`, possibly resulting in the error

```
! Undefined control sequence. . . . \@begindocumenthook
```

To test compatibility, add

```
\usepackage{cleveref}
```

near the end of the preamble (as the last package to be loaded), and try to compile the print version. It may be necessary to set

```
\setdefaultlanguage{english}
```


or some other language supported by `cleveref`, then select other languages using `\setotherlanguages`.

Once the print version works with `cleveref` and `polyglossia`, the HTML version should work as well using `lwarp`.

### 9.15.5 `todonotes` and `luatodonotes` packages

Pkg `todonotes` The documentation for `todonotes` and `luatodonotes` have an example with a `todo` inside a caption. If this example does not work it will be necessary to move the `todo` outside of the caption.  
Pkg `luatodonotes`

### 9.15.6 `fixme`

Pkg `fixme` External layouts (`\fxloadlayouts`) are not supported.  
 external layouts User control is provided for setting the HTML styling of the “faces”. The defaults are as follows, and may be changed in the preamble after `fixme` is loaded:


```
\def\FXFaceInlineHTMLStyle{font-weight:bold}
\def\FXFaceEnvHTMLStyle{font-weight:bold}
\def\FXFaceSignatureHTMLStyle{font-style:italic}
\def\FXFaceTargetHTMLStyle{font-style:italic}
```

### 9.15.7 `chemfig` package

If using `\polymerdelim` to add delimiters to a `\chemfig`, wrap both inside a single `lateximage`:

```
\begin{lateximage}[(-chemfig-~\packagediagramname)]
\chemfig{...}
\polymerdelim[...]{...}
\end{lateximage}
```

### 9.15.8 `chemformula` package

 `chemformula` with `MATHJAX` `chemformula` works best without `MATHJAX`. If `MATHJAX` is used, `\displaymathother` must be used before `array`, and then `\displaymathnormal` may be used after. (The `chemformula` package adapts to `array`, but does not know about `MATHJAX`, and `MATHJAX` does not know about `chemformula`.)

While using `MATHJAX`, `\displaymathother` may also be used for other forms of display and inline math which contain `chemformula` expressions.

### 9.15.9 `mhchem` package

See section 321.

### 9.15.10 xparse package

Pkg xparse To remove from the log any warnings about redeclaring objects, place the following before lwarp is loaded:

```
\usepackage[log-declarations=false]{xparse}
```

### 9.15.11 kotex package

Pkg kotex See section 9.14 regarding *pdf $\flat$ tex* and Korean section names.

 Korean section names

## 10 Compiling using custom shell commands

`lwarp` and `lwarpmk` try to make it easy to process print and HTML compilation tasks in most situations. Depending on the operating system, command-line options, T<sub>E</sub>X engine, and `lwarp` options, the commands `lwarpmk print` and `lwarpmk html` are automatically set up to correctly recompile the project. These actions may be overridden using `lwarp` options, thus allowing the use of packages such as `perltex` and `pythontex`.

### 10.1 Command options

Opt `PrintLatexCmd` The `lwarp` options `PrintLatexCmd` and `HTMLLatexCmd` are used to set customized commands to be executed by `lwarpmk print` and `lwarpmk html`.  
 Opt `HTMLLatexCmd`

`PrintLatexCmd` should be set to shell commands which take `project.tex` and generate `project.pdf`.

`HTMLLatexCmd` should be set to take `project_html.tex` and generate `project_html.pdf`. `lwarpmk` will then take `project_html.pdf` and automatically convert it and generate `project.html`.

### 10.2 Literal character macros

The `lwarp` package options are parsed by T<sub>E</sub>X, and so some characters require the use of a special macro to represent them. See table 7. `\LWRopquote` and `\LWRopseq` may be used to increase operating-system portability. `\jobname` must have `_html` appended for processing HTML. `\space` may be necessary between other macros.

 **macro not found** To use these macros, either `kvoptions-patch` must be loaded before `lwarp`:

---

```
\usepackage{kvoptions-patch}
\usepackage[
 PrintLatexCmd={ ... } ,
 HTMLLatexCmd={ ... }
]{lwarp}
```

---

Table 7: Literal character macros

| Character | Macro         | Comment                          |
|-----------|---------------|----------------------------------|
| %         | \LWRpercent   |                                  |
| \$        | \LWRdollar    |                                  |
| &         | \LWRamp       |                                  |
| %         | \LWRhash      |                                  |
| \         | \LWRbackslash |                                  |
| ' or "    | \LWRopquote   | Depends on the operating system. |
| & or &&   | \LWRopseq     | Depends on the operating system. |
| (space)   | \space        | Forces an extra space.           |
| (jobname) | \jobname      | Without file extension.          |

or `\lwarpsetup` must be used to set `PrintLatexCmd` and `HTMLLatexCmd`:

---

```

\usepackage[...]{lwarp}
\lwarpsetup{
 PrintLatexCmd=
 {
 latex tm \LWRopseq
 dvips -o tm-pics.ps tm.dvi \LWRopseq
 ps2pdf tm-pics.ps \LWRopseq
 pdflatex tm.tex
 } ,
 HTMLLatexCmd=
 {
 latex tm_html \LWRopseq
 dvips -o tm_html-pics.ps tm_html.dvi \LWRopseq
 ps2pdf tm_html-pics.ps \LWRopseq
 pdflatex tm_html.tex
 }
}

```

---

### 10.3 *latexmk*

Prog `latexmk` If *latexmk* is used for a project, it may be easiest to continue using it.

`latexmk project.tex` would create `project.pdf` as normal.

`latexmk project_html.tex` would create `project_html.pdf`, then

`lwarpmk pdftohtml project_html.pdf` would take `project_html.pdf` and convert it to `project.html`.

Pkg `sagetex` *latexmk* may simplify the use of packages such as `sagetex`.

## 10.4 `perltex` package

Pkg `perltex` The `lwarp` package option settings to use `perltex` would be similar to:

```
\usepackage[
 . . .
 PrintLatexCmd={perltex -latex=pdflatex project.tex} ,
 HTMLLatexCmd={perltex -latex=pdflatex project_html.tex} ,
 . . .
]{lwarp}
```

⚠ “impure” math Place `perltex` math expressions between `\displaymathother` and `\displaymathnormal`, or `\inlinemathother` and `\inlinemathnormal`. See section 9.7.9.

## 10.5 `pythontex` package

Pkg `pythontex` An example using `pythontex`:

```
\usepackage[
 . . .
 PrintLatexCmd={
 pdflatex project.tex \LWRopseq
 pythontex project \LWRopseq
 pdflatex project.tex
 } ,
 HTMLLatexCmd={
 pdflatex project_html.tex \LWRopseq
 pythontex project_html \LWRopseq
 pdflatex project_html.tex
 } ,
 . . .
]{lwarp}
```

Another possibility is to use *latexmk*, placing the `latexmk . . .` commands in the `PrintLatexCmd` and `HTMLLatexCmd` options. While using these options, the `lwarp` option `latexmk` would not be used.

⚠ “impure” math No attempt has yet been made to make `pythontex` robust with HTML output. Some math objects must be surrounded by `\displaymathother ... \displaymathnormal`, or `\inlinemathother ... \inlinemathnormal`. Displays of code may have to be enclosed inside a `lateximage` environment to prevent `<`, `>` and similar from being interpreted by the browser as HTML entities.

⚠ HTML look-alike

## 10.6 Other packages

Pkg `sympytex` Other packages such as `sympytex` and `rterface` would be set up similar to `pythontex`,  
 Pkg `rterface`

and the same warnings would apply.

## 10.7 *make* program

Prog `make` To use `lwarp` with the *make* program, have the makefile take `project.tex` and generate the print version `project.pdf`, as normal. `\usepackage{lwarp}` must be used, and it generates `lwarpmk.conf` when the print version is created.

To generate HTML, first have `project_html.tex` be compiled to generate `project_html.pdf`. This must be in PDF format. Finally, have `project_html.pdf` be converted to HTML using `lwarpmk pdftohtml project_html.pdf`, and convert SVG math with `lwarpmk limages`.

## 10.8 UTF-8 locale

⚠ **UTF-8 locale** *lwarpmk* uses the *texlua* program, which sets the “locale” to “C”, including for external operating-system calls such as when executing `lwarpmk html`. In some cases, an external program called from the user’s document may require the use of a UTF-8 “locale”. For UNIX-related operating systems, it may be required to use `lwarp`’s custom compilation options to add a locale change:

```
\usepackage{lwarp}[
 PrintLatexCmd={
 env LC_CTYPE=en_US.UTF-8
 xelatex --shell-escape project.tex
 }
 HTMLLatexCmd={
 env LC_CTYPE=en_US.UTF-8
 xelatex --shell-escape project_html.tex
 }
]
```

Pkg `ditaa` The only example seen so far where this is required is the `ditaa` package, where the locale change allows the use of UTF-8 with Xe<sub>La</sub>TeX and `ditaa`. To use Lua<sub>La</sub>TeX instead, the locale change would have to be made inside the `ditaa` package where it calls the *ditaa* program.

## 11 EPUB conversion

lwarp does not produce EPUB documents, but it may be told to modify its HTML output to greatly assist in the conversion. An external program may then be used to finish the conversion to EPUB.

**<meta> author** To assign the author's name for regular lwarp HTML files, and also for the EPUB, use `\HTMLAuthor {<name>}`. This assigns the name to the `<meta>` author element. It may be set empty, and it defaults to `\theauthor`.

A special boolean is provided to simplify the process of converting lwarp HTML output to EPUB:

|                | FormatEPUB                                                                                                                                                       |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bool           | FormatEPUB                                                                                                                                                       |
| Default: false | FormatEPUB changes HTML output for easy EPUB conversion via an external program. Removes per-file headers, footers, and nav. Adds footnotes per chapter/section. |

To help convert lwarp HTML output to EPUB, add

```
\booltrue{FormatEPUB}
```

to the project's source preamble after `\usepackage{lwarp}`. The EPUB version of the document cannot co-exist with the regular HTML version, so

```
Enter ⇒ lwarpmk cleanall
```

```
Enter ⇒ lwarpmk html
```

```
Enter ⇒ lwarpmk limages
```

to recompile with the FormatEPUB boolean turned on. Several changes are then made to the HTML output:

- Headers, footers, and navigation are removed at file splits.
- Any accumulated footnotes are printed at the bottom of each section.

The resulting files will be ready to be loaded into an EPUB conversion program, such as the open-source program *Calibre* (<https://calibre-ebook.com/>).

 **search order**

The EPUB conversion program must know what order the files are included. For lwarp projects, set the EPUB conversion software to do a breadth-first search of the files. For *Calibre*, this option is found in

**Preferences** → **Plugins** → **File type plugins** → **HTML to Zip**

 **encoding**

Check the box Add linked files in breadth first order. Set the document encoding as utf-8, which is what lwarp generates for HTML, even if the original printed document uses some other encoding.



### ⚠ section breaks

The EPUB-conversion program must also know where the section breaks are located. For a list of lwarp's section headings, see table 9. For example, an article class document would break at `\section`, which is mapped to HTML heading level `<h4>`, whereas a book class document would break at `\chapter`, which is HTML heading level `<h3>`. For *Calibre*, this option is found in

**Preferences → Conversion (Common Options) → Structure Detection → Detect chapters at (XPath expression)**

Select the “magic wand” to the right of this entry box, and set the first entry

**Match HTML tags with tag name:**

to “h4”. (Or “h3” for document classes with `\chapters`.) The Detect chapters at field should then show

`//h:h4` — or — `//h:h3`

This option is also available on the main tool bar at the Convert books button.

Once these settings have been made, the lwarp-generated HTML files may be loaded by *Calibre*, and then converted to an EPUB.

#### *MATHJAX support*

---

MATHJAX may be used in EPUB documents. Some e-readers include MATHJAX, but any given reader may or may not have a recent version, and may or may not include extensions such as support for siunitx.

lwarp adds some modifications to MathML to support equations numbered by chapter. These modifications may not be compatible with the e-reader's version of MATHJAX, so lwarp requests that a known version be loaded instead. In some cases chapter numbering of equations still doesn't work.

Until math support in EPUB documents is improved, it is recommended to use SVG images instead of MATHJAX, especially for equations numbered by chapter, or where siunitx support is important.

---

## 12 Word-processor conversion

lwarp may be told to modify its HTML output to make it easier to import the HTML document into a word processor. At the time of this writing, it seems that LIBREOFFICE works best at preserving table layout, but it still has some limitations, such as an inability to automatically assign figure and table frames and captions according to user-selected HTML classes. lwarp provides some assistance in locating these frame boundaries, as shown below.

### 12.1 Activating word-processor conversion

A special boolean is provided to simplify the process of converting lwarp HTML output to EPUB:

|                                   | FormatWP                                                                                                                                                                                                                                                                                            |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bool   FormatWP<br>Default: false | <hr/> Changes HTML output for easier conversion by a word processor. Removes headers and nav, prints footnotes per section, and also forces single-file output and turns off HTML debug comments. Additionally, honors the booleans WPMarkFloats, WPMarkMinipages, WPMarkTOC, and WPMarkLOFT. <hr/> |

To help modify lwarp HTML output for easier import to a word processor, add

```
\booltrue{FormatWP}
```

to the project's source preamble after lwarp is loaded. The following changes are then made to the HTML output:

[formatting adjustments](#)

- If using a class without chapters, \section and lower are shifted up in level for the HTML heading tags. The CSS has not been changed, so the section heading formats will not match the normal HTML output, but when imported to *LibreOffice Writer* the higher section headings will import as **Heading 1** for the title, **Heading 2** for \section, etc.
- Headers, footers, and navigation are removed at file splits.
- Any accumulated footnotes are printed at the bottom of each section.
- Forces single-file output.
- Turns off HTML debugging comments. These are comments appearing inside the HTML code, marking the opening/closing of sections and <div>s, but they are no longer useful when the document has been imported into a word processor.
- An additional <div> with an id encapsulates each float and minipage, which on import into *LibreOffice Writer* causes a thin frame to appear around the text block for each.
- Float captions are given an explicit italic formatting.

- Tabular rule borders are made explicit for *LibreOffice Writer*. `LIBREOFFICE` displays a light border around each cell while editing, even those which have no border when printed, and `lwarp` also uses a light border for thin rules, so it will be best to judge the results using the print preview instead of while editing in `LIBREOFFICE`.
- `\includegraphics` and `svg` math width and height are made explicit for `LIBREOFFICE`.
- `\hspace` is approximated by a number of `\quads`, and rules are approximated by a number of underscores.
- Explicit `HTML` styles are given to:
  - `\textsc`, etc.
  - `\underline`, `soul` and `ulem` markup.
  - `center`, `flushleft`, `flushright`.
  - `\marginpar`, `keyfloat`, `sidenotes`, `floatflt`, and `wrapfig`.
  - `fancybox` `\shadowbox`, etc.
  - The `LATEX` and `TEX` logos.

- Honors several booleans:

**WPMarkFloats:** Marks the begin and end of floats.

**WPMarkMinipages:** Marks the begin and end of minipages.

**WPMarkTOC:** Marks the location of the Table of Contents.

**WPMarkLOFT:** Marks the locations of the List of Figures/Tables.

**WPMarkMath:** Prints `LATEX` math instead of using images.

**WPTitleHeading:** Adjusts title and section headings.

Several of these may be used to add markers to the `HTML` text which help determine where to adjust the word processor document after import.

## 12.2 Additional modifications

WPMarkFloats

---

Bool WPMarkFloats  
Default: `false`

Adds

```
=== begin table ===
...
=== end ===
```

or

```
=== begin figure ===
...
=== end ===
```

around floats while formatting for word processors. This helps identify boundaries of floats to be manually converted to word-processor frames and captions.

---

|      |                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                                                                          | WPMarkMinipages                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Bool | WPMarkMinipages<br>Default: false                                        | <hr/> <p>Adds</p> <pre>=== begin minipage === ... === end minipage ===</pre> <p>around minipages while formatting for word processors. This helps identify boundaries of minipages to be manually converted to word-processor frames.</p> <hr/>                                                                                                                                                                                                       |
|      |                                                                          | WPMarkTOC                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Bool | WPMarkTOC<br>Default: true                                               | <hr/> <p>While formatting for word processors, adds</p> <pre>=== table of contents ===</pre> <p>where the Table of Contents would have been. This helps identify where to insert the actual TOC.</p> <p><i>If set false, the actual TOC is printed instead.</i></p> <hr/>                                                                                                                                                                             |
|      |                                                                          | WPMarkLOFT                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Bool | WPMarkLOFT<br>Default: false                                             | <hr/> <p>While formatting for word processors, adds</p> <pre>=== list of figures === and/or === list of tables ===</pre> <p>where each of these lists would have been. This helps identify where to insert the actual lists.</p> <p><i>If set false, the actual lists are printed instead.</i></p> <hr/>                                                                                                                                              |
|      |                                                                          | WPMarkMath                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Bool | <a href="#">siunitx</a><br>WPMarkMath<br>Default: false<br>Prog TeXMaths | <hr/> <p>While formatting for word processors, prints math as <math>\LaTeX</math> code instead of creating SVG images or MATHJAX. This is useful for cut/paste into the <i>LibreOffice Writer TeXMaths</i> extension.</p> <p>When using the <code>siunitx</code> package, enter</p> <pre>\usepackage{siunitx}</pre> <p>in the <i>TeXMaths</i> preamble. Equation numbering is problematic for <math>\mathcal{AMS}</math> math environments.</p> <hr/> |

Table 8: Section HTML headings for word-processor conversion

| Section       | HTML headings*         |                         |                        |                         |
|---------------|------------------------|-------------------------|------------------------|-------------------------|
|               | With \chapter          |                         | Without \chapter       |                         |
|               | WPTitleHeading<br>true | WPTitleHeading<br>false | WPTitleHeading<br>true | WPTitleHeading<br>false |
| Title         | <h1>                   | plain                   | <h1>                   | plain                   |
| \part         | <h2>                   | <h1>                    | <h2>                   | <h1>                    |
| \chapter      | <h3>                   | <h2>                    | —                      | —                       |
| \section      | <h4>                   | <h3>                    | <h3>                   | <h2>                    |
| \subsection   | <h5>                   | <h4>                    | <h4>                   | <h3>                    |
| \paragraph    | <h6>                   | <h5>                    | <h5>                   | <h4>                    |
| \subparagraph | span                   | <h6>                    | <h6>                   | <h5>                    |

\* For default depths when not FormatWP, see table 9 on page 195.

### WPTitleHeading

Bool WPTitleHeading  
Default: false  
section headings

While formatting for word processors, true sets the document title to <h1>, which is expected for HTML documents, but also causes the lower-level section headings to start at **Heading 2** when imported into LIBREOFFICE. Set to false to cause the title to be plain text, and the section headings to begin at **Heading 1**.

See table 8 on page 181.

## 12.3 Recommendations

TOC, LOF, LOT For use with *LibreOffice Writer*, it is recommended to:

1. Set `\booltrue{FormatWP}`
2. Set `\booltrue{WPMarkTOC}` and `\boolfalse{WPMarkLOFT}`
3. Use `lwarp` to generate the HTML document.
4. Copy/paste from the HTML document into an empty *LibreOffice Writer* document.
5. Manually insert a LIBREOFFICE TOC in the LIBREOFFICE document.
6. Manually add frames around each float, adding a caption which is cut/pasted from each float's simulated caption.
7. Manually create cross references.

This process yields a document with an actual LIBREOFFICE Table of Contents, but a simulated List of Figures and List of Tables.

`siunitx` For `siunitx`, remember to adjust the preamble as mentioned above.

**LO view border options** LIBREOFFICE has options in the **View** menu to turn on/off the display of thin borders around table cells and text objects.

## 12.4 Limitations

Floats and captions are not explicitly converted to LIBREOFFICE floats with their own captions. Floats are surrounded by a thin frame in the LIBREOFFICE editor, and may be marked with `WPMarkFloats`, but are not given a proper LIBREOFFICE object frame. Captions are given an explicit italic formatting, but not a proper LIBREOFFICE paragraph style.

Cross references are not actual LIBREOFFICE linked cross references.

The List of Figures and List of Tables are not linked. The pasted pseudo LOF and LOT match the numbering of the `LATEX` and HTML versions.

Equation numbering is not automatic, but the equation numbers in SVG math will match the `LATEX` and HTML output. SVG math is recommended when using the `AMS` environments, which may have multiple numbered equations per object.


As of when last checked, LIBREOFFICE ignores the following:

- Minipage alignment.
- Tabular cell vertical alignment.
- Image rotation and scaling.
- Rounded border corners, which are also used by:
  - `\textcircled`
  - `booktabs trim`
- `\hspace` and `rules`, also used by `algorithmic`.
- Coloring of text decorations, used by `soul` and `ulem`.
- Overline text decoration, used by `romanbar`.

LIBREOFFICE also has limitations with frames and backgrounds:

- Multiple lines in an object are framed individually instead of as a whole.
- Nested frames are not handled correctly.
- Images inside boxes are not framed correctly.
- Spans with background colors and frames are not displayed correctly.

## 13 Modifying lwarp

- locating something** To quickly find the source for a package in `lwarp.dtx`, search for `*packagename`, such as `*siunitx`.
- Likewise, to quickly find the source for a file in `lwarp.dtx`, search for `*filename`, such as `*lwarp.css`.
- Purely text-based packages probably will work as-is when generating HTML.
- Look to existing code for ideas on how to expand into new code.
- image of TeX output** An environment may be converted to a `lateximage` then displayed with an image of the resulting L<sup>A</sup>T<sub>E</sub>X output. See section 89 for an example of the `picture` environment.
- css classes** To create a custom HTML block or inline CSS class, see section 52.9.
- print/HTML macros** To create print and HTML versions of the same macro or environment, see section 37.
-  **TeX boxes** Any TeX boxes must be undone, as SVG math or `lateximages` require `\newpage`, which will not work in a TeX box.
- index recreation** To recreate the index for the lwarp documentation:

---

```
makeindex -s gglo.ist -o lwarp.gls lwarp.glo
splitindex lwarp.idx -- -s gind.ist
```

---

### 13.1 Creating a development system

The following creates a local development system for lwarp on a TeXLive system in a UNIX-like environment. Doing so allows anything requesting lwarp to use the development version instead of whichever version is installed in TeXLive.

#### Create a development directory:

Place into this directory `lwarp.dtx` and `lwarp.ins`.

To create `lwarp.sty`, execute

```
Enter ⇒ pdflatex lwarp.ins
```

which creates `lwarp.sty` and several hundred additional `lwarp-*.sty` files for the various packages which are supported.

To create the documentation `lwarp.pdf`, execute

```
Enter ⇒ pdflatex lwarp.dtx
```

#### To make the development files visible to other projects:

Create the directory

```
/usr/local/texlive/texmf-local/tex/latex/local/lwarp
```

Inside this directory, create the file update, containing:

---

```
ln -s /path_to_dev_directory/lwarp*.sty .
ln -s /path_to_dev_directory/lwarp_baseline_marker.png .
ln -s /path_to_dev_directory/lwarp_baseline_marker.eps .
mktexlsr
```

---

Run ./update now, and whenever a new lwarp-\* package is added.

**To make the development version of *lwarpmk* visible to other projects:**

---

```
cd /opt
ln -s /usr/local/texlive/texmf-local/bin/x86_64-linux texbin_local
cd texbin_local
ln -s ../../scripts/lwarp/lwarpmk.lua lwarpmk
cd /usr/local/texlive/texmf-local/scripts/
mkdir lwarp
cd lwarp
ln -s /path_to_dev_directory/lwarpmk.lua lwarpmk
```

---

Verify that the correct version is found with

Enter ⇒ **which lwarpmk**

**To make the local versions visible to the shell:**

Paths must be set by the shell startup, such as in .bashrc and .cshrc:

In .bashrc:

---

```
PATH=/opt/texbin_local:/opt/texbin:$PATH
```

---

In .cshrc:

---

```
setenv PATH ${HOME}/bin:/opt/texbin_local:/opt/texbin:${PATH}
```

---

## 13.2 Modifying a package for lwarp

If a class loads additional packages, it will be required to modify the class for lwarp, since lwarp must be loaded before most other packages.

To work with lwarp, a class must first set up anything which replicates the functions of the basic L<sup>A</sup>T<sub>E</sub>X classes, load any required fonts, then load lwarp, then finally load and adjust any other required packages.

When creating HTML, lwarp redefines the \usepackage and \RequirePackage macros such that it first looks to see if a lwarp-<packagename>.sty version exists. If so, the lwarp version is used instead. This modular system allows users to create their own versions of packages for lwarp to use for HTML, simply by creating a new package with



a `lwarp-` prefix. If placed in the local directory along with the source code, it will be seen by that project alone. If placed alongside the other `lwarp-` packages where `TEX` can see it, then the user's new package will be seen by any documents using `lwarp`. (Remember `mktextlsr` or `texhash`.)

An `lwarp-<packagename>.sty` package is only used during `HTML` generation. Its purpose is to pretend to be the original package, while modify anything necessary to create a successful `HTML` conversion. For many packages it is sufficient to simply provide nullified macros, lengths, counters, etc. for anything which the original package does, while passing the raw text on to be typeset. See the pre-existing `lwarp-` packages for examples.

Anything the user might expect of the original package must be replaced or emulated by the new `lwarp-` package, including package options, user-adjustable counters, lengths, and booleans, and conditional behaviors. In many of these packages, most of the new definitions have a “local” prefix according to the package name, and `@` characters inside the name, which hides these names from the user. In most cases these macros will not need to be emulated for `HTML` output. Only the “user-facing” macros need to be nullified or emulated.

Each `lwarp-*` package should first call either of:

```
\LWR@ProvidesPackageDrop
-or-
\LWR@ProvidesPackagePass
```

If “Drop”ped, the original print-version package is ignored, and only the `lwarp-` version is used. Use this where the original print version is useless for `HTML`. If “Pass”ed, the original package is loaded first, with the user-supplied options, then the `lwarp-` version continues loading as well. See section 350 (ntheorem) for an example of selectively disabling user options for a package. Use this when `HTML` output only requires some modifications of the original package. For a case where the original package is usable without changes, there is no need to create a `lwarp-` version.

### 13.2.1 Adding a package to the `lwarp.dtx` file

When adding a package to `lwarp.dtx` for permanent including in `lwarp`, provide the `lwarp-<packagename>` code in `lwarp.dtx`, add its entry into `lwarp.ins`, and also remember to add

```
\LWR@loadafter{<packagename>}
```

to `lwarp.dtx` in section 21.1. This causes `lwarp` to stop with an error if `packagename` is loaded before `lwarp`. Finally, add an entry in table 2, **Supported packages and features**, and also the Updates section.

### 13.3 Modifying a class for `lwarp`

If a class loads additional packages, it will be required to modify the class for `lwarp`, since `lwarp` must be loaded before most other packages.

To work with `lwarp`, a class must first set up anything which replicates the functions of the basic  $\text{\LaTeX}$  classes, load any required fonts, then load `lwarp`, then finally load and adjust any other required packages.

### 13.4 Testing `lwarp`

When changes have been made, test the print output before testing the HTML. The print output compiles faster, and any errors in the printed version will be easier to figure out than the HTML version.

Remember that the configuration files are only rewritten when compiling the printed version of the document.

When changing the source to `lwarpmk` or a css file in `lwarp.dtx`:

1. Change the source in `lwarp.dtx`.
2. `pdflatex lwarp.ins`
3. `pdflatex lwarp.dtx`
4. If modifying `lwarpmk` the new version should now be active.
5. If modifying css files:
  - (a) For the document, `lwarpmk print` to update the css files in the project.
  - (b) Reload the HTML document to see the effect of the new css files.

Sometimes it is worth checking the `<project>_html.pdf` file, which is the PDF containing HTML tags. Also, `<project>_html.html` has the text conversion of these tags, before the file is split into individual HTML files.

It is also worth checking the browser's tools for verifying the correctness of HTML and CSS code.

### 13.5 Modifying `lwarpmk`

Prog `lwarpmk`  
File `lwarpmk.lua`

In most installations, `lwarpmk.lua` is an executable file located somewhere the operating system knows about, and it is called by typing `lwarpmk` into a terminal.

A project-local copy of `lwarpmk.lua` may be generated, modified, and then used to compile documents:

1. Add the `lwarpmk` option to the `lwarp` package.
2. Recompile the printed version of the document. The `lwarpmk` option causes `lwarp` to create a local copy of `lwarpmk.lua`
3. The `lwarpmk` option may now be removed from the `lwarp` package.
4. Copy and rename `lwarpmk.lua` to a new file such as `mymake.lua`.

5. Modify `mymake.lua` as desired.
6. If necessary, make `mymake.lua` executable.
7. Use `mymake.lua` instead of `lwarpmk.lua`.

## 14 Troubleshooting

### 14.1 Using the lwarp.sty package

Also see:

Section 8.8: [Commands to be placed into the warpprint environment](#)

Section 9: [Special cases and limitations](#)

**Text is not converting correctly / corrupted HTML tags:**

- Font-related UTF-8 information must be embedded in the PDF file. See section 8.2 regarding bitmapped vs. vector fonts.
- See section 9.2.1 regarding HTML entities and the characters &, <, and >.

**Undefined HTML settings:**

- See the warning regarding the placement of the HTML settings at section 8.4.

**Tabular problems:** See section 9.10.1.

**Obscure error messages:**

**Print first:** Be sure that a print version of the document compiles and that your document's L<sup>A</sup>T<sub>E</sub>X code is correct, before attempting to generate an HTML version.

**\end{warppHTML}, \end{warpprint}, \end{warppall}:** Each of these must be without any other characters on the same line.

**Options clash:** If using memoir, see section 9.13.

**“No room for a new \write.”:** Before `\usepackage{lwarp}`, add:

```
\usepackage{morewrites}
\morewritessetup{allocate=10}
```

**“Missing \$ inserted.”:** If using a filename or URL in a footnote or `\item`, escape underscores with `\_.`

**“Label(s) may have changed. Rerun to get cross-references right.”:**

This warning may repeat endlessly if a math expression is used in a caption. Simple math expressions such as  $X=1$  may be replaced with

```
\textit{X}\,=\,1
```

**“Leaders not followed by proper glue”:** This can be caused by a missing `l@<floattype>` or `l@<sectiontype>` definition. See lwarp's definitions for examples.

**“Improper \prevdepth”:** lateximages and svg math require `\newpage`, which cannot work inside T<sub>E</sub>X boxes or `\ensuremath`. Anything using `\newsavebox`, `\newbox`, `lrbox`, `\savebox`, `\hbox`, `\vbox`, `\usebox`, `\sbox`, etc., must be modified to work without box commands.

If you find something using `\ensuremath`, have it temporarily set:

```
\LetLtxMacro\@ensuredmath\LWR@origensuredmath
```

inside a group first.

Also, custom macros which appear inside a section, figure, or table name should be made robust since they appear inside the `.toc`, `.lof`, or `.lot` files. Use `\newrobustcmd` or `\robustify` from `etoolbox`, `xparse`, etc.

If using BibTeX, see section 9.6.9.

⚠ macros in section,table,figure names

⚠ BibTeX

⚠ polyglossia

“**! Undefined control sequence. . . . \@begindocumenthook’**”: See section 9.15.4 if using polyglossia.

⚠ custom macros for environments

“**\begin{equation} ended by \end{document}**”: Do not use custom macros such as `\beq` and `\eeq` to replace

```
\begin{equation}
```

```
...
```

```
\end{equation}
```

⚠ `\LWR@formatted`

“**Misplaced \omit**”: If using `\LWR@formatted` to define new macros for print and HTML modes, see section 37 regarding `\LWR@expandableformatted`.

⚠ “impure” math objects

**Complicated objects inside math**: Some objects, such as `Tikz`, may not compile in `lwarp`’s normal math emulation. Insert

```
\displaymathother -or- \inlinemathother
```

before the math, and then

```
\displaymathnormal -or- \inlinemathnormal
```

when displaying “normal” math. See section 9.7.9.

**Slow compilation of math objects**: Complicated math objects can also cause problems with `alt` tags, resulting in very slow compilation, large `alt` tags, and possible crashes. Use `\inlinemathother ... \inlinemathnormal` or `\displaymathother ... \displaymathnormal` around the math expression.

⚠ `MATHJAX`

⚠ `MATHJAX`

**Incorrect MATHJAX**: Some objects do not convert to `MATHJAX`. Use `\displaymathother` before these objects, then `\displaymathnormal` to return to “normal” display math. See section 9.7.9.

**Missing sections**: See section 8.4 regarding the `FileDepth` and `SideTOCDepth` counters, and the use of `\tableofcontents` in the home page.

**Misnumbered footnotes from section headings**: See section 9.5.4.

**Missing HTML files**:

- See the warning regarding changes to the HTML settings at section 8.4.
- Ensure that the filenames are unique after math and short words are removed. See `FileSectionNames` at section 8.4.

**Missing / incorrect cross-references**:

- Use `lwarpmk` again followed by `lwarpmk html` or `lwarpmk print` to compile the document one more time.
- Labels with special characters may be a problem. It is best to stick with alpha-numeric, hyphen, underscore, and perhaps the colon (if not French). `\nameref` refers to the most recently-used section where the `\label` was defined. If no section has been defined before the `\label`, the link will be empty. Index entries also use `\nameref` and have the same limitation.

labels

⚠ label characters

`\nameref`

⚠ empty link

### ⚠ cleveref page numbers

- `cleveref` and `varioref` are supported, but printed page numbers do not map to HTML, so a section name or a text phrase are used for `\cpageref` and `\cpagerefrange`. This phrase includes `\cpagerefFor`, which defaults to “for”.

Ex:

```
\cpageref{tab:first,tab:second}
```

in html becomes:

“pages **for** table 4.1 and **for** table 4.2”

See `\cpagerefFor` at page 541 to redefine the message which is printed for page number references.

**BibTeX errors with `\etalchar`:** See section 9.6.9.

**Malformed URLs:** Do not use the % character between arguments of `\hyperref`, etc., as this character is among those which is neutralized for inclusion in HTML URLs.

**Em-dashes or En-dashes in listing captions and titles:**

Use  $\XeLaTeX$  or  $\LuaLaTeX$ .

**Floats out of sequence:**

**Mixed “Here” and floating:** Floats [H]ere and regular floats may become out of order. `\clearpage` if necessary.

**Caption setup:** With `\captionsetup` set the positions for the captions above or below to match their use in the source code.

**Images are appearing in strange places:**

- Enter `lwarpmk limages` to refresh the `lateximage` images.

**SVG images:**

### ⚠ adding/removing

When a math expression, picture, or `Tikz` environment is added or removed, the SVG images must be re-created by entering `lwarpmk limages` to maintain the proper image-file associations. Inline SVG math may be hashed and thus not need to be recreated, but display math and objects such as `Tikz` may move to new image numbers when the document is changed.

### recompile first

Before attempting to create the SVG image files, `lwarpmk` verifies that the HTML version of the document exists and has correct internal image references.<sup>15</sup> If it is necessary to recompile the document’s HTML version one more time, `lwarpmk` usually will inform the user with an error message, but there are some conditions which cannot be detected, so the user should watch for the  $\LaTeX$  recompile warnings.

### ⚠ HTML instead of images

If HTML appears where an SVG image should be, recompile the document one more time to get the page numbers back in sync, then remake the images one more time.

### ⚠ page counter

Incorrect SVG images will also occur if the document changes the page counter:

```
\setcounter{page}{<value>}
```

The page counter must *not* be adjusted by the user.

Expressing math as SVG images has the advantage of representing the math exactly as  $\LaTeX$  would, but has the disadvantage of requiring an individual file

### ⚠ Lots of files!

for each math expression. For inline math, and some other objects, `lwarp` uses an MD5 hash on its  $\LaTeX$  source to combine multiple instances of identical inline expressions into a single image file, but display math and other environments such as `picture` and `Tikz` require one image file each. For a document with a large amount of math, see section 6.5 to use `MATHJAX` instead.

#### Plain-looking document:

- The document's css stylesheet may not be available, or may be linked incorrectly. Verify any `\CSSFile` statements point to a valid css file.

#### Broken fragments of HTML:

- Check the PDF file used to create HTML to see if the tags overflowed the margin. (This is why such large page size and margins are used.)

#### Changes do not seem to be taking effect:

- Be sure to `lwarpmk clean`, recompile, then start by reloading the home page. You may have been looking at an older version of the document. If you changed a section name, you may have been looking at the file for the old name.
- See the warning regarding changes to the HTML settings at section 8.4.
- Verify that the proper css is actually being used.
- The browser may compensate for some subtle changes, such as automatically generating ligatures, reflowing text, etc.

#### Un-matched conditional compiles:

- Verify the proper `begin/end` of `warpprint`, `warpHTML`, and `warpall` environments.

#### 14.1.1 Debug tracing output

`\tracinglwarp` When `\tracinglwarp` is used, `lwarp` will add extra tracing messages to the `.log` file. The last several messages may help track down errors.

Place `\tracinglwarp` just after `\usepackage{lwarp}` to activate tracing.

## 14.2 Compiling the `lwarp.dtx` file

**lwarp\_tutorial.tex:** Copy or link `lwarp_tutorial.txt` from the `TDS doc` directory to the source directory, or wherever you wish to compile the documentation. This file is included verbatim in the documentation, but is in the `doc` directory so that it may be found by `texdoc` and copied by the user.

#### Illogical error messages caused by an out-of-sync `lwarp.sty` file:

1. Delete the `lwarp.sty` file.

<sup>15</sup>This becomes important when dealing with a document containing thousands of images.

2. Enter `pdflatex lwarp.ins` to generate a new `lwarp.sty` file.
3. Enter `pdflatex lwarp.dtx` to recompile the `lwarp.pdf` documentation.

**Un-nested environments:**

Be sure to properly nest:

- `\begin{macrocode}` and `\end{macrocode}`
- `\begin{macro}` and `\end{macro}`
- `\begin{environment}` and `\end{environment}`



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File 1 **lwarp.sty**

## 16 Implementation

This package is perhaps best described as a large collection of smaller individual technical challenges, in many cases solved through a number of ~~erude-hacks~~ clever tricks. Reference sources are given for many of the solutions, and a quick internet search will provide additional possibilities.

Judgement calls were made, and are often commented. Improvements are possible. The author is open to ideas and suggestions.

Packages were patched for re-use where they provided significant functionality. Examples include `xcolor` with its color models and conversion to HTML color output, and `siunitx` which provides many number and unit-formatting options, almost all of which are available in pure-text form, and thus easily used by *pdftotext*.

Packages were emulated where their primary purpose was visual formatting which is not relevant to HTML output. For example, packages related to sectioning are already patched by numerous other packages, creating a difficult number of combinations to try to support, and yet in HTML output all of the formatting is thrown away, so these packages are merely emulated.

Packages with graphical output are allowed as-is, but must be nested inside a `lateximage` environment to preserve the graphics.

Testing has primarily been done with the Iceweasel/Firefox browser.

Table 9: Section depths and HTML headings

| Section                     | $\LaTeX$<br>depth | HTML headings *                           |
|-----------------------------|-------------------|-------------------------------------------|
| title of the entire website |                   | <h1>                                      |
| none                        | -5                | new for this package                      |
| book                        | -2                | <b>not yet used</b>                       |
| part                        | -1                | <h2>                                      |
| chapter                     | 0                 | <h3>                                      |
| section                     | 1                 | <h4>                                      |
| subsection                  | 2                 | <h5>                                      |
| subsubsection               | 3                 | <h6>                                      |
| paragraph                   | 4                 | <span class = "paragraph">                |
| subparagraph                | 5                 | <span class = "subparagraph">             |
| listitem                    | 7                 | new for this package, used for list items |

\* If FormatWP is true, section headings may be adjusted, depending on WPTitleHeading. See table 8 on page 181.

## 17 Section depths and HTML headings

Stacks are created to track depth inside the  $\LaTeX$  document structure. This depth is translated to HTML headings as shown in table 9. “Depth” here is not depth in the traditional computer-science stack-usage sense, but rather a representation of the nesting depth inside the  $\LaTeX$  document structure.

When starting a new section, the program first must close out any existing sections and lists of a deeper level to keep the HTML tags nested correctly.

Support for the memoir package will require the addition of a book level, which may push the HTML headings down a step, and also cause subsubsection to become a <div> due to a limit of six HTML headings.

It is possible to use HTML5 <section> and <h1> for all levels, but this may not be well-recognized by older browsers.

Fixed levels for parts and chapters allow the CSS to remain fixed as well.

## 18 Source code

This is where the documented source code for `lwarp` begins, continuing through the following sections all the way to the change log and index at the end of this document.


The following sections document the actual implementation of the `lwarp` package.

**line numbers** The small numbers at the left end of a line refer to line numbers in the `lwarp.sty` file.

**subjects** Blue-colored tags in the left margin aid in quickly identifying the subject of each paragraph.

**objects** Black-colored tags in the left margin are used to identify programming objects such as files, packages, environments, booleans, and counters. Items without a tag are

**index entries** command macros. Each of these also appears in the index as individual entries, and are also listed together under “files”, “packages”, “environments”, “booleans”, and “counters”.

 **warnings** Special warnings are marked with a warning icon.

**for HTML output:** Green-colored tags in the left margin show which sections of source code apply to the generation of HTML, print, or both forms of output.  
**for PRINT output:**  
**for HTML & PRINT:**

## 19 Detecting the T<sub>E</sub>X engine — *pdf<sub>l</sub>atex*, *lua<sub>l</sub>atex*, *xel<sub>l</sub>atex*

See: <http://tex.stackexchange.com/a/47579>.

Detects X<sub>Y</sub>T<sub>E</sub>X and Lua<sup>L</sup>T<sub>E</sub>X:

```

1 \RequirePackage{iftex}
2 \newif\ifxetexorluatex
3 \ifXeTeX
4 \xetexorluatextrue
5 \else
6 \ifLuaTeX
7 \xetexorluatextrue
8 \else
9 \xetexorluatexfalse
10 \fi
11 \fi
12
13 \ifLuaTeX
14 \RequirePackage{luatex85}% until the geometry package is updated
15 \fi
16
17 \RequirePackage{ifpdf}

18 \RequirePackage{ifptex}

```

## 20 Early package requirements

Pkg `etoolbox` Provides `\ifbool` and other functions.

Pkg `xpatch` Patches macros with optional arguments.

```

19 \RequirePackage{etoolbox}[2011/01/03]% v2.6 for \BeforeBeginEnvironment, etc.
20 \RequirePackage{xpacth}

```

Pkg `ifplatform` Provides `\ifwindows` to try to automatically detect WINDOWS OS.

```

21 \RequirePackage{ifplatform}% sense op-system platform

```

Pkg `letltxmacro`

```

22 \RequirePackage{letltxmacro}

```

## 21 Package load order

Several packages must never be used with `lwarp`, others should only be loaded before `lwarp`, and others should only be loaded after. The `lwarp` core checks most of these

cases. In some `lwarp-*` packages, `\LWR@loadbefore` is used to trigger an error if they are loaded after `lwarp`, while additional code provides necessary patches for when they are loaded before.

Packages which must be loaded after `lwarp` are enforced by a large number of `\LWR@loadafter` statements, below. Some packages are emulated by `memoir`, and so these are tested by `\LWR@notmemoirloadafter`, which does not cause an error if `memoir` is used.

`\LWR@checkloadfilename` is used to check each filename to see if it must never be loaded, or must always be loaded before `lwarp`.

## 21.1 Tests of package load order

`\LWR@loadafter`  $\langle\textit{packagename}\rangle$  Error if this package was loaded before `lwarp`.

```

23 \newcommand*\LWR@loadafter}[1]{%
24 \@ifpackageloaded{#1}
25 {
26 \PackageError{lwarp}
27 {%
28 Package #1,\MessageBreak
29 or one which uses #1,\MessageBreak
30 must be loaded after lwarp
31 }
32 {\Move \detokenize{\usepackage}{#1} after
33 \detokenize{\usepackage}{lwarp}.\MessageBreak
34 Package #1 may also be loaded by something else,\MessageBreak
35 which must also be moved after lwarp.}
36 }
37 {}
38 }

```

`\LWR@notmemoirloadafter`  $\langle\textit{packagename}\rangle$  Error if not `memoir` class and this package was loaded before `lwarp`.

`memoir` emulates many packages, and pretends that they have already been loaded.

```

39 \@ifclassloaded{memoir}
40 {\newcommand*\LWR@notmemoirloadafter}[1]{}
41 {\LetLtxMacro\LWR@notmemoirloadafter\LWR@loadafter}

```

`\LWR@notltjloadafter`  $\langle\textit{packagename}\rangle$  Error if not a `ltjs*` class and this package was loaded before `lwarp`.

```

42 \LetLtxMacro\LWR@notltjloadafter\LWR@loadafter
43
44 \@ifclassloaded{ltjarticle}{\renewcommand*\LWR@notltjloadafter}[1]{}{ }
45 \@ifclassloaded{ltjbook}{\renewcommand*\LWR@notltjloadafter}[1]{}{ }
46 \@ifclassloaded{ltjreport}{\renewcommand*\LWR@notltjloadafter}[1]{}{ }
47 \@ifclassloaded{ltjsarticle}{\renewcommand*\LWR@notltjloadafter}[1]{}{ }
48 \@ifclassloaded{ltjsbook}{\renewcommand*\LWR@notltjloadafter}[1]{}{ }

```

```

49 \@ifclassloaded{ltjsreport}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
50 \@ifclassloaded{ltjspf}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
51 \@ifclassloaded{ltjskiyou}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
52 \@ifclassloaded{ltjarticle}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
53 \@ifclassloaded{ltjbook}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
54 \@ifclassloaded{ltjreport}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}

```

`\LWR@loadbefore`  $\langle\textit{packagename}\rangle$  Error if this package is loaded after lwarp.

```

55 \newcommand*\LWR@loadbefore}[1]{%
56 \@ifpackageloaded{#1}
57 {}
58 {
59 \PackageError{lwarp}
60 {Package #1 must be loaded before lwarp}
61 {Move \detokenize{\usepackage}{#1} before \detokenize{\usepackage}{lwarp}.}
62 }
63 }

```

`\LWR@checkloadbefore`  $\langle\textit{thispackagename}\rangle$   $\langle\textit{packagename}\rangle$

If package names match, error if it is loaded after lwarp.

```

64 \newcommand*\LWR@checkloadbefore}[2]{%
65 \edef\LWR@tempone{#1}%
66 \ifdefstring{\LWR@tempone}{#2}{%
67 \LWR@loadbefore{#1}%
68 }{}%
69 }

```

`\LWR@loadnever`  $\langle\textit{badpackagename}\rangle$   $\langle\textit{replacementpkgnames}\rangle$

The first packages is not supported, so tell the user to use the second instead.

```

70 \newcommand*\LWR@loadnever}[2]{%
71 \PackageError{lwarp}
72 {%
73 Package #1 is not supported\MessageBreak
74 by lwarp's HTML conversion.\MessageBreak
75 Package(s) #2 may be useful instead
76 }
77 {%
78 Package #1 might conflict with lwarp in some way,\MessageBreak
79 or is superceded by another package.\MessageBreak
80 For a possible alternative, see package(s) #2.
81 }
82 }

```

`\LWR@checkloadnever`  $\langle\textit{thispackagename}\rangle$   $\langle\textit{badpackagename}\rangle$   $\langle\textit{replacementpkgnames}\rangle$

If this package name is the bad packagename, suggest the replacements instead.

```

83 \newcommand*\LWR@checkloadnever}[3]{%
84 \edef\LWR@tempone{#1}%
85 \ifdefstring{\LWR@tempone}{#2}{%
86 \LWR@loadnever{#2}{#3}%
87 }{}%
88 }

```

`\LWR@earlyloadnever`  $\{\langle badpackagename \rangle\} \{\langle replacementpkgname \rangle\}$

The first package is not supported, so tell the user to use the second instead. This version checks immediately for packages which may have been loaded before lwarp.

```

89 \newcommand*\LWR@earlyloadnever}[2]{%
90 \@ifpackageloaded{#1}{%
91 \PackageError{lwarp}
92 {%
93 Package #1 is not supported\MessageBreak
94 by lwarp's HTML conversion.\MessageBreak
95 Package(s) #2 may be useful instead
96 }
97 {%
98 Package #1 might conflict with lwarp in some way,\MessageBreak
99 or is superceded by another package.\MessageBreak
100 For a possible alternative, see package(s) #2.
101 }
102 }{}%
103 }

```

`\LWR@earlyclassloadnever`  $\{\langle badclassname \rangle\} \{\langle replacementclassname \rangle\}$

The first class is not supported, so tell the user to use the second instead. This version checks immediately for classes which may have been loaded before lwarp.

```

104 \newcommand*\LWR@earlyclassloadnever}[2]{%
105 \@ifclassloaded{#1}{%
106 \PackageError{lwarp}
107 {%
108 Class #1 is not supported\MessageBreak
109 by lwarp's HTML conversion.\MessageBreak
110 Class(es) #2 may be useful instead
111 }
112 {%
113 Class #1 might conflict with lwarp in some way,\MessageBreak
114 or is superceded by another class.\MessageBreak
115 For a possible alternative, see class(es) #2.
116 }
117 }{}%
118 }

```

## 21.2 Error for disallowed packages and classes loaded before lwarp



```

119 \LWR@earlyclassloadnever{jarticle}{ujarticle}
120 \LWR@earlyclassloadnever{jbook}{ujbook}
121 \LWR@earlyclassloadnever{jreport}{ujreport}
122 \LWR@earlyclassloadnever{tarticle}{utarticle}
123 \LWR@earlyclassloadnever{tbook}{utbook}
124 \LWR@earlyclassloadnever{treport}{utreport}
125 \LWR@earlyloadnever{ae}{cm-super, lmodern}
126 \LWR@earlyloadnever{aeimpl}{cm-super, lmodern}
127 \LWR@earlyloadnever{aecc}{cm-super, lmodern}
128 \LWR@earlyloadnever{alg}{algorithm2e, algorithmicx}
129 \LWR@earlyloadnever{algorithmic}{algorithm2e, algorithmicx}
130 \LWR@earlyloadnever{boxedminipage}{boxedminipage2e}
131 \LWR@earlyloadnever{caption2}{caption}
132 % \LWR@earlyloadnever{ccaption}{caption}% might be preloaded by memoir

```

The older CJK and CJKutf8 only work with xeCJK:

```

133 \@ifpackageloaded{xeCJK}{}{
134 \LWR@earlyloadnever{CJK}{ctex, xeCJK}
135 \LWR@earlyloadnever{CJKutf8}{ctex, xeCJK}
136 }

```

bxckjatype is based on CJK:

```

137 \LWR@earlyloadnever{bxckjatype}{upLaTeX, bxjsarticle, ujarticle, utarticle}

```

hangul is not in TeXLive, and is not tested:

```

138 \LWR@earlyloadnever{hangul}{kotex, xetexko, luatexko}

```

Others:

```

139 \LWR@earlyloadnever{colortab}{colortbl}
140 \LWR@earlyloadnever{epsf}{graphicx}
141 \LWR@earlyloadnever{fancyheadings}{fancyhdr}
142 \LWR@earlyloadnever{fncylab}{cleveref}
143 \LWR@earlyloadnever{glossary}{glossaries}
144 \LWR@earlyloadnever{hyper}{hyperref}
145 \LWR@earlyloadnever{pdfcpot}{microtype}
146 \LWR@earlyloadnever{picinpar}{floatflt, wrapfig}
147 \LWR@earlyloadnever{picins}{floatflt, wrapfig}
148 \LWR@earlyloadnever{sistyle}{siunitx}
149 \LWR@earlyloadnever{t1enc}{fontenc, inputenc, inputenx}
150 \LWR@earlyloadnever{ucs}{inputenc, inputencx}
151 \LWR@earlyloadnever{wasysym}{textcomp, amssymb, amsfonts, mnsymbol, fdsymbol}

```

### 21.3 Enforcing package loading after lwarp

Packages which should only be loaded after lwarp are tested here to trip an error of they have already been loaded.

The following packages must be loaded after lwarp:

```

152 \LWR@loadafter{2in1}

```

```
153 \LWR@loadafter{2up}
154 \LWR@loadafter{a4}
155 \LWR@loadafter{a4wide}
156 \LWR@loadafter{a5comb}
157 \LWR@notmemoirloadafter{abstract}
158 \LWR@loadafter{academicons}
159 \LWR@loadafter{accsupp}
160 \LWR@loadafter{acro}
161 \LWR@loadafter{acronym}
162 \LWR@loadafter{adjmulticol}
163 \LWR@loadafter{addlines}
164 \LWR@loadafter{ae}
165 \LWR@loadafter{aecc}
166 \LWR@loadafter{afterpage}
167 \LWR@loadafter{algorithm2e}
168 \LWR@loadafter{algorithmicx}
169 \LWR@loadafter{alltt}
170 \LWR@loadafter{amsmath}
171 \LWR@loadafter{amsthm}
172 \LWR@loadafter{anonchp}
173 \LWR@loadafter{anysize}
174 \LWR@notmemoirloadafter{appendix}
175 \LWR@loadafter{ar}
176 \LWR@loadafter{arabicfront}
177 \LWR@notmemoirloadafter{array}
178 \LWR@loadafter{arydshln}
179 \LWR@loadafter{asymptote}
180 % \LWR@loadafter{atbegshi}% used by morewrites
181 \LWR@loadafter{attachfile}
182 \LWR@loadafter{attachfile2}
183 \LWR@loadafter{authblk}
184 \LWR@loadafter{autonum}
185 \LWR@loadafter{axessibility}
186 \LWR@loadafter{axodraw2}
187 \LWR@loadafter{backref}
188 \LWR@loadafter{balance}
189 \LWR@loadafter{bbding}
190 \LWR@loadafter{bigdelim}
191 \LWR@loadafter{bigfoot}
192 \LWR@loadafter{bigstrut}
193 \LWR@loadafter{bitpattern}
194 \LWR@loadafter{blowup}
195 \LWR@loadafter{booklet}
196 \LWR@loadafter{bookmark}
197 \LWR@notmemoirloadafter{booktabs}
198 \LWR@loadafter{bophook}
199 \LWR@loadafter{bounddvi}
200 \LWR@loadafter{boxedminipage}
201 \LWR@loadafter{boxedminipage2e}
202 \LWR@loadafter{breakurl}
203 \LWR@loadafter{breqn}
204 \LWR@loadafter{bsheaders}
205 \LWR@loadafter{bypapersize}
206 \LWR@loadafter{byfield}
207 \LWR@loadafter{cancel}
```

---

208 \LWR@loadafter{canoniclayout}  
209 \LWR@loadafter{caption}  
210 \LWR@loadafter{caption2}  
211 \LWR@loadafter{cases}  
212 % \LWR@loadafter{ccaption}% may be preloaded by memoir  
213 \LWR@loadafter{changebar}  
214 \LWR@loadafter{changelayout}  
215 \LWR@notmemoirloadafter{changepage}  
216 \LWR@loadafter{changes}  
217 \LWR@loadafter{chappg}  
218 \LWR@loadafter{chapterbib}  
219 \LWR@loadafter{chemfig}  
220 \LWR@loadafter{chemformula}  
221 \LWR@loadafter{chemgreek}  
222 \LWR@loadafter{chemmacros}  
223 \LWR@loadafter{chemnum}  
224 \LWR@loadafter{chkfloat}  
225 \LWR@notmemoirloadafter{chnpage}  
226 \LWR@loadafter{cite}  
227 \LWR@loadafter{cmdtrack}  
228 \LWR@loadafter{color}  
229 \LWR@loadafter{colortbl}  
230 \LWR@loadafter{continue}  
231 \LWR@loadafter{copyrightbox}  
232 \LWR@notmemoirloadafter{crop}  
233 % ctex must be loaded before lwarp  
234 \LWR@loadafter{ctable}  
235 \LWR@loadafter{cuted}  
236 \LWR@loadafter{cutwin}  
237 \LWR@loadafter{dblfloatfix}  
238 \LWR@loadafter{dblfnote}  
239 \LWR@notmemoirloadafter{dcolumn}  
240 \LWR@loadafter{diagbox}  
241 \LWR@loadafter{dingbat}  
242 \LWR@loadafter{dprogress}  
243 \LWR@loadafter{draftcopy}  
244 \LWR@loadafter{draftfigure}  
245 \LWR@loadafter{draftwatermark}  
246 \LWR@loadafter{easy-todo}  
247 \LWR@loadafter{ebook}  
248 \LWR@loadafter{ed}  
249 \LWR@loadafter{ellipsis}  
250 \LWR@loadafter{embrac}  
251 \LWR@loadafter{emptypage}  
252 \LWR@loadafter{endfloat}  
253 \LWR@loadafter{endheads}  
254 \LWR@loadafter{endnotes}  
255 \LWR@notmemoirloadafter{enumerate}  
256 \LWR@loadafter{enumitem}  
257 \LWR@notmemoirloadafter{epigraph}  
258 \LWR@loadafter{epsfig}  
259 \LWR@loadafter{epstopdf}  
260 \LWR@loadafter{epstopdf-base}  
261 \LWR@loadafter{eqlist}  
262 \LWR@loadafter{eqparbox}

```
263 \LWR@loadafter{errata}
264 \LWR@loadafter{eso-pic}
265 \LWR@loadafter{eurosym}
266 \LWR@loadafter{everypage}
267 \LWR@loadafter{everyshi}
268 \LWR@loadafter{extramarks}
269 \LWR@loadafter{fancybox}
270 \LWR@loadafter{fancyhdr}
271 \LWR@loadafter{fancyheadings}
272 \LWR@loadafter{fancyref}
273 \LWR@loadafter{fancytabs}
274 \LWR@loadafter{fancyvrb}
275 \LWR@loadafter{figcaps}
276 \LWR@loadafter{figsize}
277 \LWR@loadafter{fitbox}
278 \LWR@loadafter{fix2col}
279 \LWR@loadafter{fixme}
280 \LWR@loadafter{fixmetodonotes}
281 \LWR@loadafter{flafter}
282 \LWR@loadafter{flippdf}
283 \LWR@loadafter{float}
284 \LWR@loadafter{floatflt}
285 \LWR@loadafter{floatpag}
286 \LWR@loadafter{floatrow}
287 \LWR@loadafter{fltrace}
288 \LWR@loadafter{flushend}
289 \LWR@loadafter{fnbreak}
290 \LWR@loadafter{fncychap}
291 \LWR@loadafter{fnlineno}
292 \LWR@loadafter{fnpara}
293 \LWR@loadafter{fnpos}
294 \LWR@loadafter{fontawesome}
295 \LWR@loadafter{fontawesome5}
296 % fontenc must be loaded before lwarp
297 % fontspec must be loaded before lwarp
298 \LWR@loadafter{footmisc}
299 \LWR@loadafter{footnote}
300 \LWR@loadafter{footnotebackref}
301 \LWR@loadafter{footnotehyper}
302 \LWR@loadafter{footnoterange}
303 \LWR@loadafter{footnpag}
304 \LWR@loadafter{foreign}
305 \LWR@loadafter{forest}
306 \LWR@loadafter{framed}
307 \LWR@loadafter{ftcap}
308 \LWR@loadafter{ftnright}
309 \LWR@loadafter{fullminipage}
310 \LWR@loadafter{fullpage}
311 \LWR@loadafter{fullwidth}
312 \LWR@loadafter{fwlw}
313 \LWR@loadafter{gentombow}
314 % geometry is always loaded by lwarp, and lwarp-geometry is AtBeginDocument
315 \LWR@loadafter{gmeometric}
316 \LWR@loadafter{glossaries}
317 % \LWR@loadafter{graphics}% pre-loaded by xunicode
```

```
318 % \LWR@loadafter{graphicx}% pre-loaded by xunicode
319 \LWR@loadafter{gloss}
320 \LWR@loadafter{glossary}
321 \LWR@loadafter{grffile}
322 \LWR@loadafter{grid}
323 \LWR@loadafter{grid-system}
324 \LWR@loadafter{gridset}
325 \LWR@loadafter{hang}
326 \LWR@loadafter{hanging}
327 \LWR@loadafter{hypcap}
328 \LWR@loadafter{hypdestopt}
329 \LWR@loadafter{hypernat}
330 \LWR@loadafter{hyperref}
331 \LWR@loadafter{hyperxmp}
332 \LWR@loadafter{hyphenat}
333 \LWR@loadafter{idxlayout}
334 \LWR@loadafter{ifoddpages}
335 \LWR@loadafter{imakeidx}
336 \LWR@notmemoirloadafter{index}
337 % inputenc must be loaded before lwarp
338 % inputenx must be loaded before lwarp
339 % inputtrc may be loaded before lwarp
340 \LWR@loadafter{intopdf}
341 \LWR@loadafter{karnaugh-map}
342 \LWR@loadafter{keyfloat}
343 \LWR@loadafter{layaureo}
344 \LWR@loadafter{layout}
345 \LWR@loadafter{layouts}
346 \LWR@loadafter{leading}
347 \LWR@loadafter{letterspace}
348 \LWR@loadafter{lettrine}
349 \LWR@loadafter{lineno}
350 \LWR@loadafter{lips}
351 \LWR@loadafter{listings}
352 \LWR@loadafter{listliketab}
353 \LWR@loadafter{longtable}
354 \LWR@loadafter{lscap}
355 \LWR@loadafter{ltablex}
356 \LWR@loadafter{ltcaption}
357 \LWR@loadafter{ltxgrid}
358 \LWR@loadafter{ltxtable}
359 \LWR@loadafter{lua-check-hyphen}
360 \LWR@loadafter{lua-visual-debug}
361 \LWR@loadafter{luacolor}
362 \LWR@loadafter{luatodonotes}
363 \LWR@loadafter{magaz}
364 \LWR@notmemoirloadafter{makeidx}
365 \LWR@loadafter{manyfoot}
366 \LWR@loadafter{marginfit}
367 \LWR@loadafter{marginfix}
368 \LWR@loadafter{marginnote}
369 \LWR@loadafter{marvosym}
370 \LWR@loadafter{mathtools}
371 \LWR@loadafter{mcaption}
372 \LWR@loadafter{mdframed}
```

```
373 \LWR@loadafter{memhfixc}
374 \LWR@loadafter{metalogo}
375 \LWR@loadafter{metalogoX}
376 \LWR@loadafter{mhchem}
377 \LWR@loadafter{microtype}
378 \LWR@loadafter{midfloat}
379 \LWR@loadafter{midpage}
380 \LWR@loadafter{minitoc}
381 % morefloats must be allowed early for print mode
382 \LWR@notmemoirloadafter{moreverb}
383 % morewrites must be loaded before lwarp
384 \LWR@notmemoirloadafter{mparhack}
385 \LWR@loadafter{multicap}
386 %\LWR@loadafter{multicol}% loaded by ltxdoc
387 \LWR@loadafter{multicolrule}
388 \LWR@loadafter{multirow}
389 \LWR@loadafter{multitoc}
390 \LWR@loadafter{musicography}
391 \LWR@loadafter{nameauth}
392 \LWR@loadafter{nameref}
393 \LWR@loadafter{natbib}
394 \LWR@notmemoirloadafter{nccfancyhdr}
395 \LWR@notmemoirloadafter{needspace}
396 % newclude must be loaded before lwarp
397 \LWR@loadafter{newtxmath}
398 % newunicodechar must be loaded before lwarp
399 \LWR@notmemoirloadafter{nextpage}
400 \LWR@loadafter{nicefrac}
401 \LWR@loadafter{niceframe}
402 \LWR@loadafter{nomenc}
403 \LWR@loadafter{nonfloat}
404 \LWR@loadafter{nonumonpart}
405 \LWR@loadafter{nopageno}
406 \LWR@loadafter{notes}
407 \LWR@loadafter{notespages}
408 \LWR@loadafter{nowidow}
409 \LWR@loadafter{ntheorem}
410 \LWR@loadafter{octave}
411 \LWR@loadafter{overpic}
412 \LWR@loadafter{pagegrid}
413 \LWR@notmemoirloadafter{pagenote}
414 \LWR@loadafter{pagesel}
415 \LWR@loadafter{paralist}
416 \LWR@loadafter{parnotes}
417 \LWR@notmemoirloadafter{parskip}
418 \LWR@loadafter{pbox}
419 \LWR@loadafter{pdfcomment}
420 \LWR@loadafter{pdfscape}
421 \LWR@loadafter{pdfmarginpar}
422 \LWR@loadafter{pdfpages}
423 \LWR@loadafter{pdfprivacy}
424 \LWR@loadafter{pdfrender}
425 \LWR@loadafter{pdfsync}
426 \LWR@loadafter{pdftricks}
427 \LWR@loadafter{pdfx}
```

```
428 \LWR@loadafter{perpage}
429 \LWR@loadafter{pfnote}
430 \LWR@loadafter{phfqit}
431 \LWR@loadafter{pifont}
432 \LWR@loadafter{placeins}
433 \LWR@loadafter{plarray}
434 \LWR@loadafter{plarydshln}
435 \LWR@loadafter{plextarray}
436 \LWR@loadafter{plextarydshln}
437 \LWR@loadafter{plcolortbl}
438 \LWR@loadafter{plextdelarray}
439 \LWR@loadafter{prelim2e}
440 \LWR@loadafter{prettyref}
441 \LWR@loadafter{preview}
442 \LWR@loadafter{psfrag}
443 \LWR@loadafter{psfragx}
444 \LWR@loadafter{pst-eps}
445 \LWR@loadafter{pstool}
446 \LWR@loadafter{pstricks}
447 % \LWR@loadafter{pxatbegshi}% may be used by morewrites
448 \LWR@loadafter{pxeveryshi}
449 \LWR@loadafter{pxftnright}
450 \LWR@loadafter{pxjahyper}
451 \LWR@loadafter{quotchap}
452 \LWR@loadafter{quoting}
453 \LWR@loadafter{ragged2e}
454 \LWR@loadafter{realscripts}
455 \LWR@loadafter{refcheck}
456 \LWR@loadafter{register}
457 \LWR@loadafter{relsize}
458 \LWR@loadafter{repeatindex}
459 \LWR@loadafter{resizegather}
460 \LWR@loadafter{rmpage}
461 \LWR@loadafter{romanbar}
462 \LWR@loadafter{romanbarpagenumber}
463 \LWR@loadafter{rotating}
464 \LWR@loadafter{rotfloat}
465 \LWR@loadafter{rviewport}
466 \LWR@loadafter{savetrees}
467 % scalefnt is loaded by babel-french
468 \LWR@loadafter{schemata}
469 \LWR@loadafter{scrextend}
470 \LWR@loadafter{scrhack}
471 \LWR@loadafter{scrlayer}
472 \LWR@loadafter{scrlayer-notecolumn}
473 \LWR@loadafter{scrlayer-scrpage}
474 \LWR@loadafter{scrpage2}
475 \LWR@loadafter{section}
476 \LWR@loadafter{sectionbreak}
477 \LWR@loadafter{sectsty}
478 \LWR@loadafter{semantic-markup}
479 \LWR@notmemoirloadafter{setspace}
480 \LWR@loadafter{shadow}
481 \LWR@notmemoirloadafter{showidx}
482 \LWR@loadafter{showkeys}
```

```
483 \LWR@loadafter{showtags}
484 \LWR@loadafter{sidecap}
485 \LWR@loadafter{sidenotes}
486 \LWR@loadafter{SIunits}
487 \LWR@loadafter{siunitx}
488 \LWR@loadafter{soul}
489 \LWR@loadafter{soulpos}
490 \LWR@loadafter{soulutf8}
491 \LWR@loadafter{splitidx}
492 \LWR@loadafter{srcltx}
493 \LWR@loadafter{srctex}
494 \LWR@loadafter{stabular}
495 \LWR@notltjloadafter{stfloats}
496 \LWR@loadafter{struktex}
497 \LWR@loadafter{subcaption}
498 \LWR@loadafter{subfig}
499 \LWR@loadafter{subfigure}
500 \LWR@loadafter{supertabular}
501 \LWR@loadafter{t1inc}
502 \LWR@loadafter{tbls}
503 \LWR@loadafter{tablefootnote}
504 \LWR@notmemoirloadafter{tabularx}
505 \LWR@loadafter{tabulary}
506 \LWR@loadafter{tascmac}
507 \LWR@loadafter{textarea}
508 % \LWR@loadafter{textcomp}% maybe before lwarp with font packages
509 \LWR@loadafter{textfit}
510 \LWR@loadafter{textpos}
511 \LWR@loadafter{theorem}
512 \LWR@loadafter{thinsp}
513 \LWR@loadafter{threadcol}
514 \LWR@loadafter{threeparttable}
515 \LWR@loadafter{threeparttablex}
516 \LWR@loadafter{thumb}
517 \LWR@loadafter{thumbs}
518 \LWR@loadafter{tikz}
519 \LWR@loadafter{titleps}
520 \LWR@loadafter{titlesec}
521 \LWR@loadafter{titletoc}
522 \LWR@notmemoirloadafter{titling}
523 % \LWR@loadafter{tocbasic}% preloaded by koma-script classes
524 \LWR@notmemoirloadafter{tocbibind}
525 \LWR@loadafter{tocdata}
526 \LWR@loadafter{tocenter}
527 \LWR@notmemoirloadafter{tocloft}
528 \LWR@loadafter{tocstyle}
529 \LWR@loadafter{todo}
530 \LWR@loadafter{todonotes}
531 \LWR@loadafter{topcapt}
532 \LWR@loadafter{tram}
533 \LWR@loadafter{transparent}
534 \LWR@loadafter{trimclip}
535 \LWR@loadafter{trivfloat}
536 \LWR@loadafter{truncate}
537 \LWR@loadafter{turnthepage}
```



```

538 \LWR@loadafter{twoup}

539 % \LWR@loadafter{typearea}% preloaded by koma-script classes
540 \LWR@loadafter{typicons}
541 % \LWR@loadafter{ulem}% preloaded by ctexart and related classes
542 \LWR@loadafter{umoline}
543 \LWR@loadafter{underscore}
544 \LWR@loadafter{units}
545 \LWR@loadafter{unitsdef}
546 \LWR@loadafter{upref}
547 \LWR@loadafter{url}
548 \LWR@loadafter{uspace}
549 \LWR@loadafter{varioref}% no lwarp package provided
550 \LWR@notmemoirloadafter{verse}
551 \LWR@loadafter{versionotes}
552 \LWR@loadafter{vertbars}
553 \LWR@loadafter{vmargin}
554 \LWR@loadafter{vowel}
555 \LWR@loadafter{vpe}
556 \LWR@loadafter{vwcol}
557 \LWR@loadafter{wallpaper}
558 \LWR@loadafter{watermark}
559 \LWR@loadafter{widows-and-orphans}
560 \LWR@loadafter{wrapfig}
561 \LWR@loadafter{xbmks}
562 \LWR@loadafter{xcolor}
563 \LWR@loadafter{xexchangebar}
564 \LWR@loadafter{xellipsis}
565 % xetexko-vertical must be loaded before lwarp
566 \LWR@loadafter{xfakebold}
567 \LWR@loadafter{xfrac}
568 \LWR@loadafter{xltabular}
569 \LWR@loadafter{xltextra}
570 \LWR@loadafter{xmpincl}
571 \LWR@loadafter{xpiano}
572 \LWR@loadafter{xpinyin}
573 \LWR@loadafter{xtab}
574 % xunicode must be loaded before lwarp
575 \LWR@loadafter{xurl}
576 \LWR@loadafter{xy}
577 \LWR@loadafter{zwpageLayout}

```

## 22 MD5 hashing

The MD5 hash is used for lateximage filenames for svg math.

```

578 \newcommand{\LWR@mdfive}[1]{%
579 \PackageError{lwarp}
580 {No MD5 macro was found}
581 {Lwarp must find the macros pdfmdfivesum or mdfivesum.}
582 }

```

The default for pdf $\LaTeX$ , dvi $\LaTeX$ , up $\LaTeX$ , etc:

```
583 \let\LWR@mdfive\pdfmdfivesum
```

For Lua $\LaTeX$ :

```
584 \ifLuaTeX
585 \RequirePackage{pdftexcmds}
586 \let\LWR@mdfive\pdf@mdfivesum
587 \fi
```

For Xe $\LaTeX$ :

```
588 \ifXeTeX
589 \@ifundefined{pdf@fivesum}{}
590 {\let\LWR@mdfive\pdfmdfivesum}
591 \@ifundefined{mdfivesum}{}
592 {\let\LWR@mdfive\mdfivesum}
593 \fi
```

## 23 pdf $\LaTeX$ T1 and UTF-8 encoding

When using pdf $\LaTeX$ , lwarp requires T1 encoding, and recommends UTF-8 encoding.

If some other input encoding is already defined, lwarp will try to use it instead, and hope for the best.

Xe $\LaTeX$  and Lua $\LaTeX$  are both UTF-8 by nature.

`\LWR@pdfencoding` Sets T1, and also utf8 if not already set.

```
594 \newcommand*\LWR@pdfencoding{%
595 \RequirePackage[T1]{fontenc}
596
597 \@ifpackageloaded{inputenc}{\{
598 \@ifpackageloaded{inputex}{\{
599 \RequirePackage[utf8]{inputenc}
600 \}
601 \}
602 }

603 \ifPDFTeX% pdflatex or dvi latex
604 \LWR@pdfencoding
605 \fi
606
607 \ifpTeX
608 \LWR@pdfencoding
609 \fi
```

## 24 Unicode input characters

**for HTML & PRINT:** If using *pdflatex*, convert a minimal set of Unicode characters. Additional characters may be defined by the user, as needed.

A commonly-used multiply symbol is declared to be `\texttimes`.

The first arguments of `\newunicodechar` below are text ligatures in the source code, even though they are not printed in the following listing.

```

610 \ifpTeX
611 \else
612 \RequirePackage{newunicodechar}
613
614 \newunicodechar{x}{\texttimes}
615
616 \ifPDFTeX% pdflatex or dvi latex
617 \newunicodechar{ff}{ff}% the first arguments are ligatures
618 \newunicodechar{fi}{fi}
619 \newunicodechar{fl}{fl}
620 \newunicodechar{ffi}{ffi}
621 \newunicodechar{ffl}{ffl}
622 \newunicodechar{---}{---}
623 \newunicodechar{--}{--}
624 \fi
625
626 \fi

```

## 25 Avoid a bitmapped font

If `DVI` or `PDF LATEX`, and if the default Computer Modern is the selected font family, ensure that `cm-super` or `lmodern` is used to provide a vector font.

```

627 \ifxetexorluatex
628 \else
629 \ifdefstring{\f@family}{cmr}{
630 \IfFileExists{type1ec.sty}% found in cm-super
631 {}
632 {% cm-super not installed
633 \IfFileExists{lmodern.sty}{
634 \PackageInfo{lwarp}{cm-super not installed, loading lmodern}
635 \RequirePackage{lmodern}
636 }{
637 \PackageError{lwarp}
638 {%
639 Lwarp requires a vector font.\MessageBreak
640 Install and load cm-super, lmodern, or another\MessageBreak
641 Type-1 vector font before loading lwarp%
642 }
643 }
644 Install cm-super or lmodern.\MessageBreak

```

```

645 If lmodern, load it before lwarp:\MessageBreak
646 \space\space\protect\usepackage{lmodern}\MessageBreak
647 \space\space\protect\usepackage{lwarp}%
648 }
649 }
650 }% cm-super not installed
651 }{}% f@family
652 \fi

```

## 26 Upright quotes

In PDFTEX, preserve upright quotes in verbatim text. `upquote` also loads `textcomp`.

```

653 \ifPDFTeX
654 \RequirePackage{upquote}
655 \fi
656
657 \ifpTeX
658 \RequirePackage{upquote}
659 \fi

```

## 27 Miscellaneous tools

`\LWR@providelength` `{\langle lengthname \rangle}` Provides the length if it isn't defined yet.

Used to provide source compatibility for lengths which will be ignored, but might or might not be already provided by other packages.

```

660 \newcommand*\LWR@providelength[1]{%
661 \ifdeflength{#1}{\newlength{#1}}%
662 }

```

Prints a length in the given units, without printing the unit itself.

`\LWR@convertto` `{\langle dest unit \rangle} {\langle length \rangle}`

```

663 \newcommand*\LWR@convertto[2]{\strip@pt\dimexpr #2*65536/\number\dimexpr 1#1}

```

`\LWR@patcherror` `{\langle packagename \rangle} {\langle macroname \rangle}`

Prints an error if could not patch a macro.

```

664 \newcommand*\LWR@patcherror[2]{%
665 \PackageError{lwarp}
666 {Unable to patch package #1, macro #2}
667 {Please contact the author of the lwarp package.}
668 }

```

`\LWR@isolate`  $\langle text \rangle$  Isolates Chinese characters from the surrounding text. This is required to avoid extra spaces on either side of the Chinese characters, especially when written to a file.

```
669 \newcommand{\LWR@isolate}[1]{#1}%
670
671 \@ifpackageloaded{ctexpatch}{
672 \renewcommand{\LWR@isolate}[1]{\null#1\null}%
673 }{}
674
675 \@ifpackageloaded{xeCJK}{
676 \renewcommand{\LWR@isolate}[1]{\null#1\null}%
677 }{}
```

`\LWR@firstoffour`  $\langle first \rangle$   $\langle second \rangle$   $\langle third \rangle$   $\langle fourth \rangle$

`\LWR@secondoffour`  $\langle first \rangle$   $\langle second \rangle$   $\langle third \rangle$   $\langle fourth \rangle$

`\LWR@thirdoffour`  $\langle first \rangle$   $\langle second \rangle$   $\langle third \rangle$   $\langle fourth \rangle$

`\LWR@fourthoffour`  $\langle first \rangle$   $\langle second \rangle$   $\langle third \rangle$   $\langle fourth \rangle$

Expands to the *n*th of the four arguments. Used for extra cross referencing.

```
678 \long\def\LWR@firstoffour#1#2#3#4{#1}
679 \long\def\LWR@secondoffour#1#2#3#4{#2}
680 \long\def\LWR@thirdoffour#1#2#3#4{#3}
681 \long\def\LWR@fourthoffour#1#2#3#4{#4}
```

## 28 Operating-System portability

|                 |                                                                                         |
|-----------------|-----------------------------------------------------------------------------------------|
| Prog Unix       | lwarp tries to detect which operating system is being used. UNIX / MAC OS / LINUX       |
| Prog Mac OS     | is the default (collectively referred to as “UNIX” in the configuration files), and MS- |
| Prog Linux      | WINDOWS is supported as well.                                                           |
| Prog MS-Windows | If MS-WINDOWS is not correctly detected, use the lwarp option OSWindows.                |
| Prog Windows    | When detected or specified, the operating-system path separator used by lwarp is        |
| Opt OSWindows   | modified, and the boolean usingOSWindows is set true. This boolean may be tested        |
|                 | by the user for later use.                                                              |

### 28.1 Literal characters

Literal characters to be used in `PrintLatexCmd` and `HTMLLatexCmd`. These are defined without @ to easily allow their inclusion in the user’s document.

The literal % character:

```
682 \let\LWRpercent\@percentchar
```

The literal \$ character:

```
683 \catcode'\$=12
684 \def\LWRdollar{\$}
685 \catcode'\$=3
```

The literal & character:

```
686 \catcode'\&=12
687 \def\LWRamp{&}
688 \catcode'\&=4
```

The literal \ character. The ampersand is temporarily set to the escape character during the definition of the backslash macro.

```
689 \catcode'\&=0
690 &catcode'\&=12
691 \def\LWRbackslash{\}
692 &catcode'\&=0
693 \catcode'\&=4
```

The literal { character. The ampersand is temporarily set to the begin group character during the definition of the leftbrace macro.

```
694 \catcode'\&=1
695 \catcode'\{=12
696 \def\LWRleftbrace&{\}
697 \catcode'\{=1
698 \catcode'\&=4
```

The literal } character. The ampersand is temporarily set to the end group character during the definition of the leftbrace macro.

```
699 \catcode'\&=2
700 \catcode'\}=12
701 \def\LWRrightbrace{&}
702 \catcode'\}=2
703 \catcode'\&=4
```

The literal # character:

```
704 \catcode'\#=12
705 \def\LWRhash{#}
706 \catcode'\#=6
```

`\LWRopquote` The operating system's quote mark, UNIX default. For WINDOWS, see `\LWR@setOSWindows`, below.

```
707 \def\LWRopquote{'}
```

`\LWRopseq` The operating system's sequential execution command, UNIX default. For WINDOWS, see `\LWR@setOSWindows`, below.

```
708 \def\LWRopseq{\space\LWRamp\LWRamp\space\space}
```

## 28.2 Common portability code

Bool `usingOSWindows` Set if the `OSWindows` option is used, or if `WINDOWS` is automatically detected.

```
709 \newbool{usingOSWindows}
710 \boolfalse{usingOSWindows}
```

## 28.3 UNIX, LINUX, and MAC OS

`\OSPathSymbol` Symbol used to separate directories in a path.

```
711 \newcommand*{\OSPathSymbol}{/}
```

## 28.4 MS-WINDOWS

For MS-WINDOWS:

`\LWR@setOSWindows` Set defaults for the MS-WINDOWS operating system. `lwarp` attempts to auto-detect the operating system, and the `OSWindows` option may also be used to force MS-WINDOWS compatibility.

```
712 \newcommand*{\LWR@setOSWindows}
713 {
714 \booltrue{usingOSWindows}
715 \renewcommand*{\OSPathSymbol}{\@backslashchar}
716 \def\LWRopquote{"}
717 \def\LWRopseq{\space\LWRamp\space\space}
718 }
```

Test for windows during compile. The user may also specify `OSWindows` package option in case this test fails.

```
719 \ifwindows
720 \LWR@setOSWindows
721 \fi
```

## 29 Package options

Pkg kvoptions Allows key/value package options.

```
722 \RequirePackage{kvoptions}
723 \SetupKeyvalOptions{family=LWR,prefix=LWR@}
```

\lwarpssetup A user interface to set the keys:

```
724 \newcommand{\lwarpssetup}[1]{\setkeys{LWR}{#1}}
```

Bool warpingprint

Bool warpingHTML

Bool mathjax

Bool LWR@origmathjax

Set to true/false depending on the package option selections for print/HTML/EPUB output and mathsvg/mathjax.

LWR@origmathjax remembers the original setting to be restored by `\displaymathnormal`.

```
725 \newbool{warpingprint}
726 \newbool{warpingHTML}
727 \newbool{mathjax}
728 \newbool{LWR@origmathjax}
```

**defaults** The default is print output, and svg math if the user chose HTML output.

```
729 \booltrue{warpingprint}%
730 \boolfalse{warpingHTML}%
731 \boolfalse{mathjax}%
```

Opt warpprint If the warpprint option is given, boolean warpingprint is true and boolean warpingHTML is false, and may be used for `\ifbool` tests.

```
732 \DeclareVoidOption{warpprint}{%
733 \PackageInfo{lwarp}{Using option 'warpprint'}
734 \booltrue{warpingprint}%
735 \boolfalse{warpingHTML}%
736 }
```

Opt warpHTML Anything in the warpHTML environment will be generated for HTML output only.

Opt warpHTML If the warpHTML option is given, boolean warpingHTML is true and boolean warpingprint is false, and may be used for `\ifbool` tests.

```
737 \DeclareVoidOption{warpHTML}{%
738 \PackageInfo{lwarp}{Using option 'warpHTML'}%
739 \booltrue{warpingHTML}%
740 \boolfalse{warpingprint}%
741 }
```

Opt mathsvg Option mathsvg selects svg math display: If the mathsvg option is given, boolean



mathjax is false, and may be used for `\ifbool` tests.

```
742 \DeclareVoidOption{mathsvg}{%
743 \PackageInfo{lwarp}{Using option 'mathsvg'}
744 \boolfalse{mathjax}%
745 \boolfalse{LWR@origmathjax}%

746 }
```

Opt `mathjax` Option `mathjax` selects MATHJAX math display: If the `mathjax` option is given, boolean `mathjax` is true, may be used for `\ifbool` tests.

```
747 \DeclareVoidOption{mathjax}{%
748 \PackageInfo{lwarp}{Using option 'mathjax'}
749 \booltrue{mathjax}%
750 \booltrue{LWR@origmathjax}%

751 }
```

Opt `BaseJobname` Option `BaseJobname` sets the `\BaseJobname` for this document.

Default: `\jobname`

This is the `\jobname` of the printed version, even if currently compiling the HTML version. I.e. this is the `\jobname` without `_html` appended. This is used to set `\HomeHTMLFilename` if the user did not provide one.

```
752 \DeclareStringOption[\jobname]{BaseJobname}
```

Opt `ImagesDirectory` Option `ImagesDirectory` sets the name of the directory to use for the `lateximage` images.  
Default: `\jobname-images`

```
753 \DeclareStringOption[\BaseJobname-images]{ImagesDirectory}
```

Opt `ImagesName` Option `ImagesName` sets the prefix to use for the `lateximage` images.

Default: `image-`

```
754 \DeclareStringOption[image-]{ImagesName}
```

Opt `makeindexStyle` Selects a custom `.ist` file. A customized file should be based on `lwarp.ist`, and must retain the lines related to `\hyperindexref`.  
Default: `lwarp.ist`

```
755 \DeclareStringOption[lwarp.ist]{makeindexStyle}
```

Opt `xindyStyle` Selects a custom `.xdy` file. A customized file should be based on `lwarp.xdy`, and must retain the line  
Default: `lwarp.xdy`

```
(markup-locref :open "\hyperindexref{" :close "}")
```

```
756 \DeclareStringOption[lwarp.xdy]{xindyStyle}
```

Opt `xindyLanguage` Sets the `xindy` language to be assigned in *lwarpmk*'s configuration files. This is then  
Default: `english`

used by *lwarpmk* while processing the index and glossary.

```
757 \DeclareStringOption[english]{xindyLanguage}
```

- Opt xindyCodepage Sets the xindy codepage to be assigned in *lwarpmk*'s configuration files. This is then used by *lwarpmk* while processing the index.  
Default: utf8

```
758 \DeclareStringOption[utf8]{xindyCodepage}
```

- Opt pdftotextEnc The option `pdftotextEnc` sets the encoding used by *pdftotext*. This is passed to *pdftotext* using its `-enc` option, and is used when converting L<sup>A</sup>T<sub>E</sub>X PDF output with HTML tags into a plain-text file with HTML tags.  
Default: UTF-8

```
759 \DeclareStringOption[UTF-8]{pdftotextEnc}
```

- Opt lwarpmk Tells *lwarp* to generate a local copy of *lwarpmk* called `lwarpmk.lua`. Useful for archiving for future use. This file may be made executable and acts just like *lwarpmk*.

If `lwarpmk` option, creates a local copy of `lwarpmk.lua`:

```
760 \newbool{LWR@creatinglwarpmk}
761 \boolfalse{LWR@creatinglwarpmk}
762
763 \DeclareVoidOption{lwarpmk}{
764 \PackageInfo{lwarp}{Using option 'lwarpmk'}}
765 \booltrue{LWR@creatinglwarpmk}
766 }
```

- Opt OSWindows Tells *lwarp* to use MS-WINDOWS compatibility. Auto-detection of the operating system is attempted, and this option is only necessary if the auto-detection fails. See the automatically-generated `lwarpmk.conf` file to find out whether the operating system was detected correctly.

```
767 \DeclareVoidOption{OSWindows}{
768 \PackageInfo{lwarp}{Using option 'OSWindows'}}
769 \LWR@setOSWindows
770 }
```

- Opt HomeHTMLFilename The filename of the homepage. The default is the jobname. This option is stored into `\LWR@HomeHTMLFilename`, and later transferred into `\HomeHTMLFilename` for internal use.  
Default: \BaseJobname

```
771 \DeclareStringOption[]{HomeHTMLFilename}
```

- Opt HTMLFilename The filename prefix of web pages after the homepage. The default is empty, no prefix. This option is stored into `\LWR@HTMLFilename`, and later transferred into `\HTMLFilename` for internal use.  
Default: <empty>

```
772 \DeclareStringOption[]{HTMLFilename}
```

- Opt PrintLatexCmd The shell commands to use to compile the print document.  
Default: <automatic>

```
773 \DeclareStringOption[]{\PrintLatexCmd}
```

Opt HTMLLatexCmd The shell commands to use to compile the HTML document.

Default: <automatic>

```
774 \DeclareStringOption[]{\HTMLLatexCmd}
```

Opt PrintIndexCmd The shell commands to use to compile the print indexes.

Default: <empty>

```
775 \DeclareStringOption[]{\PrintIndexCmd}
```

Opt HTMLIndexCmd The shell commands to use to compile the HTML indexes.

Default: <empty>

```
776 \DeclareStringOption[]{\HTMLIndexCmd}
```

Opt LatexmkIndexCmd The shell commands to be used by *latexmk* to compile the print indexes. Unlike PrintIndexCmd and HTMLIndexCmd, LatexmkIndexCmd does not include the filename, which will be provided by *latexmk*.

Default: <empty>

```
777 \DeclareStringOption[]{\LatexmkIndexCmd}
```

Opt makeindex Tells lwarp to use *makeindex* for index generation. When *lwarpmk.conf* and *\*.lwarpmkconf* are generated, PrintIndexCmd and HTMLIndexCmd will be set for *makeindex* with a single index file.

```
778 \DeclareBoolOption[false]{makeindex}
```

Opt xindy Tells lwarp to use *xindy* for index generation. When *lwarpmk.conf* and *\*.lwarpmkconf* are generated, PrintIndexCmd and HTMLIndexCmd will be set for *xindy* with a single index file.

```
779 \DeclareBoolOption[false]{xindy}
```

Opt GlossaryCmd The shell command to use to compile the glossary. The print or HTML version of the glossary filename will be appended to this command.

Default: *makeglossaries*

```
780 \DeclareStringOption[makeglossaries]{GlossaryCmd}
```

Opt latexmk Option *latexmk* tells *lwarpmk* to use *latexmk* when compiling documents.

```
781 \DeclareBoolOption[false]{latexmk}
```

Opt dvips Option *dvips* tells *lwarpmk* to use *dvips* when compiling DVI *latex* documents.

```
782 \DeclareBoolOption[false]{dvips}
```

Opt dvipdfm Option *dvipdfm* tells *lwarpmk* to use *dvipdfm* when compiling DVI *latex* documents.

```
783 \DeclareBoolOption[false]{dvipdfm}
```

Opt dvipdfmx Option dvipdfmx tells *lwarpmk* to use *dvipdfmx* when compiling DVI *latex* documents.

```
784 \DeclareBoolOption[false]{dvipdfmx}
```

[Execute options](#) Execute the package options, with the defaults which have been set just above:

```
785 \ProcessKeyvalOptions*\relax
```

## 29.1 Additional options support

Assign the `\BaseJobname` if the user hasn't provided one:

```
786 \providecommand*\BaseJobname{\LWR@BaseJobname}
```

Defaults unless already over-ridden by the user:

```
787 \ifcseempty{LWR@HomeHTMLFilename}{
788 \newcommand*\HomeHTMLFilename{\BaseJobname}
789 }{
790 \csedef{HomeHTMLFilename}{\LWR@HomeHTMLFilename}
791 }
792
793 \csedef{HTMLFilename}{\LWR@HTMLFilename}
```

Special handling for underscores in labels and filenames.

`\LWR@sanitized` The sanitized version of what was given to `\LWR@sanitize`. Characters are set to their detokenized versions. Required for underscores in labels and filenames.

```
794 \newcommand*\LWR@sanitized{}
```

`\LWR@sanitize`  $\langle text \rangle$

Sanitizes the text and returns the result in `\LWR@sanitized`.

```
795 \newcommand*\LWR@sanitize[1]{%
796 \edef\LWR@sanitized{#1}%
797 \edef\LWR@sanitized{\detokenize\expandafter{\LWR@sanitized}}%
798 }
```

Sanitize some string options to neutralize underscores.

```
799 \LWR@sanitize{\LWR@BaseJobname}
800 \edef\LWR@BaseJobname{\LWR@sanitized}
801
802 \LWR@sanitize{\LWR@ImagesDirectory}
803 \edef\LWR@ImagesDirectory{\LWR@sanitized}
804
805 \LWR@sanitize{\LWR@ImagesName}
806 \edef\LWR@ImagesName{\LWR@sanitized}
```

`\LWR@PrintIndexCmd` and `\LWR@HTMLIndexCmd` are tested to see if they are empty. If so, they are set to a reasonable defaults for a single index using *makeindex*, then possibly set to defaults for *xindy* if the `lwarp xindy` option was selected.

```

807 \ifdefempty{\LWR@PrintIndexCmd}{
808 \renewcommand{\LWR@PrintIndexCmd}{%
809 makeindex -s \LWR@makeindexStyle \space \jobname.idx%
810 }
811 \ifbool{LWR@xindy}{
812 \renewcommand{\LWR@PrintIndexCmd}{%
813 xindy
814 -M \LWR@xindyStyle \space
815 -L \LWR@xindyLanguage \space
816 -C \LWR@xindyCodepage \space
817 \jobname.idx%
818 }
819 }{}
820 }{}
821
822 \ifdefempty{\LWR@HTMLIndexCmd}{
823 \renewcommand{\LWR@HTMLIndexCmd}{%
824 makeindex -s \LWR@makeindexStyle \space \jobname_html.idx%
825 }
826 \ifbool{LWR@xindy}{
827 \renewcommand{\LWR@HTMLIndexCmd}{%
828 xindy
829 -M \LWR@xindyStyle \space
830 -L \LWR@xindyLanguage \space
831 -C \LWR@xindyCodepage \space
832 \jobname_html.idx%
833 }
834 }{}
835 }{}
836
837 \ifdefempty{\LWR@LatexmkIndexCmd}{
838 \renewcommand{\LWR@LatexmkIndexCmd}{%
839 makeindex -s \LWR@makeindexStyle%
840 }
841 \ifbool{LWR@xindy}{
842 \renewcommand{\LWR@LatexmkIndexCmd}{%
843 xindy
844 -M \LWR@xindyStyle \space
845 -L \LWR@xindyLanguage \space
846 -C \LWR@xindyCodepage%
847 }
848 }{}
849 }{}

```

## 29.2 Conditional compilation

`\warpprintonly {<contents>}`

Only process the contents if producing printed output.

```
850 \newcommand{\warpprintonly}[1]{\ifbool{warpingprint}{#1}{}}
```

`\warpHTMLonly` {<*contents*>}

Only process the contents if producing HTML output.

```
851 \newcommand{\warpHTMLonly}[1]{\ifbool{warpingHTML}{#1}{}}
```

`Pkg comment` Provides conditional code blocks.

Attempts to use `versions` or `verbatim` fail in some cases, and do not provide much of a speed benefit even when they do work.

```
852 \RequirePackage{comment}
```

Use `comment_print.cut` for print mode, and `comment_html.cut` for HTML mode. This helps *l<sup>a</sup>texmk* to more reliably know whether to recompile.

```
853 \ifbool{warpingHTML}{
854 \def\DefaultCutFileName{\def\CommentCutFile{comment_html.cut}}
855 }{}
856
857 \ifbool{warpingprint}{
858 \def\DefaultCutFileName{\def\CommentCutFile{comment_print.cut}}
859 }{}
```

`Env warpall` Anything in the `warpall` environment will be generated for print or HTML outputs.

```
860 \includecomment{warpall}
```

`Env warpprint` Anything in the `warpprint` environment will be generated for print output only.

`Env warpHTML`

For HTML output:

```
861 \ifbool{warpingHTML}
862 {\includecomment{warpHTML}}
863 {\excludecomment{warpHTML}}%

864 \ifbool{warpingprint}
865 {\includecomment{warpprint}}
866 {\excludecomment{warpprint}}
```

Optionally generate a local copy of *lwarpmk*. Default to no.

```
867 \ifbool{LWR@creatinglwarpmk}
868 {\includecomment{LWR@createlwarpmk}}
869 {\excludecomment{LWR@createlwarpmk}}
```

## 30 Required packages

These packages are automatically loaded by lwarp when generating HTML output. Some of them are also automatically loaded when generating print output, but some are not.

**for HTML output:** 870 `\begin{warpHTML}`

Load fontspec if necessary:

```
871 \ifxetexorluatex
872 \@ifpackageloaded{fontspec}{\{
873 \usepackage[no-math]{fontspec}
874 }
```

The monospaced font is used for HTML tags, so turn off its TeX ligatures and common ligatures:

```
875 \defaultfontfeatures[\rmfamily]{Ligatures={NoCommon,TeX}}
876 \defaultfontfeatures[\sffamily]{Ligatures={NoCommon,TeX}}
877 \defaultfontfeatures[\ttfamily]{Ligatures=NoCommon}
878 \else
```

**pdf<sub>l</sub>atex only:** Only pre-loaded if *pdf<sub>l</sub>atex* is being used.

Pkg microtype

**ligatures** Older browsers don't display ligatures. Turn off letter ligatures, keeping L<sup>A</sup>T<sub>E</sub>X dash and quote ligatures, which may fail on older browsers but at least won't corrupt written words.

```
879 \RequirePackage {microtype}
880
881 \microtypesetup{
882 protrusion=false,
883 expansion=false,
884 tracking=false,
885 kerning=false,
886 spacing=false}
887
888 \DisableLigatures[f,q,t,T,Q]{encoding = *,family = *}
889 \fi
890 \end{warpHTML}
```

Pkg geometry Tactics to avoid unwanted page breaks and margin overflow:

- Uses a very long and wide page to minimize page breaks and margin overflow.
- Uses a scriptsize font.
- Uses extra space at the margin to avoid HTML tag overflow off the page.

- Forces a new PDF page before some environments.
- Forces line break between major pieces of long tags.

**for HTML output:** 891 \begin{warpHTML}

892 \RequirePackage{geometry}

Avoid class and option conflict by changing settings after package load:

```
893 \geometry{
894 paperheight=190in,%
895 paperwidth=20in,%
896 left=2in,right=6in,%
897 top=1in,bottom=1in,%
898 }
```

l<sup>at</sup>article and other classes may require these to be reset by lwarp:

```
899 \setlength{\textheight}{0.8\paperheight}
900 \setlength{\textwidth}{0.7\paperwidth}
901
902 \@twosidefalse
903 \@mparswitchfalse
904
905 \end{warpHTML}
```

**for HTML & PRINT:** 906 \begin{warpall}

Pkg xparse

L<sup>A</sup>T<sub>E</sub>X3 command argument parsing

907 \RequirePackage{xparse}

Pkg calc

908 \RequirePackage{calc}

909 \end{warpall}

**for HTML output:** 910 \begin{warpHTML}

Pkg expl3

L<sup>A</sup>T<sub>E</sub>X3 programming

911 \RequirePackage{expl3}

Pkg gettitlestring

Used to emulate \nameref.

912 \RequirePackage{gettitlestring}



Pkg everyhook

everyhook is used to patch paragraph handling.

```
913 \@ifundefined{bxjs@everypar}{ }\let\everypar\bxjs@everypar}
914
915 \RequirePackage{everyhook}
916 \end{warpHTML}
```

**for HTML & PRINT:** 917 \begin{warpall}

Pkg filecontents

Used to write helper files, done in print mode.

Patched to work with `morewrites`, per <https://tex.stackexchange.com/questions/312830/does-morewrites-not-support-filecontents-and-can-i-write-body-of-environment-us/312910>

```
918 \RequirePackage{filecontents}
919
920 \@ifpackagelater{filecontents}{2011/10/09}%
921 {}
922 {
923 \newwrite\fcwrite
924 \let\LWR@origfilec@ntents\filec@ntents
925 \def\filec@ntents{\def\chardef##1\write{\let\reserved@c\fcwrite}\LWR@origfilec@ntents}
926 }

927 \end{warpall}
```

**for HTML output:** 928 \begin{warpHTML}

Pkg xifthen

```
929 \RequirePackage{xifthen}
```

Pkg verbatim

```
930 \RequirePackage{verbatim}
```

Pkg refcount

Provides `\setcounterref`, `\setcounterpageref`, etc.

```
931 \RequirePackage{refcount}
```

Pkg newfloat

```
932 \RequirePackage{newfloat}
```

```
933 \end{warpHTML}
```

**for HTML & PRINT:** 934 \begin{warpall}

Pkg xstring There was a short-term bug in xstring regarding \IfInteger which affected lwarp's index generation. The updated version is requested here.

 index

935 \RequirePackage{xstring}[2019/02/01]

Pkg environ Used to encapsulate math environments for re-use in HTML <alt> text.

936 \RequirePackage{environ}

937 \end{warpall}

**for HTML output:** 938 \begin{warpHTML}

Pkg printlen Used to convert lengths for image width/height options.

939 \RequirePackage{printlen}

\LWR@printlength  $\{\langle length \rangle\}$

Prints a length using a locally-controlled unit and space. Rounding is used unless the length is small.

940 \newrobustcmd\*\LWR@printlength[1]{%

941 \begingroup%

942 \uselengthunit{PT}%

943 \renewcommand\*\unitspace{}%

944 \ifdimless{#1}{10pt}{%

945 \printlength{#1}%

946 }{%

947 \rndprintlength{#1}%

948 }%

949 \endgroup%

950 }

951 \end{warpHTML}

**for PRINT output:** 952 \begin{warpprint}

Pkg varwidth Used for print-mode lateximage.

953 \RequirePackage{varwidth}

954 \end{warpprint}

## 31 Loading packages

**for HTML & PRINT:** 955 \begin{warpall}

Remember the original `\RequirePackage`:

```
956 \LetLtxMacro\LWR@origRequirePackage\RequirePackage
```

`\LWR@requirepackagenames` Stores the list of required package names.

```
957 \newcommand*{\LWR@requirepackagenames}{}
```

`\LWR@parsedrequirepackagenames` Stores the parsed list of required package names after spaces are removed and `lwarp-` is prepended.

```
958 \newcommand*{\LWR@parsedrequirepackagenames}{}
```

`\LWR@nullifycomment` Remove the preexisting comment environment. Certain packages define it for their own use.

```
959 \newcommand*{\LWR@nullifycomment}{%
960 \PackageInfo{lwarp}%
961 {Nullifying the comment environment before loading \LWR@strresulttwo,}%
962 \let\comment\relax%
963 \let\endcomment\relax%
964 }
```

`\LWR@findword` [*1: separator*] [*2: list*] [*3: index*] [*4: destination*]

Note that argument 4 is passed directly to `\StrBetween`.

```
965 \newcommand*\LWR@findword[3][,]{%
966 \StrBetween[#3,\numexpr#3+1]{#1#2#1}{#1}{#1}%
967 }
```

`\LWR@checkloadfilename` `{<filename>}` Checks if this filename should be loaded after `lwarp`, or never at all.

The following should never be loaded:

```
968 \newcommand*{\LWR@checkloadfilename}[1]{%
969 \LWR@checkloadnever{#1}{ae}{latinmodern}
970 \LWR@checkloadnever{#1}{aecc}{latinmodern}
971 \LWR@checkloadnever{#1}{alg}{algorithm2e, algorithmicx}
972 \LWR@checkloadnever{#1}{algorithmic}{algorithm2e, algorithmicx}
973 \LWR@checkloadnever{#1}{bitfield}{bytefield}
974 \LWR@checkloadnever{#1}{boxedminipage}{boxedminipage2e}
975 \LWR@checkloadnever{#1}{caption2}{caption}
976 \LWR@checkloadnever{#1}{ccaption}{caption}
977 \LWR@checkloadnever{#1}{colortab}{colortbl}
978 \LWR@checkloadnever{#1}{doublespace}{setspace}
979 \LWR@checkloadnever{#1}{epsf}{graphicx}
980 \LWR@checkloadnever{#1}{fancyheadings}{fancyhdr}
981 \LWR@checkloadnever{#1}{fncylab}{cleveref}
982 \LWR@checkloadnever{#1}{glossary}{glossaries}
983 \LWR@checkloadnever{#1}{hyper}{hyperref}
```

```

984 \LWR@checkloadnever{#1}{newthm}{ntheorem}
985 \LWR@checkloadnever{#1}{pdfcprot}{microtype}
986 \LWR@checkloadnever{#1}{picinpar}{floatflt, wrapfig}
987 \LWR@checkloadnever{#1}{picins}{floatflt, wrapfig}
988 \LWR@checkloadnever{#1}{rplain}{fancyhdr}
989 \LWR@checkloadnever{#1}{si}{siunitx}
990 \LWR@checkloadnever{#1}{sistyle}{siunitx}
991 \LWR@checkloadnever{#1}{tlenc}{fontenc, inputenc, inputenx}
992 \LWR@checkloadnever{#1}{ucs}{inputenc, inputencx}
993 \LWR@checkloadnever{#1}{wasysym}{textcomp, amssymb, amfonts, mnsymbol, fdsymbol}

```

The following should only be loaded before lwarp:

```

994 \LWR@checkloadbefore{#1}{ctex}
995 \LWR@checkloadbefore{#1}{fontspec}
996 \LWR@checkloadbefore{#1}{inputenc}
997 \LWR@checkloadbefore{#1}{inputenx}
998 \LWR@checkloadbefore{#1}{kotex}
999 \LWR@checkloadbefore{#1}{luatexja}
1000 \LWR@checkloadbefore{#1}{luatexja-fontspec}
1001 \LWR@checkloadbefore{#1}{luatexko}
1002 \LWR@checkloadbefore{#1}{morewrites}
1003 \LWR@checkloadbefore{#1}{newcluede}
1004 \LWR@checkloadbefore{#1}{newunicodechar}
1005 \LWR@checkloadbefore{#1}{plext}
1006 \LWR@checkloadbefore{#1}{xeCJK}
1007 \LWR@checkloadbefore{#1}{xetexko}
1008 \LWR@checkloadbefore{#1}{zxjatype}
1009 }

```

`\LWR@lookforpackagename` {*index*}

If HTML, and if this is an lwarp-supported package name, re-direct it to the lwarp version by renaming it lwarp- followed by the original name.

Looks index deep into the list of package names, `\LWR@requirepackagenames`, and builds `\LWR@parsedrequirepackagenames` which is the modified list of names.

```
1010 \newcommand*{\LWR@lookforpackagename}[1]{%
```

Find the index'th package name from the list:

```
1011 \LWR@findword{\LWR@requirepackagenames}{#1}[\LWR@strresult]%
```

Remove blanks. The original name with blanks is in `LWR@strresult` and the final name with no blanks goes into `LWR@strresulttwo`.

```
1012 \StrSubstitute[100]{\LWR@strresult}{ }{ }[\LWR@strresulttwo]%
```

See if the package name was found:

```

1013 \IfStrEq{\LWR@strresulttwo}{}%
1014 {}% no filename
1015 {% yes filename was found

```

Possible adjustments before loading the package. Maybe nullify the comment environment if the new package will be redefining it for a new purpose.

```
1016 \ifdefstring{\LWR@strresulttwo}{easyReview}{\LWR@nullifycomment}{}%
1017 \ifdefstring{\LWR@strresulttwo}{changes}{\LWR@nullifycomment}{}%
```

If HTML, check if the package should be loaded before lwarp, or never at all:

```
1018 \ifbool{warpingHTML}{\LWR@checkloadfilename{\LWR@strresulttwo}}{%}
```

If HTML, and if found, and if an lwarp-equivalent name exists, use lwarp-\* instead.

```
1019 \ifboolexpr{
1020 bool{warpingHTML} and
1021 test{\IfFileExists{lwarp-\LWR@strresulttwo.sty}}
1022 }{%
1023 {% lwarp-* file found
1024 \ifdefvoid{\LWR@parsedrequirepackagenames}{%
1025 \edef\LWR@parsedrequirepackagenames{lwarp-\LWR@strresulttwo}%
1026 }{%
1027 \edef\LWR@parsedrequirepackagenames{%
1028 \LWR@parsedrequirepackagenames, lwarp-\LWR@strresulttwo%
1029 }%
1030 }%
1031 }%
1032 {%
```

Otherwise, use the current package name.

```
1033 \ifdefvoid{\LWR@parsedrequirepackagenames}{%
1034 \edef\LWR@parsedrequirepackagenames{\LWR@strresulttwo}%
1035 }{%
1036 \edef\LWR@parsedrequirepackagenames{%
1037 \LWR@parsedrequirepackagenames, \LWR@strresulttwo%
1038 }%
1039 }%
1040 }% no lwarp-* file
1041 }% yes filename
1042 }
```

`\RequirePackage` [*<1: options>*] [*<2: package names>*] [*<3: version>*]

For each of many package names in a comma-separated list, if an lwarp version of a package exists, select it instead of the L<sup>A</sup>T<sub>E</sub>X version.

```
1043 \RenewDocumentCommand{\RequirePackage}{o m o}{%
```

Redirect up to twenty names:<sup>16</sup>

```
1044 \renewcommand*{\LWR@requirepackagenames}{#2}%
1045 \renewcommand*{\LWR@parsedrequirepackagenames}{}%
```

<sup>16</sup>This was originally nine names, but then I came across a package which used twelve...

```

1046 \LWR@Lookforpackagename{1}%
1047 \LWR@Lookforpackagename{2}%
1048 \LWR@Lookforpackagename{3}%
1049 \LWR@Lookforpackagename{4}%
1050 \LWR@Lookforpackagename{5}%
1051 \LWR@Lookforpackagename{6}%
1052 \LWR@Lookforpackagename{7}%
1053 \LWR@Lookforpackagename{8}%
1054 \LWR@Lookforpackagename{9}%
1055 \LWR@Lookforpackagename{10}%
1056 \LWR@Lookforpackagename{11}%
1057 \LWR@Lookforpackagename{12}%
1058 \LWR@Lookforpackagename{13}%
1059 \LWR@Lookforpackagename{14}%
1060 \LWR@Lookforpackagename{15}%
1061 \LWR@Lookforpackagename{16}%
1062 \LWR@Lookforpackagename{17}%
1063 \LWR@Lookforpackagename{18}%
1064 \LWR@Lookforpackagename{19}%
1065 \LWR@Lookforpackagename{20}%

```

\RequirePackage depending on the options and version:

```

1066 \IfValueTF{#1}%
1067 {% options given
1068 \IfValueTF{#3}% version given?
1069 {\LWR@origRequirePackage[#1]{\LWR@parsedrequirepackagenames}[#3]}%
1070 {\LWR@origRequirePackage[#1]{\LWR@parsedrequirepackagenames}}%
1071 }%
1072 {% no options given
1073 \IfValueTF{#3}% version given?
1074 {\LWR@origRequirePackage{\LWR@parsedrequirepackagenames}[#3]}%
1075 {\LWR@origRequirePackage{\LWR@parsedrequirepackagenames}}%
1076 }%
1077 }
1078 \LetLtxMacro\usepackage\RequirePackage

1079 \end{warpall}

```

**for HTML output:** 1080 \begin{warpHTML}

\LWR@ProvidesPackagePass {<pkgname>} [<version>]

Uses the original package, including options.

```

1081 \NewDocumentCommand{\LWR@ProvidesPackagePass}{m o}{
1082 \PackageInfo{lwarp}{%
1083 Using package ‘#1’ and adding lwarp modifications,\MessageBreak
1084 including options,}%
1085 \IfValueTF{#2}
1086 {\ProvidesPackage{lwarp-#1}[#2]}
1087 {\ProvidesPackage{lwarp-#1}}
1088 \DeclareOption*{\PassOptionsToPackage{\CurrentOption}{#1}}
1089 \ProcessOptions\relax

```

```

1090 \IfValueTF{#2}
1091 {\LWR@origRequirePackage{#1}[#2]}
1092 {\LWR@origRequirePackage{#1}}

```

In some cases, the following seems to be required to avoid an “unknown option” error, such as when loading xcolor with options.

```

1093 \DeclareOption*{%
1094 \ProcessOptions\relax
1095 }

```

`\LWR@ProvidesPackageDrop` {<pkgname>} [<version>]

Ignores the original package and uses lwarp’s version instead. Drops/discards all options.

```

1096 \NewDocumentCommand{\LWR@ProvidesPackageDrop}{m o}{
1097 \PackageInfo{lwarp}{%
1098 Replacing package ‘#1’ with the lwarp version,\MessageBreak
1099 and discarding options,%
1100 }%
1101 \IfValueTF{#2}
1102 {\ProvidesPackage{lwarp-#1}[#2]}
1103 {\ProvidesPackage{lwarp-#1}}

```

Ignore all options.

```

1104 \DeclareOption*{}

```

Nullifies then processes the options. Seems to be required when options contain curly braces, which were causing “Missing \begin{document}”.

```

1105 % \ProcessOptions\relax% original LaTeX code
1106 \let\ds@\empty% from the original \ProcessOptions
1107 \edef\@curroptions{}% lwarp modification to \ProcessOptions
1108 \@process@ptions\relax% from the original \ProcessOptions
1109 }

```

```

1110 \end{warpHTML}

```

## 32 Additional required packages

for HTML output: 1111 \begin{warpHTML}

Pkg caption

```

1112 \LWR@origRequirePackage{caption}
1113 \AtBeginDocument{\RequirePackage{lwarp-caption}}%
1114 \end{warpHTML}

```

### 33 File handles

Defines file handles for writes.

**for HTML & PRINT:** 1115 `\begin{warpall}`

`\LWR@quickfile` For quick temporary use only. This is reused in several places.

1116 `\newwrite\LWR@quickfile%`

1117 `\end{warpall}`

**for HTML output:** 1118 `\begin{warpHTML}`

`\LWR@lateximagesfile` For `<project>-images.txt`:

1119 `\newwrite\LWR@lateximagesfile`

1120 `\end{warpHTML}`

### 34 Include a file

During HTML output, `\include{<filename>}` causes the following to occur:

1. lwarp creates `<filename>_html_inc.tex` whose contents are:
 

```
\input <filename>.tex
```
2. `<filename>_html_inc.tex` is then `\included` instead of `<filename>.tex`.
3. `<filename>_html_inc.aux` is automatically generated and used by L<sup>A</sup>T<sub>E</sub>X.

**for HTML output:** 1121 `\begin{warpHTML}`

`\include {<filename>}`

`\@include {<filename>}` Modified to load `_html_inc` files.

1122 `\def\@include#1 {%`

1123 `\immediate\openout\LWR@quickfile #1_html_inc.tex% lwarp`

1124 `\immediate\write\LWR@quickfile{\string\input{#1.tex}}% lwarp`

1125 `\immediate\closeout\LWR@quickfile% lwarp`

1126 `\LWR@origclearpage% \changed`

1127 `\if@filesw`

1128 `\immediate\write\@mainaux{\string\@input{#1_html_inc.aux}}% changed`

1129 `\fi`

1130 `\@tempwatrue`



```

1131 \if@partsw
1132 \@tempwafalse
1133 \edef\reserved@b{#1}%
1134 \@for\reserved@a:=\@partlist\do
1135 {\ifx\reserved@a\reserved@b\@tempwattrue\fi}%
1136 \fi
1137 \if@tempswa
1138 \let\@auxout\@partaux
1139 \if@filesw
1140 \immediate\openout\@partaux #1_html_inc.aux % changed
1141 \immediate\write\@partaux{\relax}%
1142 \fi
1143 \@input{#1_html_inc.tex}% changed
1144 \LWR@origclearpage% changed
1145 \@writeckpt{#1}%
1146 \if@filesw
1147 \immediate\closeout\@partaux
1148 \fi
1149 \else
1150 \deadcycles\z@
1151 \@nameuse{cp@#1}%
1152 \fi
1153 \let\@auxout\@mainaux%
1154 }

1155 \end{warpHTML}

```

## 35 Copying a file

**for HTML output:** 1156 \begin{warpHTML}

\LWR@copyfile {<source filename>} {<destination filename>}

Used to copy the .toc file to .sidetoc to re-print the TOC in the sidetoc navigation pane.

```

1157 \newwrite\LWR@copyoutfile % open the file to write to
1158 \newread\LWR@copyinfile % open the file to read from
1159
1160 \newcommand*{\LWR@copyfile}[2]{%
1161 \LWR@traceinfo{\LWR@copyfile: copying #1 to #2}
1162
1163 \immediate\openout\LWR@copyoutfile=#2
1164 \openin\LWR@copyinfile=#1
1165 \begingroup\newlinechar=-1
1166 \makeatletter
1167
1168 \LWR@traceinfo{\LWR@copyfile: about to loop}
1169
1170 \loop\unless\ifeof\LWR@copyinfile
1171 \LWR@traceinfo{\LWR@copyfile: one line}
1172 \read\LWR@copyinfile to\LWR@fileline % Read one line and store it into \LWR@fileline

```

```

1173 % \LWR@fileline\par % print the content into the pdf
1174 % print the content:
1175 \immediate\write\LWR@copyoutfile{\unexpanded\expandafter{\LWR@fileline}}%
1176 \repeat
1177 \immediate\closeout\LWR@copyoutfile
1178 \LWR@traceinfo{LWR@copyfile: done}
1179 \endgroup
1180 }

1181 \end{warpHTML}

```

## 36 Debugging messages

**HTML comments** To have the HTML output include additional HTML comments, such as which `<div>` is closing, use

```
\booltrue{HTMLDebugComments}
```

**debugging information** To have debug information written to the log, use

```
\tracinglwarp
```

**for HTML & PRINT:** 1182 \begin{warpall}

Bool LWR@tracinglwarp True if tracing is turned on.

```
1183 \newbool{LWR@tracinglwarp}
```

\tracinglwarp Turns on the debug tracing messages.

```
1184 \newcommand{\tracinglwarp}{\booltrue{LWR@tracinglwarp}}
```

\LWR@traceinfo `{<text>}` If tracing is turned on, writes the text to the `.log` file.

```

1185 \newcommand{\LWR@traceinfo}[1]{%
1186 \ifbool{LWR@tracinglwarp}%
1187 {%
1188 \typeout{*** lwarp: #1}%
1189 }%
1190 }%
1191 }

```

Bool HTMLDebugComments Add comments in HTML about closing `<div>`s, sections, etc.

Default: false

```

1192 \newbool{HTMLDebugComments}
1193 \boolfalse{HTMLDebugComments}

```

If `\tracinglwarp`, show where preamble hooks occur:

```

1194 \AfterEndPreamble{
1195 \LWR@traceinfo{AfterEndPreamble}
1196 }
1197
1198 \AtBeginDocument{
1199 \LWR@traceinfo{AtBeginDocument}
1200 }

1201 \end{warpall}

```

### 37 Defining print and HTML versions of macros and environments

The following refers to defining objects inside `lwarp`, and is not for the user's document.

Many macros and environments must be provided as both print and HTML versions.

While generating the print version of a document, the original macros as defined by L<sup>A</sup>T<sub>E</sub>X and its packages are used as-is.

While generating the HTML version of a document, the original macro or environment is redefined to call a new HTML version or a copy of the original print version. The new HTML versions of macros and environments are used most of the time. Copies of the print versions are used inside a `lateximage` environment, which draws and remembers an image of the printed output, and also several other places. The copies of the print versions may also be used by the HTML versions, such as when the HTML version merely encloses the print version inside HTML tags.

The general structure for providing print and HTML versions of a macro or environment is as follows:

**For a preexisting macro, not defined with `xparse`:** An HTML version is provided with a special name, inside a `warpHTML` environment, then `\LWR@formatted` is used to redefine and patch various macros:

---

```

\begin{warpHTML}
\newcommand{\LWR@HTML@name}{...}% may also use xparse

\LWR@formatted{name}
\end{warpHTML}

```

---

`\LWR@formatted{name}` copies the original print version, then redefines `\name` to use either the print or HTML version depending on which mode `lwarp` is using. `xparse` may be used to define the new HTML version, even if the original did not use `xparse`.

**For a preexisting environment, not defined with `xparse`:** The process is similar. Note the use of `\LWR@formattedenv` instead of `\LWR@formatted`.

---

```

\begin{warpHTML}
\newenvironment{LWR@HTML@name}{...}% may also use xparse

\LWR@formattedenv{name}
\end{warpHTML}

```

---

**If the original used xparse:** A copy must be made using a new name:

---

```

\begin{warpHTML}
\NewDocumentCommand{\LWR@print@name}{..}{..}% copy the original

\NewDocumentCommand{\LWR@HTML@name}{..}{..}% or use \newcommand

\LWR@formatted{name}
\end{warpHTML}

```

---

Similar for an environment, using `\LWR@formattedenv`. (`\LWR@formatted` and `\LWR@formattedenv` use `\LetLtxMacro` to copy the original print definition, which may not work with macros and environments created by `xparse`, so the print version must be manually recreated in the `lwarp` source.)

**For a new macro or environment, not using xparse for the print version:**

---

```

\begin{warpall}
\newcommand{\name}{...}% NOT xparse!
\end{warpall}

\begin{warpHTML}
\newcommand{\LWR@HTML@name}{...}% may use xparse for HTML

\LWR@formatted{name}
\end{warpHTML}

```

---

Similar for an environment. The plain `\name` or environment name is used for the printed version, and is placed inside `warpall`. `xparse` may be used for the `\LWR@HTML@<name>` version.

**For a new macro or environment, using xparse:** It is possible to use `xparse` for an entirely new macro or environment by defining the `\LWR@print@<name>` version with `xparse`, along with `\name` defined without `xparse` to refer directly to the `\LWR@print` version:

---

```

\begin{warpall}
\NewDocumentCommand{\LWR@print@name}{...} {...}% -or-
\NewDocumentEnvironment{\LWR@print@name}{...} {...} {...}

% Simply a call to \LWR@print@name:
\newcommand{\name}{\LWR@print@name}% -or-
\newenvironment{name}{\LWR@print@name}{\endLWR@print@name}

```

```

\end{warpall}

\begin{warpHTML}
\NewDocumentCommand{\LWR@HTML@name}{...} {...}% -or-
\NewDocumentEnvironment{\LWR@HTML@name}{...} {...} {...}

\LWR@formatted{name}% -or-
\LWR@formattedenv{name}
\end{warpHTML}

```

---

In general, `\LWR@formatted` or `\LWR@formattedenv` are placed inside a `warpHTML` environment, and while producing an HTML document they do the following:

- Macros are modified:
  1. The pre-existing print version `\name` is saved as `\LWR@print@<name>`, unless `\LWR@print@<name>` is already defined.
  2. The original `\name` is redefined to call either the print or HTML version depending on which format is in use at the moment, as set by `\LWR@formatting`, which is defined as either “print” or “HTML”.
- When `lwarp` is producing a print document, the original definitions are used, as well as any new definitions defined in `warpall` above.
- When `lwarp` is generating HTML output, `\LWR@formatting` is set to “HTML”, and `\name` is directed to `\LWR@HTML@<name>`.
- When `lwarp` is generating HTML output but enters a `lateximage` environment, or for some other reason needs to draw images using the original print definitions, `\LWR@formatting` is changed to “print” and `\name` is then redirected to `\LWR@print@<name>`, which was the original `\name`.

Since arguments are not handled by the new `\name`, any star and other arguments are processed by the print or HTML version.

Expandable versions are also provided as well. These usually are necessary for anything which could appear inside a `tabular`, without which a “Misplaced `\omit`” error may occur.

```

\LWR@expandableformatted
\LWR@expandableformattedenv

```

(Older versions of `lwarp` used `\LetLtxMacro` for everything, but this could fail when using macros defined by `xparse`. This older system is still in use for many definitions.)

**for HTML output:** 1202 `\begin{warpHTML}`}

`\LWR@formatting` Remembers if selected print/HTML formatting.

Used while `\LWR@restoreorigformatting`, such as in an `lateximage`. May be set to either “print” or “HTML”.

1203 `\newcommand*{\LWR@formatting}{HTML}`



Misplaced `\omit` error

`\LWR@formatted` {*<macroname>*} No backslash in the macro name.

If not yet defined, defines `\LWR@print@<name>` as the original print-mode `\<name>`. Also redefines `\<name>` to use `\LWR@<format>@<name>`, where `<format>` is set by `\LWR@formatting`, and is `print` or `HTML`.

```

1204 \newcommand*{\LWR@formatted}[1]{%
1205 \ifcsundef{\LWR@print@#1}{%
1206 \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1207 \csname#1\endcsname%
1208 }{%
1209 \ifcsundef{#1}{%
1210 \expandafter\newrobustcmd\csname #1\endcsname{%
1211 \@nameuse{\LWR@\LWR@formatting @#1}%
1212 }%
1213 }{%
1214 \expandafter\renewrobustcmd\csname #1\endcsname{%
1215 \@nameuse{\LWR@\LWR@formatting @#1}%
1216 }%
1217 }%
1218 }
```

`\LWR@expandableformatted` {*<macroname>*} No backslash in the macro name.

An expandable version of `\LWR@formatted`.

```

1219 \newcommand*{\LWR@expandableformatted}[1]{%
1220 \ifcsundef{\LWR@print@#1}{%
1221 \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1222 \csname#1\endcsname%
1223 }{%
1224 \ifcsundef{#1}{%
1225 \expandafter\newcommand\csname #1\endcsname{%
1226 \@nameuse{\LWR@\LWR@formatting @#1}%
1227 }%
1228 }{%
1229 \expandafter\renewcommand\csname #1\endcsname{%
1230 \@nameuse{\LWR@\LWR@formatting @#1}%
1231 }%
1232 }%
1233 }
```

`\LWR@formattedenv` {*<environmentname>*}

If not yet defined, defines the environment `LWR@print@<name>` as the original print-mode `<name>`. Also redefines the environment `<name>` to use environment `LWR@<format>@<name>`, where `<format>` is set by `\LWR@formatting`, and is `print` or `HTML`.

```

1234 \newcommand*{\LWR@formattedenv}[1]{%
1235 \ifcsundef{\LWR@print@#1}{%
1236 \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1237 \csname#1\endcsname%
1238 \csletcs{endLWR@print@#1}{end#1}%
1239 }{%
```

```

1240 \DeclareDocumentEnvironment{#1}{}%
1241 {\@nameuse{LWR@LWR@formatting @#1}}%
1242 {\@nameuse{endLWR@LWR@formatting @#1}}%
1243 }

```

`\LWR@expandableformattedenv`  $\langle environmentname \rangle$

An expandable version of `LWR@formattedenv`.

```

1244 \newcommand*{\LWR@expandableformattedenv}[1]{%
1245 \ifcsundef{LWR@print@#1}{%
1246 \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1247 \csname#1\endcsname%
1248 \csletcs{endLWR@print@#1}{end#1}%
1249 }{}%
1250 \DeclareExpandableDocumentEnvironment{#1}{}%
1251 {\@nameuse{LWR@LWR@formatting @#1}}%
1252 {\@nameuse{endLWR@LWR@formatting @#1}}%
1253 }

1254 \end{warpHTML}

```

## 38 HTML-conversion output modifications

These booleans modify the HTML output in various ways to improve conversion to EPUB or word processor imports.

**for HTML & PRINT:** 1255 `\begin{warpall}`

### 38.1 User-level controls

**Bool** `FormatEPUB` Changes HTML output for easy EPUB conversion via an external program. Removes per-file headers, footers, and nav. Adds footnotes per chapter/section.  
**Default:** `false`

```

1256 \newbool{FormatEPUB}
1257 \boolfalse{FormatEPUB}

```

**Bool** `FormatWP` Changes HTML output for easier conversion by a word processor. Removes headers and nav, prints footnotes per section, and also forces single-file output and turns off HTML debug comments.  
**Default:** `false`

```

1258 \newbool{FormatWP}
1259 \boolfalse{FormatWP}

```

**Bool** `WPMarkFloats` Adds

**Default:** `false`

```

=== begin table ===
. . .
=== end ===

```

or

```
=== begin figure ===
. . .
=== end ===
```

around floats while formatting for word processors. This helps identify boundaries of floats to be manually converted to word-processor frames and captions.<sup>17</sup>

```
1260 \newbool{WPMarkFloats}
1261 \boolfalse{WPMarkFloats}
```

Bool WPMarkMinipages

Adds

Default: false

```
=== begin minipage ===
. . .
=== end minipage ===
```

around minipages while formatting for word processors. This helps identify boundaries of minipages to be manually converted to word-processor frames.

```
1262 \newbool{WPMarkMinipages}
1263 \boolfalse{WPMarkMinipages}
```

Bool WPMarkTOC

While formatting for word processors, adds

Default: true

```
=== table of contents ===
```

where the Table of Contents would have been. This helps identify where to insert the actual TOC.

*If set false, the actual TOC is printed instead.*

```
1264 \newbool{WPMarkTOC}
1265 \booltrue{WPMarkTOC}
```

Bool WPMarkLOFT

While formatting for word processors, adds

Default: false

```
=== list of figures === and/or
=== list of tables ===
```

where each of these lists would have been. This helps identify where to insert the actual lists.

*If set false, the actual lists are printed instead.*

```
1266 \newbool{WPMarkLOFT}
1267 \boolfalse{WPMarkLOFT}
```

Bool WPMarkMath

While formatting for word processors, prints math as L<sup>A</sup>T<sub>E</sub>X code instead of creating

Default: false

<sup>17</sup>Perhaps some day word processors will have HTML import options for identifying <figure> and caption tags for figures and tables.



SVG images or MATHJAX. This is useful for cut/paste into the *LibreOffice Writer TeXMaths* extension.

```
1268 \newbool{WPMarkMath}
1269 \boolfalse{WPMarkMath}
```

Bool WPTitleHeading While formatting for word processors, true sets the document title to <h1>, which is expected for HTML documents, but also causes the lower-level section headings to start at **Heading 2** when imported into LIBREOFFICE. Set to false to cause the title to be plain text, and the section headings to begin at **Heading 1**.

Default: false

See table 8 on page 181.

```
1270 \newbool{WPTitleHeading}
1271 \boolfalse{WPTitleHeading}
```

```
1272 \end{warppall}
```

## 38.2 Heading adjustments

If formatting the HTML for a word processor, adjust heading levels.

If WPTitleHeading is true, adjust so that part is **Heading 1**.

If WPTitleHeading is false, use <h1> for the title, and set part to **Heading 2**.

for HTML output: 1273 \begin{warppHTML}

```
1274 \AtBeginDocument{
1275 \ifbool{FormatWP}{
1276 \@ifundefined{chapter}{
1277 \ifbool{WPTitleHeading}{% part and section starting at h2
1278 \renewcommand*\LWR@tagtitle}{h1}
1279 \renewcommand*\LWR@tagtitleend}{/h1}
1280 \renewcommand*\LWR@tagpart}{h2}
1281 \renewcommand*\LWR@tagpartend}{/h2}
1282 \renewcommand*\LWR@tagsection}{h3}
1283 \renewcommand*\LWR@tagsectionend}{/h3}
1284 \renewcommand*\LWR@tagsubsection}{h4}
1285 \renewcommand*\LWR@tagsubsectionend}{/h4}
1286 \renewcommand*\LWR@tagsubsubsection}{h5}
1287 \renewcommand*\LWR@tagsubsubsectionend}{/h5}
1288 \renewcommand*\LWR@tagparagraph}{h6}
1289 \renewcommand*\LWR@tagparagraphend}{/h6}
1290 \renewcommand*\LWR@tagsubparagraph}{span class="subparagraph"}
1291 \renewcommand*\LWR@tagsubparagraphend}{/span}
1292 }% WPTitleHeading
1293 {% not WPTitleHeading, part and section starting at h1
1294 \renewcommand*\LWR@tagtitle}{div class="title"}
1295 \renewcommand*\LWR@tagtitleend}{/div}
1296 \renewcommand*\LWR@tagpart}{h1}
1297 \renewcommand*\LWR@tagpartend}{/h1}
```

```

1298 \renewcommand*\LWR@tagsection}{h2}
1299 \renewcommand*\LWR@tagsectionend}{/h2}
1300 \renewcommand*\LWR@tagsubsection}{h3}
1301 \renewcommand*\LWR@tagsubsectionend}{/h3}
1302 \renewcommand*\LWR@tagsubsubsection}{h4}
1303 \renewcommand*\LWR@tagsubsubsectionend}{/h4}
1304 \renewcommand*\LWR@tagparagraph}{h5}
1305 \renewcommand*\LWR@tagparagraphend}{/h5}
1306 \renewcommand*\LWR@tagsubparagraph}{h6}
1307 \renewcommand*\LWR@tagsubparagraphend}{/h6}
1308 }% not WPTitleHeading
1309 }% chapter undefined
1310 {% chapter defined
1311 \ifbool{WPTitleHeading}{}
1312 {% not WPTitleHeading, part and chapter starting at h1
1313 \renewcommand*\LWR@tagtitle}{div class="title"}
1314 \renewcommand*\LWR@tagtitleend}{/div}
1315 \renewcommand*\LWR@tagpart}{h1}
1316 \renewcommand*\LWR@tagpartend}{/h1}
1317 \renewcommand*\LWR@tagchapter}{h2}
1318 \renewcommand*\LWR@tagchapterend}{/h2}
1319 \renewcommand*\LWR@tagsection}{h3}
1320 \renewcommand*\LWR@tagsectionend}{/h3}
1321 \renewcommand*\LWR@tagsubsection}{h4}
1322 \renewcommand*\LWR@tagsubsectionend}{/h4}
1323 \renewcommand*\LWR@tagsubsubsection}{h5}
1324 \renewcommand*\LWR@tagsubsubsectionend}{/h5}
1325 \renewcommand*\LWR@tagparagraph}{h6}
1326 \renewcommand*\LWR@tagparagraphend}{/h6}
1327 \renewcommand*\LWR@tagsubparagraph}{span class="subparagraph"}
1328 \renewcommand*\LWR@tagsubparagraphend}{/span}
1329 }% not WPTitleHeading
1330 }% chapter defined
1331 }{}% FormatWP
1332 }% AtBeginDocument

1333 \end{warpHTML}

```

## 39 Remembering original formatting macros

**for HTML output:** 1334 \begin{warpHTML}

Remember original definitions of formatting commands. Will be changed to HTML commands for most uses. Will be temporarily restored to original meaning inside any lateximage environment. Also nullify unused commands.

Some packages redefine \#, which is used to generate HTML, so the original must be remembered here.

```
1335 \chardef\LWR@origpound='\#
```

```
1336 \let\LWR@origcomma\,
```

```
1337 \let\LWR@origthinspace\thinspace
1338 \let\LWR@orignegthinspace\negthinspace
1339 \let\LWR@origtilde~
1340 \let\LWR@origenskip\enskip
1341 \let\LWR@origquad\quad
1342 \let\LWR@origqqquad\qqquad
1343 \let\LWR@origfil\hfil
1344 \let\LWR@orighss\hss
1345 \let\LWR@origllap\llap
1346 \let\LWR@origrlap\rlap
1347 \let\LWR@origfilneg\hfilneg
1348 \let\LWR@orighspace\hspace
1349
1350 \let\LWR@origrule\rule
1351
1352 \let\LWR@origmedskip\medskip
1353 \let\LWR@origbigskip\bigskip
1354
1355 \let\LWR@origtextellipsis\textellipsis
1356 \let\LWR@orig@textquotedbl\textquotedbl
1357
1358 \LetLtxMacro\LWR@origrmfamily\rmfamily
1359 \LetLtxMacro\LWR@origsffamily\sffamily
1360 \LetLtxMacro\LWR@origttfamily\ttfamily
1361 \LetLtxMacro\LWR@origbfseries\bfseries
1362 \LetLtxMacro\LWR@origmdseries\mdseries
1363 \LetLtxMacro\LWR@origupshape\upshape
1364 \LetLtxMacro\LWR@origslshape\slshape
1365 \LetLtxMacro\LWR@origscshape\scshape

1366 \@ifundefined{sisshape}{
1367 \LetLtxMacro\LWR@origsisshape\scshape
1368 }{
1369 \LetLtxMacro\LWR@origsisshape\sisshape
1370 }

1371 \LetLtxMacro\LWR@origitshape\itshape
1372 \LetLtxMacro\LWR@origem\em
1373 \LetLtxMacro\LWR@orignormalfont\normalfont
1374
1375 \let\LWR@origonecolumn\onecolumn
1376
1377 \let\LWR@origsp\sp
1378 \let\LWR@origsb\sb
1379 \LetLtxMacro\LWR@origtextsuperscript\textsuperscript
1380 \LetLtxMacro\LWR@orig@textsuperscript\@textsuperscript
1381
1382 \AtBeginDocument{
1383 \LetLtxMacro\LWR@origtextsubscript\textsubscript
1384 \LetLtxMacro\LWR@orig@textsubscript\@textsubscript
1385 }
1386
1387 \LetLtxMacro\LWR@origunderline\underline

1388 \let\LWR@orignewpage\newpage
```

```

1389
1390 \let\LWR@origpagestyle\pagestyle
1391 \let\LWR@origthispagestyle\thispagestyle
1392 \LetLtxMacro\LWR@origpagenumbering\pagenumbering
1393
1394 \let\LWR@orignewline\newline
1395
1396
1397 \AtBeginDocument{% in case packages change definition
1398 \let\LWR@orig@trivlist@trivlist
1399 \let\LWR@origtrivlist\trivlist
1400 \let\LWR@origendtrivlist\endtrivlist
1401 \LetLtxMacro\LWR@origitem\item
1402 \LetLtxMacro\LWR@origitemize\itemize
1403 \LetLtxMacro\LWR@endorigitemize\enditemize
1404 \LetLtxMacro\LWR@origenumerate\enumerate
1405 \LetLtxMacro\LWR@endorigenumerate\endenumerate
1406 \LetLtxMacro\LWR@origdescription\description
1407 \LetLtxMacro\LWR@endorigdescription\enddescription
1408 \let\LWR@orig@mklab@mklab
1409 \let\LWR@origmake\make\make
1410 \let\LWR@orig@donoparitem@donoparitem
1411 \LetLtxMacro\LWR@orig@item@item
1412 \let\LWR@orig@nbitem@nbitem
1413 }
1414
1415 \let\LWR@origpar\par
1416
1417 \LetLtxMacro\LWR@origfootnote\footnote
1418 \let\LWR@orig@mpfootnotetext@mpfootnotetext
1419
1420 \let\LWR@origclearpage\clearpage
1421
1422
1423 \AtBeginDocument{% in case packages change definition
1424 \LetLtxMacro\LWR@orighline\hline%
1425 \LetLtxMacro\LWR@origcline\cline%
1426 }

1427 \end{warpHTML}

```

## 40 Accents

Native  $\LaTeX$  accents such as `\'` will work, but many more kinds of accents are available when using Unicode-aware  $X_{\text{Y}}\LaTeX$  and  $\text{Lua}\LaTeX$ .

**for HTML output:** 1428 `\begin{warpHTML}`

Without `\AtBeginDocument`, `\t` was being re-defined somewhere.

```
1429 \AtBeginDocument{
```

The following are restored for print when inside a `lateximage`.

For Unicode engines, only `\t` needs to be redefined:

```
1430 \LetLtxMacro\LWR@origt\t
```

For `pdfLATEX`, additional work is required:

```
1431 \ifPDFTeX% pdflatex or dvi latex
1432 \LetLtxMacro\LWR@origequalaccent\=
1433 \LetLtxMacro\LWR@origdotaccent\.
1434 \LetLtxMacro\LWR@origu\u
1435 \LetLtxMacro\LWR@origv\v
1436 \LetLtxMacro\LWR@origc\c
1437 \LetLtxMacro\LWR@origd\d
1438 \LetLtxMacro\LWR@origb\b
```

The `HTML` redefinitions follow.

For `pdfLATEX`, Unicode diacritical marks are used:

```
1439 \renewcommand*{\=} [1]{#1\HTMLUnicode{0305}}
1440 \renewcommand*{\.} [1]{#1\HTMLUnicode{0307}}
1441 \renewcommand*{\u} [1]{#1\HTMLUnicode{0306}}
1442 \renewcommand*{\v} [1]{#1\HTMLUnicode{030C}}
1443 \renewcommand*{\c} [1]{#1\HTMLUnicode{0327}}
1444 \renewcommand*{\d} [1]{#1\HTMLUnicode{0323}}
1445 \renewcommand*{\b} [1]{#1\HTMLUnicode{0331}}
1446 \fi
```

For all engines, a Unicode diacritical tie is used:

```
1447 \def\LWR@t#1#2{#1\HTMLUnicode{0361}#2}
1448 \renewcommand*{\t} [1]{\LWR@t#1}
```

`\LWR@restoreorigaccents` Called from `\restoreoriginalformatting` when a `lateximage` is begun.

```
1449 \ifPDFTeX% pdflatex or dvi latex
1450 \newcommand*{\LWR@restoreorigaccents}{%
1451 \LetLtxMacro\=\LWR@origequalaccent%
1452 \LetLtxMacro\.\LWR@origdotaccent%
1453 \LetLtxMacro\u\LWR@origu%
1454 \LetLtxMacro\v\LWR@origv%
1455 \LetLtxMacro\t\LWR@origt%
1456 \LetLtxMacro\c\LWR@origc%
1457 \LetLtxMacro\d\LWR@origd%
1458 \LetLtxMacro\b\LWR@origb%
1459 }%
1460 \else% XeLaTeX, LuaLaTeX:
1461 \newcommand*{\LWR@restoreorigaccents}{%
1462 \LetLtxMacro\t\LWR@origt%
1463 }%
1464 \fi%
1465 }% AtBeginDocument
```

```
1466 \end{warpHTML}
```

## 41 Configuration files

### 41.1 Decide whether to generate configuration files

Configuration files are only written if processing the print version of the document, and not processing a `pstool` image. `pstool` uses an additional compile for each image using the original document's preamble, which includes `lwarp`, so the `lwarp` configuration files are turned off if `-pstool` is part of the `\jobname`.

Default to no configuration files:

```
1467 \excludecomment{LWRwriteconf}
```

Generate configuration files if print mode and not `-pstool`:

```
for PRINT output: 1468 \begin{warpprint}
1469 \fullexpandarg%
1470 \IfSubStr*{\jobname}{-pstool}
1471 {
1472 \typeout{lwarp: jobname with -pstool is found,}%
1473 \typeout{lwarp: \space\space not generating configuration files.}%
1474 }
1475 {
1476 \typeout{lwarp: generating configuration files}
1477 \includecomment{LWRwriteconf}
1478 }
1479 \end{warpprint}
```

### 41.2 <project>\_html.tex

File `*_html.tex` Used to allow an HTML version of the document to exist alongside the print version.

```
Config file: 1480 \begin{LWRwriteconf}
1481 \immediate\openout\LWR@quickfile=\jobname_html.tex
1482 \immediate\write\LWR@quickfile{%
1483 \detokenize{\PassOptionsToPackage}%
1484 {warpHTML,BaseJobname=\jobname}{lwarp}%
1485 }
1486 \immediate\write\LWR@quickfile{%
1487 \detokenize{\input}\string{\jobname.tex}\string }%
1488 }
1489 \immediate\closeout\LWR@quickfile
1490 \end{LWRwriteconf}
```

### 41.3 *lwarp*mk configuration files

**Config file:** 1491 \begin{LWRwriteconf}

`\LWR@lwarpcnfversion` The version number of the configuration file, allowing *lwarp*mk to detect an obsolete configuration file format. Incremented by one each time the configuration file format changes. (This is NOT the same as the *lwarp* version number.)

1492 \newcommand\*{\LWR@lwarpcnfversion}[2]{% also in lwarpmk.lua

#### 41.3.1 Helper macros

`\LWR@shellescapecmd` The LaTeX compile option for shell escape, if used.

```
1493 \ifshellescape
1494 \def\LWR@shellescapecmd{--shell-escape }
1495 \else
1496 \def\LWR@shellescapecmd{}
1497 \fi
```

`\LWR@compilecmd`  $\{\langle engine \rangle\} \{\langle suffix \rangle\}$

Used to form the basic compilation command for a document, adding the optional shell escape.

Engine is *pdf $\flat$ tex*, etc. Suffix is empty or `_html`

```
1498 \newcommand*{\LWR@compilecmd}[2]{%
1499 #1 \LWR@shellescapecmd \jobname#2%
1500 }
```

`\LWR@addcompilecmd`  $\{\langle cmd \rangle\} \{\langle suffix \rangle\}$

Adds to the compilation command.

Cmd is *dvipdfmx*, etc. Suffix is empty or `_html`

```
1501 \newcommand*{\LWR@addcompilecmd}[2]{%
1502 \LWRopseq
1503 #1 \jobname#2%
1504 }
```

`\LWR@unknownengine` Error message if not sure which L<sup>A</sup>T<sub>E</sub>X engine is being used.

```
1505 \newcommand*{\LWR@unknownengine}{%
1506 \PackageError{lwarp}
1507 {Unknown LaTeX engine.}
1508 {Lwarp only knows about pdf \flat tex, dvi latex, xelatex, lua \flat tex, and up \flat TeX.}
1509 }
```

`\LWR@latexmkvar`  $\{\langle varname \rangle\} \{\langle value \rangle\}$

Adds a *latexmk* variable assignment.

```
1510 \newcommand*\LWR@latexmkvar}[2]{%
1511 -e
1512 \LWRopquote%
1513 \LWRdollar #1=q/#2/%
1514 \LWRopquote
1515 }
```

`\LWR@latexmkcmd`  $\{\langle latexmk options \rangle\}$

Sets a call to *latexmk* with the given options, possibly adding `--shell-escape`, and also adding the indexing program.

```
1516 \newcommand*\LWR@latexmkcmd}[1]{%
1517 latexmk \space \LWR@shellescapecmd \space #1 \space
1518 -recorder \space
1519 \LWR@latexmkvar{makeindex}\LWR@LatexmkIndexCmd}
1520 }
```

`\LWR@latexmkdvipdfm`  $\{\langle dvipdfm \text{ or } dvipdfmx \rangle\}$

Adds the options settings for *dvipdfm* or *dvipdfmx*.

```
1521 \newcommand*\LWR@latexmkdvipdfm}[1]{%
1522 -pdfdvi \space
1523 \LWR@latexmkvar{dvipdf}{%
1524 #1
1525 \@percentchar O
1526 -o \@percentchar D
1527 \@percentchar S%
1528 }
1529 }
```

`\LWR@compileuplatex` Sets compile options for up $\LaTeX$  with *ujarticle* or related classes.

```
1530 \newcommand*\LWR@compileuplatex{%
1531 \def\LWR@tempprintlatexcmd{%
1532 \LWR@compilecmd{uplatex}{}
1533 \LWR@addcompilecmd{dvipdfmx}{}
1534 }
1535 \def\LWR@tempHTMLlatexcmd{%
1536 \LWR@compilecmd{uplatex}{_html}
1537 \LWR@addcompilecmd{dvipdfmx}{_html}
1538 }
1539 }
```

`\LWR@PrintLatexCmd` If not set by the user, the following sets the command to use to compile the source to  
`\LWR@HTMLLatexCmd` PDF form.



If using *latexmk*, a complicated string is created, eventually resulting in something such as:

For *xelatex* with `--shell-escape`:

---

```
[[latexmk -xelatex --shell-escape -recorder
 -e '$makeindex = q/makeindex -s lwarp.ist/' <jobname>_html]]
```

---

For *dvipdfmx*:

---

```
[[latexmk -pdfdvi -e '$dvipdf=q/dvipdfmx %0 -o %D %S/'
 -recorder
 -e '$makeindex=q/makeindex -s lwarp.ist/' <jobname>_html]]
```

---

For the following, temporary values are computed, but the permanent values are only set if the originals were not assigned by the user.

```
1540 \ifbool{LWR@latexmk}{
```

For *latexmk* with *pdflatex* or *lualatex*:

```
1541 \ifpdf
```

For *latexmk* with *pdflatex*:

```
1542 \ifPDFTeX
1543 \def\LWR@latexcmd{\LWR@latexmkcmd{-pdf -dvi- -ps-}}
1544 \else
```

For *latexmk* with *lualatex*:

```
1545 \ifLuaTeX
1546 \def\LWR@latexcmd{\LWR@latexmkcmd{-lualatex}}
1547 \else
1548 \LWR@unknownengine
1549 \fi
1550 \fi
1551 \else% \ifpdf
```

For *latexmk* with *xelatex* or DVI *latex*:

```
1552 \ifXeTeX
```

For *latexmk* with *xelatex*:

```
1553 \def\LWR@latexcmd{\LWR@latexmkcmd{-xelatex}}
1554 \else% \ifXeTeX
```

For *latexmk* with DVI *latex*:

```

1555 \ifbool{LWR@dvipdfm}{
1556 \def\LWR@latexcmd{%
1557 \LWR@latexmkcmd{%
1558 \LWR@latexmkdvipdfm{dvipdfm}%
1559 }
1560 }
1561 }{
1562 \ifbool{LWR@dvipdfmx}{
1563 \def\LWR@latexcmd{%
1564 \LWR@latexmkcmd{%
1565 \LWR@latexmkdvipdfm{dvipdfmx}%
1566 }
1567 }
1568 }{
1569 \def\LWR@latexcmd{\LWR@latexmkcmd{-pdfps}}
1570 }
1571 }
1572 \fi
1573 \fi% \ifpdf

```

The final assignment if *latexmk*:

```

1574 \def\LWR@tempprintlatexcmd{\LWR@latexcmd \space \jobname}
1575 \def\LWR@tempHTMLlatexcmd{\LWR@latexcmd \space \jobname_html}
1576 }% latexmk

```

Without *latexmk*, the compiling command is simply the compiler name and the optional shell escape:

```

1577 {% not latexmk
1578 \ifpdf

```

For *pdflatex* or *lualatex*:

```

1579 \ifPDFTeX

```

For *pdflatex*:

```

1580 \def\LWR@tempprintlatexcmd{\LWR@compilecmd{pdflatex}{}}
1581 \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{pdflatex}{_html}}
1582 \else
1583 \ifLuaTeX

```

For *lualatex*:

```

1584 \def\LWR@tempprintlatexcmd{\LWR@compilecmd{lualatex}{}}
1585 \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{lualatex}{_html}}
1586 \else
1587 \LWR@unknownengine
1588 \fi
1589 \fi
1590 \else% \ifpdf

```

For DVI *latex* or *xelatex*:

```
1591 \ifXeTeX
```

For *xelatex*:

```
1592 \def\LWR@tempprintlatexcmd{\LWR@compilecmd{xelatex}{}}
1593 \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{xelatex}{_html}}
1594 \else
```

For DVI *latex*. Default to *dvips*, unless told to use *dvipdfm* or *dvipdfmx*:

```
1595 \ifbool{LWR@dvipdfm}{
```

For DVI *latex* with *dvipdfm*:

```
1596 \def\LWR@tempprintlatexcmd{%
1597 \LWR@compilecmd{latex}{}
1598 \LWR@addcompilecmd{dvipdfm}{}
1599 }
1600 \def\LWR@tempHTMLlatexcmd{%
1601 \LWR@compilecmd{latex}{_html}
1602 \LWR@addcompilecmd{dvipdfm}{_html}
1603 }
1604 }{
1605 \ifbool{LWR@dvipdfmx}{
```

For DVI *latex* with *dvipdfmx*:

```
1606 \def\LWR@tempprintlatexcmd{%
1607 \LWR@compilecmd{latex}{}
1608 \LWR@addcompilecmd{dvipdfmx}{}
1609 }
1610 \def\LWR@tempHTMLlatexcmd{%
1611 \LWR@compilecmd{latex}{_html}
1612 \LWR@addcompilecmd{dvipdfmx}{_html}
1613 }
1614 }{% dvips
```

For DVI *latex* with *dvips* and *ps2pdf*:

```
1615 \def\LWR@tempprintlatexcmd{%
1616 \LWR@compilecmd{latex}{}
1617 \LWR@addcompilecmd{dvips}{}
1618 \LWR@addcompilecmd{ps2pdf}{_html}.ps
1619 }
1620 \def\LWR@tempHTMLlatexcmd{%
1621 \LWR@compilecmd{latex}{_html}
1622 \LWR@addcompilecmd{dvips}{_html}
1623 \LWR@addcompilecmd{ps2pdf}{_html}.ps
1624 }
1625 }
1626 }
1627 \fi% \ifXeTeX
```

```
1628 \fi% \ifpdf
1629}% latexmk
```

For `ujarticle`, `utarticle`, and related, using up $\text{\LaTeX}$  and `dvipdfmx`:

```
1630 \@ifclassloaded{ujarticle}{\LWR@compileuplatex}{ }
1631 \@ifclassloaded{ujbook}{\LWR@compileuplatex}{ }
1632 \@ifclassloaded{ujreport}{\LWR@compileuplatex}{ }
1633 \@ifclassloaded{utarticle}{\LWR@compileuplatex}{ }
1634 \@ifclassloaded{utbook}{\LWR@compileuplatex}{ }
1635 \@ifclassloaded{utreport}{\LWR@compileuplatex}{ }
```

Only make the setting permanent if the original was empty:

```
1636 \ifdefempty{\LWR@PrintLatexCmd}{
1637 \def\LWR@PrintLatexCmd{\LWR@tempprintlatexcmd}
1638 }{ }
1639 \ifdefempty{\LWR@HTMLLatexCmd}{
1640 \def\LWR@HTMLLatexCmd{\LWR@tempHTMLlatexcmd}
1641 }{ }
```

`\LWR@writeconf` {*(filename)*}

Common code for each of `lwarpmk.conf` and `<project>.lwarpmkconf`. Each entry is a variable name, the equal sign, and a quoted string inside `[[` and `]]`, which are *lua*'s long quote characters, allowing the use of single and double quotes inside.

```
1642 \newcommand{\LWR@writeconf}[1]{
1643 \ifcsdef{LWR@quickfile}{ }\newwrite{\LWR@quickfile}
1644 \immediate\openout\LWR@quickfile=#1
1645 \immediate\write\LWR@quickfile{confversion = [[\LWR@lwarpconfversion]]}
1646 \ifbool{usingOSWindows}{
1647 \immediate\write\LWR@quickfile{opsystem = [[Windows]]}
1648 }{
1649 \immediate\write\LWR@quickfile{opsystem = [[Unix]]}
1650 }
1651 \immediate\write\LWR@quickfile{sourcename = [[\jobname]]}
1652 \immediate\write\LWR@quickfile{homehtmlfilename = [[\HomeHTMLFilename]]}
1653 \immediate\write\LWR@quickfile{htmlfilename = [[\HTMLFilename]]}
1654 \immediate\write\LWR@quickfile{imagesdirectory = [[\LWR@ImagesDirectory]]}
1655 \immediate\write\LWR@quickfile{imagesname = [[\LWR@ImagesName]]}
1656 \immediate\write\LWR@quickfile{latexmk = [[\ifbool{LWR@latexmk}{true}{false}]]}
1657 \immediate\write\LWR@quickfile{printlatexcmd = [[\LWR@PrintLatexCmd]]}
1658 \immediate\write\LWR@quickfile{HTMLlatexcmd = [[\LWR@HTMLLatexCmd]]}
1659 \immediate\write\LWR@quickfile{printindexcmd = [[\LWR@PrintIndexCmd]]}
1660 \immediate\write\LWR@quickfile{HTMLindexcmd = [[\LWR@HTMLIndexCmd]]}
1661 \immediate\write\LWR@quickfile{latexmkindexcmd = [[\LWR@LatexmkIndexCmd]]}
1662 \immediate\write\LWR@quickfile{glossarycmd = [[\LWR@GlossaryCmd]]}
1663 \immediate\write\LWR@quickfile{pdftotextenc = [[\LWR@pdftotextEnc]]}
1664 \immediate\closeout\LWR@quickfile
1665 }
1666

1667 \end{LWRwriteconf}
```

### 41.3.2 lwarpmk.conf

File `lwarpmk.conf` `lwarpmk.conf` is automatically (re-)created by the `lwarp` package when executing `pdflatex <project.tex>`, or similar for `xelatex` or `lualatex`, in print-document generation mode, which is the default unless the `warpHTML` option is given. `lwarpmk.conf` is then used by the utility `lwarpmk`.

**Config file:**

```
1668 \begin{LWRwriteconf}
1669
1670 \AtBeginDocument{\LWR@writeconf{lwarpmk.conf}}
1671
1672 \end{LWRwriteconf}
```

### 41.3.3 <project>.lwarpmkconf

File `project.lwarpmkconf` A project-specific configuration file for `lwarpmk`.

The `makeindex` and `xindy` options have already been handled for `lwarp.conf`.

**Config file:**

```
1673 \begin{LWRwriteconf}
1674
1675 \AtBeginDocument{\LWR@writeconf{\jobname.lwarpmkconf}}
1676
1677 \end{LWRwriteconf}
```

## 41.4 lwarp.css

File `lwarp.css` This is the base CSS layer used by `lwarp`.

This must be present both when compiling the project and also when distributing the HTML files.

**Config file:**

```
1678 \begin{LWRwriteconf}
1679 \begin{filecontents*}{lwarp.css}
1680 /*
1681 CSS stylesheet for the LaTeX lwarp package
1682 Copyright 2016-2018 Brian Dunn --- BD Tech Concepts LLC
1683 */
1684
1685
1686 /* a fix for older browsers: */
1687 header, section, footer, aside, nav, main,
1688 article, figure { display: block; }
1689
1690
1691 A:link {color:#000080 ; text-decoration: none ; }
1692 A:visited {color:#800000 ; }
1693 A:hover {color:#000080 ; text-decoration: underline ;}
1694 A:active {color:#800000 ; }
1695
```

```
1696 a.tocpart {display: inline-block ; margin-left: 0em ;
1697 font-weight: bold ;}
1698 a.tocchapter {display: inline-block ; margin-left: 0em ;
1699 font-weight: bold ;}
1700 a.tocsection {display: inline-block ; margin-left: 1em ;
1701 text-indent: -.5em ; font-weight: bold ; }
1702 a.tocsubsection {display: inline-block ; margin-left: 2em ;
1703 text-indent: -.5em ; }
1704 a.tocsubsubsection {display: inline-block ; margin-left: 3em ;
1705 text-indent: -.5em ; }
1706 a.tocparagraph {display: inline-block ; margin-left: 4em ;
1707 text-indent: -.5em ; }
1708 a.tocsubparagraph {display: inline-block ; margin-left: 5em ;
1709 text-indent: -.5em ; }
1710 a.tocfigure {margin-left: 0em}
1711 a.tocsubfigure {margin-left: 2em}
1712 a.toctable {margin-left: 0em}
1713 a.tocsubtable {margin-left: 2em}
1714 a.toctheorem {margin-left: 0em}
1715 a.toclstlisting {margin-left: 0em}
1716
1717 body {
1718 font-family: "DejaVu Serif", "Bitstream Vera Serif",
1719 "Lucida Bright", Georgia, serif;
1720 background: #FAF7F4 ;
1721 color: black ;
1722 margin: 0em ;
1723 padding: 0em ;
1724 font-size: 100% ;
1725 line-height: 1.2 ;
1726 }
1727
1728 p {margin: 1.5ex 0em 1.5ex 0em ;}
1729 table p {margin: .5ex 0em .5ex 0em ;}
1730
1731 /* Holds a section number */
1732 span.sectionnumber { margin-right: 0em }
1733
1734 /* Inserted in front of index lines */
1735 span.indexitem {margin-left: 0em}
1736 span.indexsubitem {margin-left: 2em}
1737 span.indexsubsubitem {margin-left: 4em}
1738
1739 div.hidden, span.hidden { display: none ; }
1740
1741 kbd, span.texttt {
1742 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
1743 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
1744 "Courier New", monospace;
1745 font-size: 100% ;
1746 }
1747
1748 pre { padding: 3pt ; }
1749
1750 span.strong, span.textbf, div.strong, div.textbf { font-weight: bold; }
```

```
1751
1752 span.textit, div.textit { font-style: italic; }
1753
1754 span.textmd, div.textmd { font-weight: normal; }
1755
1756 span.textsc, div.textsc {
1757 font-variant: small-caps;
1758 font-variant-numeric: oldstyle-nums ;
1759 }
1760
1761 span.textsi, div.textsi {
1762 font-style: italic ;
1763 font-variant: small-caps;
1764 font-variant-numeric: oldstyle-nums ;
1765 }
1766
1767 span.textsl, div.textsl { font-style: oblique; }
1768
1769 span.textup, div.textup {
1770 font-style: normal;
1771 font-variant: normal;
1772 font-variant-numeric: normal ;
1773 }
1774
1775 span.textrm, div.textrm {
1776 font-family: "DejaVu Serif", "Bitstream Vera Serif",
1777 "Lucida Bright", Georgia, serif;
1778 }
1779
1780 span.textsf, div.textsf {
1781 font-family: "DejaVu Sans", "Bitstream Vera Sans",
1782 Geneva, Verdana, sans-serif ;
1783 }
1784
1785 span.textcircled { border: 1px solid black ; border-radius: 1ex ; }
1786
1787 span.underline {
1788 text-decoration: underline ;
1789 text-decoration-skip: auto ;
1790 }
1791
1792 span.overline {
1793 text-decoration: overline ;
1794 text-decoration-skip: auto ;
1795 }
1796
1797
1798 /* for vertical text: */
1799 div.verticalrl { writing-mode: vertical-rl }
1800 div.horizontaltb { writing-mode: horizontal-tb }
1801
1802
1803 /* for diagbox */
1804 div.diagboxtitleN { border-bottom: 1px solid gray }
1805 div.diagboxtitleS { border-top: 1px solid gray }
```

```
1806
1807 div.diagboxE {
1808 padding-left: 2em ;
1809 text-align: right ;
1810 }
1811
1812 div.diagboxW {
1813 padding-right: 2em ;
1814 text-align: left ;
1815 }
1816
1817
1818
1819 /* For realscripts */
1820 .supsubscript {
1821 display: inline-block;
1822 text-align:left ;
1823 }
1824
1825 .supsubscript sup,
1826 .supsubscript sub {
1827 position: relative;
1828 display: block;
1829 font-size: .5em;
1830 line-height: 1;
1831 }
1832
1833 .supsubscript sup {
1834 top: .5em;
1835 }
1836
1837 .supsubscript sub {
1838 top: .5em;
1839 }
1840
1841 div.attribution p {
1842 text-align: right ;
1843 font-size: 80%
1844 }
1845
1846 span.poemtitle {
1847 font-size: 120% ; font-weight: bold;
1848 }
1849
1850 pre.tabbing {
1851 font-family: "Linux Libertine Mono O", "Lucida Console",
1852 "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono",
1853 "Liberation Mono", "FreeMono", "Andale Mono",
1854 "Nimbus Mono L", "Courier New", monospace;
1855 }
1856
1857 blockquote {
1858 display: block ;
1859 margin-left: 2em ;
1860 margin-right: 2em ;
```



```
1861 }
1862
1863 blockquotation {
1864 display: block ;
1865 margin-left: 2em ;
1866 margin-right: 2em ;
1867 }
1868
1869 /* quotchap is for the quotchap package */
1870 div.quotchap {
1871 display: block ;
1872 font-style: oblique ;
1873 overflow-x: auto ;
1874 margin-left: 2em ;
1875 margin-right: 2em ;
1876 }
1877
1878 blockquote p, blockquotation p, div.quotchap p {
1879 line-height: 1.5;
1880 text-align: left ;
1881 font-size: .85em ;
1882 }
1883
1884 /* qauthor is for the quotchap package */
1885 div.qauthor {
1886 display: block ;
1887 text-align: right ;
1888 margin-left: auto ;
1889 margin-right: 2em ;
1890 font-size: 80% ;
1891 font-variant: small-caps;
1892 }
1893
1894 div.qauthor p {
1895 text-align: right ;
1896 }
1897
1898 div.epigraph, div.dictum {
1899 line-height: 1.2;
1900 text-align: left ;
1901 padding: 3ex 1em 0ex 1em ;
1902 /* margin: 3ex auto 3ex auto ; */ /* Epigraph centered */
1903 margin: 3ex 1em 3ex auto ; /* Epigraph to the right */
1904 /* margin: 3ex 1em 3ex 1em ; */ /* Epigraph to the left */
1905 font-size: .85em ;
1906 max-width: 27em ;
1907 }
1908
1909 div.epigraphsource, div.dictumauthor {
1910 text-align:right ;
1911 margin-left:auto ;
1912 /* max-width: 50% ; */
1913 border-top: 1px solid #A0A0A0 ;
1914 padding-bottom: 3ex ;
1915 line-height: 1.2;
```

```
1916 }
1917
1918 div.epigraph p, div.dictum p { padding: .5ex ; margin: 0ex ;}
1919 div.epigraphsource p, div.dictumauthor p { padding: .5ex 0ex 0ex 0ex ; margin: 0ex ;}
1920 div.dictumauthor { font-style:italic }
1921
1922
1923 /* copyrightbox package */
1924 div.copyrightbox { margin: .5ex .5em }
1925 div.copyrightbox p {margin: 0px .5em ; padding: 0px}
1926 div.copyrightboxnote {text-align: left ; font-size: 60%}
1927
1928
1929 /* lettrine package: */
1930 span.lettrine { font-size: 4ex ; float: left ; }
1931 span.lettrinetext { font-variant: small-caps ; }
1932
1933 /* ulem, soul, umoline packages: */
1934 span.uline {
1935 text-decoration: underline ;
1936 text-decoration-skip: auto ;
1937 }
1938
1939 span.uuline {
1940 text-decoration: underline ;
1941 text-decoration-skip: auto ;
1942 text-decoration-style: double ;
1943 }
1944
1945 span.uwave {
1946 text-decoration: underline ;
1947 text-decoration-skip: auto ;
1948 text-decoration-style: wavy ;
1949 }
1950
1951 span.sout {
1952 text-decoration: line-through ;
1953 }
1954
1955 span.oline {
1956 text-decoration: overline ;
1957 text-decoration-skip: auto ;
1958 }
1959
1960 span.xout {
1961 text-decoration: line-through ;
1962 }
1963
1964 span.dashuline {
1965 text-decoration: underline ;
1966 text-decoration-skip: auto ;
1967 text-decoration-style: dashed ;
1968 }
1969
1970 span.dotuline {
```

```
1971 text-decoration: underline ;
1972 text-decoration-skip: auto ;
1973 text-decoration-style: dotted ;
1974 }
1975
1976 span.letterspacing { letter-spacing: .2ex ; }
1977
1978 span.capsspacing {
1979 font-variant: small-caps ;
1980 letter-spacing: .1ex ;
1981 }
1982
1983 span.highlight { background: #F8E800 ; }
1984
1985
1986
1987
1988 html body {
1989 margin: 0 ;
1990 line-height: 1.2;
1991 }
1992
1993
1994 body div {
1995 margin: 0ex;
1996 }
1997
1998
1999 h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
2000 {
2001 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
2002 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
2003 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
2004 "Times New Roman", serif;
2005 font-style: normal ;
2006 font-weight: bold ;
2007 text-align: left ;
2008 }
2009
2010 h1 { /* title of the entire website, used on each page */
2011 text-align: center ;
2012 font-size: 2.5em ;
2013 padding: .4ex 0em 0ex 0em ;
2014 }
2015 h2 { font-size: 2.25em }
2016 h3 { font-size: 2em }
2017 h4 { font-size: 1.75em }
2018 h5 { font-size: 1.5em }
2019 h6 { font-size: 1.25em }
2020 span.paragraph {font-size: 1em ; font-variant: normal ;
2021 margin-right: 1em ; }
2022 span.subparagraph {font-size: 1em ; font-variant: normal ;
2023 margin-right: 1em ; }
2024
2025 div.minisec {
```

```
2026 font-family: "DejaVu Sans", "Bitstream Vera Sans",
2027 Geneva, Verdana, sans-serif ;
2028 font-style: normal ;
2029 font-weight: bold ;
2030 text-align: left ;
2031 }
2032
2033 h1 {
2034 margin: 0ex 0em 0ex 0em ;
2035 line-height: 1.3;
2036 text-align: center ;
2037 }
2038
2039 h2 {
2040 margin: 1ex 0em 1ex 0em ;
2041 line-height: 1.3;
2042 text-align: center ;
2043 }
2044
2045 h3 {
2046 margin: 3ex 0em 1ex 0em ;
2047 line-height: 1.3;
2048 }
2049
2050 h4 {
2051 margin: 3ex 0em 1ex 0em ;
2052 line-height: 1.3;
2053 }
2054
2055 h5 {
2056 margin: 3ex 0em 1ex 0em ;
2057 line-height: 1.3;
2058 }
2059
2060 h6 {
2061 margin: 3ex 0em 1ex 0em ;
2062 line-height: 1.3;
2063 }
2064
2065
2066 div.titlepage {
2067 text-align: center ;
2068 }
2069
2070 .footnotes {
2071 text-align: left ;
2072 font-size: .85em ;
2073 margin: 3ex 2em 0ex 2em ;
2074 border-top: 1px solid silver ;
2075 }
2076
2077 .marginpar, .marginparblock {
2078 max-width: 50%;
2079 float: right ;
2080 clear: both ;
```

```
2081 text-align: left ;
2082 margin: 1ex 0.5em 1ex 1em ;
2083 padding: 1ex 0.5em 1ex 0.5em ;
2084 font-size: 85% ;
2085 border-top: 1px solid silver ;
2086 border-bottom: 1px solid silver ;
2087 overflow-x: auto ;
2088 }
2089
2090 .marginpar br { margin-bottom: 2ex ; }
2091
2092 div.marginblock, div.marginparblock {
2093 max-width:50%;
2094 min-width: 10em; /* room for caption */
2095 float:right;
2096 text-align:left;
2097 margin: 1ex 0.5em 1ex 1em ;
2098 padding: 1ex 0.5em 1ex 0.5em ;
2099 overflow-x: auto;
2100 }
2101
2102 div.marginblock div.minipage,
2103 div.marginparblock div.minipage {
2104 display: block ;
2105 margin: 0pt auto 0pt auto ;
2106 }
2107
2108 div.marginblock div.minipage p ,
2109 div.marginparblock div.minipage p
2110 { font-size: 85%}
2111
2112 div.marginblock br ,
2113 div.marginparblock br
2114 { margin-bottom: 2ex ; }
2115
2116 div.bodycontainer {
2117 float: left ;
2118 width: 80% ;
2119 }
2120
2121 div.bodywithoutsidetoc div.bodycontainer {
2122 float: none ;
2123 width: 100% ;
2124 }
2125
2126 section.textbody div.footnotes{
2127 margin: 3ex 2em 0ex 2em ;
2128 border-bottom: 2px solid silver ;
2129 }
2130
2131 .footnoteheader {
2132 border-top: 2px solid silver ;
2133 margin-top: 3ex ;
2134 padding-top: 1ex ;
2135 font-weight: bold ;
```

```
2136 }
2137
2138 .mpfootnotes {
2139 text-align: left ;
2140 font-size: .85em ;
2141 margin-left: 1em ;
2142 border-top: 1px solid silver ;
2143 }
2144
2145 /* Remove footnote top border in the title page. */
2146 div.titlepage div.mpfootnotes {
2147 border-top: none ;
2148 }
2149
2150
2151
2152 ul, ol {
2153 margin: 1ex 1em 1ex 0em;
2154 line-height: 1.2;
2155 }
2156
2157 body dir, body menu {
2158 margin: 3ex 1em 3ex 0em;
2159 line-height: 1.2;
2160 }
2161
2162 li { margin: 0ex 0em 1ex 0em; }
2163
2164 html {
2165 margin: 0;
2166 padding: 0;
2167 }
2168
2169 .programlisting {
2170 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2171 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2172 "Courier New", monospace;
2173 margin: 1ex 0ex 1ex 0ex ;
2174 padding: .5ex 0pt .5ex 0pt ;
2175 overflow-x: auto;
2176 }
2177
2178 section.textbody>pre.programlisting {
2179 border-top: 1px solid silver ;
2180 border-bottom: 1px solid silver ;
2181 }
2182
2183
2184 div.displaymath {
2185 text-align: center ;
2186 }
2187
2188 div.displaymathnumbered {
2189 text-align: right ;
2190 margin-left: 5% ;
```

```
2191 margin-right: 5% ;
2192 min-width: 2.5in ;
2193 }
2194
2195 @media all and (min-width: 400px) {
2196 div.displaymathnumbered {
2197 margin-left: 10% ;
2198 margin-right: 10% ;
2199 }
2200 }
2201
2202 @media all and (min-width: 800px) {
2203 div.displaymathnumbered {
2204 margin-right: 20% ;
2205 }
2206 }
2207
2208 @media all and (min-width: 1200px) {
2209 div.displaymathnumbered {
2210 margin-right: 30% ;
2211 }
2212 }
2213
2214
2215 .inlineprogramlisting {
2216 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2217 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2218 "Courier New", monospace;
2219 overflow-x: auto;
2220 }
2221
2222 span.listinglabel {
2223 display: inline-block ;
2224 font-size: 70% ;
2225 width: 4em ;
2226 text-align: right ;
2227 margin-right: 2em ;
2228 }
2229
2230 div.abstract {
2231 margin: 2em 5% 2em 5% ;
2232 padding: 1ex 1em 1ex 1em ;
2233 /* font-weight: bold ; */
2234 font-size: 90% ;
2235 text-align: left ;
2236 }
2237
2238 div.abstract dl {line-height:1.5;}
2239 div.abstract dt {color:#304070;}
2240
2241 div.abstracttitle{
2242 font-family: "URW Classico", Optima, "Linux Biolinum O",
2243 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
2244 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2245 font-weight:bold;
```

```
2246 font-size:1.25em;
2247 text-align: center ;
2248 }
2249
2250 span.abstractrunintitle{
2251 font-family: "URW Classico", Optima, "Linux Biolinum O",
2252 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
2253 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2254 font-weight:bold;
2255 }
2256
2257
2258 .verbatim {
2259 overflow-x: auto ;
2260 }
2261
2262 .alltt {
2263 overflow-x: auto ;
2264 }
2265
2266
2267 .bverbatim {
2268 margin: 1ex 0pt 1ex 0pt ;
2269 padding: .5ex 0pt .5ex 0pt ;
2270 overflow-x: auto ;
2271 }
2272
2273 .lverbatim {
2274 margin: 1ex 0pt 1ex 0pt ;
2275 padding: .5ex 0pt .5ex 0pt ;
2276 overflow-x: auto ;
2277 }
2278
2279 .fancyvrb {
2280 font-size:.85em ;
2281 margin: 3ex 0pt 3ex 0pt
2282 }
2283
2284 .fancyvrblabel {
2285 font-weight:bold;
2286 text-align: center ;
2287 }
2288
2289
2290 .verse {
2291 font-family: "Linux Libertine Mono O", "Lucida Console",
2292 "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono",
2293 "Liberation Mono", "FreeMono", "Andale Mono",
2294 "Nimbus Mono L", "Courier New", monospace;
2295 margin-left: 1em ;
2296 }
2297
2298
2299 div.singlespace { line-height: 1.2 ; }
2300 div.onehalfspace { line-height: 1.5 ; }
```



```
2301 div.doublespace { line-height: 2 ; }
2302
2303
2304 /* Word processor format output: */
2305 div.wpfigure { border: 1px solid red ; margin: .5ex ; padding: .5ex ; }
2306 div.wptable { border: 1px solid blue ; margin: .5ex ; padding: .5ex ; }
2307 div.wpminipage { border: 1px solid green ; margin: .5ex ; padding: .5ex ;}
2308
2309
2310
2311
2312 /* Minipage environments, vertically aligned to top, center, bottom: */
2313 .minipage, .fminipage, .fcolorminipage {
2314 /* display: inline-block ; */
2315 /* Mini pages which follow each other will be tiled. */
2316 margin: .25em .25em .25em .25em;
2317 padding: .25em .25em .25em .25em;
2318 display: inline-flex;
2319 flex-direction: column ;
2320 overflow: auto;
2321 }
2322
2323 .inlineminipage {
2324 display: inline-block ;
2325 text-align: left
2326 }
2327
2328 /* Paragraphs in the flexbox did not collapse their margins. */
2329 /* Have not yet researched this. */
2330 .minipage p {margin: .75ex 0em .75ex 0em ;}
2331
2332 .fboxBlock .minipage, .colorbox .minipage, .colorboxBlock .minipage,
2333 .fcolorbox .minipage, .fcolorboxBlock .minipage
2334 {border: none ; background: none;}
2335
2336 .fbox, .fboxBlock { border: 1px solid black ; }
2337
2338 .fbox, .fboxBlock, .fcolorbox, .fcolorboxBlock, .colorbox, .colorboxBlock,
2339 .fminipage, .fcolorminipage
2340 {display: inline-block}
2341
2342 .shadowbox, .shabox {
2343 border: 1px solid black;
2344 box-shadow: 3px 3px 3px #808080 ;
2345 border-radius: 0px ;
2346 padding: .4ex .3em .4ex .3em ;
2347 margin: 0pt .3ex 0pt .3ex ;
2348 display: inline-block ;
2349 }
2350
2351 .doublebox {
2352 border: 3px double black;
2353 border-radius: 0px ;
2354 padding: .4ex .3em .4ex .3em ;
2355 margin: 0pt .3ex 0pt .3ex ;
```

```
2356 display: inline-block ;
2357 }
2358
2359 .ovalbox, .Ovalbox {
2360 border: 1px solid black;
2361 border-radius: 1ex ;
2362 padding: .4ex .3em .4ex .3em ;
2363 margin: 0pt .3ex 0pt .3ex ;
2364 display: inline-block ;
2365 }
2366
2367 .Ovalbox { border-width: 2px ; }
2368
2369 .framebox {
2370 border: 1px solid black;
2371 border-radius: 0px ;
2372 padding: .3ex .2em 0ex .2em ;
2373 margin: 0pt .1ex 0pt .1ex ;
2374 display: inline-block ;
2375 }
2376
2377
2378 .mdframed {
2379 padding: 0ex ;
2380 margin: 2ex 0em 2ex 0em ;
2381 }
2382
2383 .mdframed p { padding: 0ex .5em 0ex .5em ; }
2384
2385 .mdframed dl { padding: 1ex .5em 0ex .5em ; }
2386
2387 .mdframedtitle {
2388 padding: .5ex 0pt 0pt 0pt ;
2389 border-radius: 10pt 10pt 0pt 0pt ;
2390 display: block ;
2391 margin-bottom: 1ex ;
2392 }
2393
2394 .mdframedsubtitle {
2395 display: block ;
2396 }
2397
2398 .mdframedsubsubtitle {
2399 display: block ;
2400 }
2401
2402 .mdtheorem {
2403 padding: 0ex .5em 0ex .5em ;
2404 margin: 3ex 5% 3ex 5% ;
2405 }
2406
2407
2408 /* framed package */
2409 .framed, pre.boxedverbatim, fcolorbox {
2410 margin: 3ex 0em 3ex 0em ;
```

```
2411 border: 1px solid black;
2412 border-radius: 0px ;
2413 padding: .3ex 1em 0ex 1em ;
2414 display: block ;
2415 }
2416
2417 .shaded {
2418 margin: 3ex 0em 3ex 0em ;
2419 padding: .3ex 1em .3ex 1em ;
2420 display: block ;
2421 }
2422
2423 .snugframed {
2424 margin: 3ex 0em 3ex 0em ;
2425 border: 1px solid black;
2426 border-radius: 0px ;
2427 display: block ;
2428 }
2429
2430 .framedleftbar {
2431 margin: 3ex 0em 3ex 0em ;
2432 border-left: 3pt solid black;
2433 border-radius: 0px ;
2434 padding: .3ex .2em .3ex 1em ;
2435 display: block ;
2436 }
2437
2438 .framedtitle {
2439 margin: 0em ;
2440 padding: 0em ;
2441 font-size: 130%
2442 }
2443
2444 .framedtitle p { padding: .3em }
2445
2446
2447 /* For the niceframe package: */
2448
2449 div.niceframe, div.curlyframe, div.artdecoframe, div.generalframe {
2450 padding: 1ex ;
2451 margin: 2ex auto ;
2452 border-radius: 2ex ;
2453 }
2454
2455 div.niceframe {
2456 border: 6px groove black ;
2457 }
2458
2459 div.curlyframe {
2460 border-left: 3px dotted black ;
2461 border-right: 3px dotted black ;
2462 border-radius: 6ex ;
2463 }
2464
2465 div.artdecoframe {
```

```
2466 border-left: 10px double black ;
2467 border-right: 10px double black ;
2468 border-radius: 6ex ;
2469 }
2470
2471 div.generalframe {
2472 border: 6px groove black ;
2473 }
2474
2475
2476
2477 dl {
2478 margin: 1ex 2em 1ex 0em;
2479 line-height: 1.3;
2480 }
2481
2482 dl dt {
2483 display: block ;
2484 float:left ;
2485 font-weight: bold;
2486 padding-right: 1em ;
2487 }
2488
2489 dl dd { display: block ; }
2490
2491 dl dd:after { content: "" ; display: block ; clear: both }
2492
2493 dl dd p { margin-top: 0em; }
2494
2495 dd ul, dd ol, dd dl { clear: both ; padding-top: 1ex }
2496
2497
2498 nav {
2499 font-family: "URW Classico", Optima, "Linux Biolinum O",
2500 "DejaVu Sans", "Bitstream Vera Sans",
2501 Geneva, Verdana, sans-serif ;
2502 margin-bottom: 4ex ;
2503 }
2504
2505 nav p {
2506 line-height: 1.2 ;
2507 margin-top:.5ex ;
2508 margin-bottom:.5ex;
2509 font-size: .9em ;
2510 }
2511
2512
2513
2514 img, img.hyperimage, img.borderimage {
2515 max-width: 600px;
2516 border: 1px solid silver;
2517 box-shadow: 3px 3px 3px #808080 ;
2518 padding: .5% ;
2519 margin: .5% ;
2520 background: none ;
```

```
2521 }
2522
2523 img.inlineimage{
2524 padding: 0px ;
2525 box-shadow: none ;
2526 border: none ;
2527 background: none ;
2528 margin: 0px ;
2529 display: inline-block ;
2530 border-radius: 0px ;
2531 }
2532
2533 img.logoimage{
2534 max-width: 300px ;
2535 box-shadow: 3px 3px 3px #808080 ;
2536 border: 1px solid black ;
2537 background:none ;
2538 padding:0 ;
2539 margin:.5ex ;
2540 border-radius: 10px ;
2541 }
2542
2543
2544 .section {
2545 /*
2546 To have each section float relative to each other:
2547 */
2548 /*
2549 display: block ;
2550 float: left ;
2551 position: relative ;
2552 background: white ;
2553 border: 1px solid silver ;
2554 padding: .5em ;
2555 */
2556 margin: 0ex .5em 0ex .5em ;
2557 padding: 0 ;
2558 }
2559
2560
2561 figure {
2562 margin: 5ex auto 5ex auto ;
2563 padding: 1ex 1em 1ex 1em ;
2564 overflow-x: auto ;
2565 }
2566
2567
2568 /* To automatically center images in figures: */
2569 /*
2570 figure img.inlineimage {
2571 margin: 0ex auto 0ex auto ;
2572 display: block ;
2573 }
2574 */
2575
```

```
2576 /* To automatically center minipages in figures: */
2577 /*
2578 figure div.minipage, figure div.minipage div.minipage {
2579 margin: 1ex auto 1ex auto ;
2580 display: block ;
2581 }
2582 */
2583
2584 figure figure { margin: 0pt }
2585
2586 figure div.minipage p { font-size: 85% ; }
2587
2588 figure.subfigure, figure.subtable {
2589 display: inline-block ; margin: 3ex 1em 3ex 1em ;
2590 }
2591
2592 div.figurecaption .minipage { margin:0 ; padding: 0 }
2593
2594 div.minipage figure { border: none ; box-shadow: none ; }
2595 div.minipage figure.table { margin: 0ex }
2596 div.minipage div.footnotes { margin: 1ex 2em 0ex 2em }
2597
2598 div.floatrow { text-align: center; }
2599
2600 div.floatrow figure { display: inline-block ; margin: 1ex 2% ; }
2601
2602 div.floatfoot { font-size: .85em ;
2603 border-top: 1px solid silver ; line-height: 1.2 ; }
2604
2605 div.figurecaption , .lstlistingtitle {
2606 font-size: .85em ;
2607 text-align: center ;
2608 font-weight: bold ;
2609 margin-top: 1ex ;
2610 margin-bottom: 1ex ;
2611 }
2612
2613 figure.subfigure div.figurecaption, figure.subtable div.figurecaption {
2614 border-bottom: none ; background: none ;
2615 }
2616
2617 div.nonfloatcaption {
2618 margin: 1ex auto 1ex auto ;
2619 font-size: .85em ;
2620 text-align: center ;
2621 font-weight: bold ;
2622 }
2623
2624 /* For a \RawCaption inside a minipage inside a figure's floatrow: */
2625 figure div.floatrow div.minipage div.figurecaption {
2626 border: none ;
2627 background: none ;
2628 }
2629
2630
```

```
2631 /* For packages such as float, rotfloat, and algorithm2e: */
2632
2633 figure.boxed, figure.boxruled {
2634 border: 1px solid black ;
2635 }
2636
2637 figure.ruled {
2638 border-top: 1px solid black ;
2639 border-bottom: 1px solid black ;
2640 border-left: 0px ;
2641 border-right: 0px ;
2642 border-radius: 0px ;
2643 background: none ;
2644 box-shadow: none ;
2645 }
2646
2647 figure.ruled div.figurecaption, figure.boxruled div.figurecaption {
2648 border-top: 1px solid silver ;
2649 border-bottom: 1px solid silver ;
2650 }
2651
2652
2653 table {
2654 margin: 1ex auto 1ex auto ;
2655 border-collapse: separate ;
2656 border-spacing: 0px ;
2657 line-height: 1.3 ;
2658 }
2659
2660 tr.hline td {border-top: 1px solid #808080 ; margin-top: 0ex ;
2661 margin-bottom: 0ex ; } /* for \hline */
2662
2663 tr.tbrule td {border-top: 1px solid black ; margin-top: 0ex ;
2664 margin-bottom: 0ex ; } /* for \toprule, \bottomrule */
2665
2666 td {padding: .5ex .5em .5ex .5em ;}
2667
2668 table td.tdl { text-align: left ; vertical-align: middle ; }
2669 table td.tdc { text-align: center ; vertical-align: middle ; }
2670 table td.tdat { text-align: center ; vertical-align: middle ; padding: 0px ; margin: 0px ; }
2671 table td.tdbang { text-align: center ; vertical-align: middle ; }
2672 table td.tdr { text-align: right ; vertical-align: middle ; }
2673 table td.tdp { text-align: left ; vertical-align: bottom ; }
2674 table td.tdm { text-align: left ; vertical-align: middle ; }
2675 table td.tdb { text-align: left ; vertical-align: top ; }
2676 table td.tdP { text-align: center ; vertical-align: bottom ; }
2677 table td.tdM { text-align: center ; vertical-align: middle ; }
2678 table td.tdB { text-align: center ; vertical-align: top ; }
2679
2680 table td.tvertbarl { border-left: 1px solid black }
2681 table td.tvertbardouble { border-left: 4px double black }
2682 table td.tvertbarr { border-right: 1px solid black }
2683 table td.tvertbarrdouble { border-right: 4px double black }
2684
2685 table td.tvertbardash { border-left: 1px dashed black }
```

```
2686 table td.tvertbarldoubledash { border-left: 2px dashed black }
2687 table td.tvertbarrdash { border-right: 1px dashed black }
2688 table td.tvertbarrdoubledash { border-right: 2px dashed black }
2689
2690
2691 /* for cmidrules: */
2692 table td.tdrule {
2693 border-top: 1px solid #A0A0A0 ;
2694 }
2695
2696 table td.tdrulel {
2697 border-top-left-radius:.5em ;
2698 border-top: 1px solid #A0A0A0 ;
2699 }
2700
2701 table td.tdruler {
2702 border-top-right-radius:.5em ;
2703 border-top: 1px solid #A0A0A0 ;
2704 }
2705
2706 table td.tdrulelr {
2707 border-top-left-radius:.5em ;
2708 border-top-right-radius:.5em ;
2709 border-top: 1px solid #A0A0A0 ;
2710 }
2711
2712
2713 /* Margins of paragraphs inside table cells: */
2714 td.tdp p , td.tdprule p , td.tdP p , td.tdPrule p { padding-top: 1ex ;
2715 padding-bottom: 1ex ; margin: 0ex ; }
2716 td.tdm p , td.tdmrule p , td.tdM p , td.tdMrule p { padding-top: 1ex ;
2717 padding-bottom: 1ex ; margin: 0ex ; }
2718 td.tdb p , td.tdbrule p , td.tdB p , td.tdBrule p { padding-top: 1ex ;
2719 padding-bottom: 1ex ; margin: 0ex ; }
2720
2721 td.tdp , td.tdprule , td.tdP , td.tdPrule
2722 { padding: 0ex .5em 0ex .5em ; }
2723 td.tdm , td.tdmrule , td.tdM , td.tdMrule
2724 { padding: 0ex .5em 0ex .5em ; }
2725 td.tdb , td.tdbrule , td.tdB , td.tdBrule
2726 { padding: 0ex .5em 0ex .5em ; }
2727
2728
2729 /* table notes: */
2730 .tnotes {
2731 margin: 0ex 5% 1ex 5% ;
2732 padding: 0.5ex 1em 0.5ex 1em;
2733 font-size:.80em;
2734 text-align: left ;
2735 }
2736
2737 .minipage .tnotes {
2738 margin: 0pt ;
2739 padding: 0pt ;
2740 }
```



```
2741
2742 .tnotes dl dt p {margin-bottom:0px;}
2743
2744 .tnoteitemheader {margin-right: 1em;}
2745
2746
2747 /* for colortbl and cell color */
2748 div.cellcolor {
2749 width: 100% ;
2750 padding: .5ex .5em .5ex .5em ;
2751 margin: -.5ex -.5em -.5ex -.5em ;
2752 }
2753
2754
2755 /* for bigdelim */
2756 .ldelim, .rdelim { font-size: 200% }
2757
2758
2759 /* center, flushleft, flushright environments */
2760 div.center{text-align:center;}
2761 div.center table {margin-left:auto;margin-right:auto;}
2762 div.flushleft{text-align:left;}
2763 div.flushleft table {margin-left:0em ; margin-right:auto;}
2764 div.flushright{text-align:right;}
2765 div.flushright table {margin-left:auto ; margin-right: 0em ;}
2766
2767
2768 /* Fancybox */
2769 div.Btrivlist table tr td {
2770 padding: .2ex 0em ;
2771 }
2772
2773
2774 /* program listing callouts: */
2775 span.callout {
2776 font-family: "DejaVu Sans", "Bitstream Vera Sans",
2777 Geneva, Verdana, sans-serif ;
2778 border-radius: .5em;
2779 background-color:black;
2780 color:white;
2781 padding:0px .25em 0px .25em;
2782 margin: 0 ;
2783 font-weight: bold;
2784 font-size:.72em ;
2785 }
2786
2787 div.programlisting pre.verbatim span.callout{
2788 font-size: .85em ;
2789 }
2790
2791 span.verbatim {
2792 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2793 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2794 "Courier New", monospace;
2795 }
```

```
2796
2797
2798
2799 div.published
2800 {
2801 text-align: center ;
2802 font-variant: normal ;
2803 font-style: italic ;
2804 font-size: 1em ;
2805 margin: 1ex 0em 1ex 0em ;
2806 }
2807
2808 div.subtitle
2809 {
2810 text-align: center ;
2811 font-variant: normal ;
2812 font-style: italic ;
2813 font-size: 1.25em ;
2814 margin: 1ex 0em 1ex 0em ;
2815 }
2816
2817 div.subtitle p { margin: 1ex ; }
2818
2819 div.author
2820 {
2821 font-variant: normal ;
2822 font-style: normal ;
2823 font-size: 1em ;
2824 margin: 1ex 0em 1ex 0em ;
2825 }
2826
2827 div.oneauthor {
2828 display: inline-block ;
2829 margin: 0ex 1em 0ex 1em ;
2830 }
2831
2832 /*
2833 div.author table {
2834 margin: 1ex auto 0ex auto ;
2835 background: none ;
2836 }
2837
2838 div.author table tbody tr td { padding: .25ex ; }
2839 */
2840
2841 span.affiliation {font-size: .85em ; font-variant: small-caps; }
2842
2843 div.titledate {
2844 text-align: center ;
2845 font-size: .85em ;
2846 font-style: italic;
2847 margin: 1ex 0em 1ex 0em ;
2848 }
2849
2850
```

```
2851 nav.topnavigation{
2852 text-align: left ;
2853 padding: 0.5ex 1em 0.5ex 1em ;
2854 /* margin: 2ex 0em 3ex 0em ; */
2855 margin: 0 ;
2856 border-bottom: 1px solid silver ;
2857 border-top: 1px solid silver ;
2858 clear:both ;
2859 }
2860
2861 nav.botnavigation{
2862 text-align: left ;
2863 padding: 0.5ex 1em 0.5ex 1em ;
2864 /* margin: 3ex 0em 2ex 0em ; */
2865 margin: 0 ;
2866 border-top: 1px solid silver ;
2867 border-bottom: 1px solid silver ;
2868 clear:both ;
2869 }
2870
2871
2872 header {
2873 line-height: 1.2 ;
2874 font-size: 1em ;
2875 border-bottom: 1px solid silver ;
2876 margin: 0px ;
2877 padding: 2ex 1em 2ex 1em ;
2878 text-align:left ;
2879 }
2880
2881
2882 footer {
2883 font-size: .85em ;
2884 line-height: 1.2 ;
2885 margin-top: 1ex ;
2886 border-top: 1px solid silver ;
2887 padding: 2ex 1em 2ex 1em ;
2888 clear:both ;
2889 text-align:left ;
2890 }
2891
2892
2893 a.linkhome { font-weight:bold ; font-size: 1em ;}
2894
2895
2896 div.lateximagesource { padding: 0px ; margin: 0px ; display: none; }
2897
2898 img.lateximage{
2899 padding: 0pt ;
2900 margin: 0pt ;
2901 box-shadow: none ;
2902 border: none ;
2903 background: none ;
2904 max-width: 100% ;
2905 border-radius: 0ex ;
```

```
2906 border: none ;
2907 }
2908
2909
2910 /* The -1px right margin compensates for the 1px right border. */
2911 /* Without this -1px margin, the body container appears below instead */
2912 /* of floating to the side. */
2913 div.sidetoccontainer {
2914 font-family: "DejaVu Serif", "Bitstream Vera Serif",
2915 "Lucida Bright", Georgia, serif;
2916 float: left ;
2917 width: 20%;
2918 margin: 0pt -1px 3ex 0pt ;
2919 border-right: 1px solid silver;
2920 border-bottom: 1px solid silver;
2921 background: #FAF7F4 ;
2922 font-size:.9em ;
2923 border-radius: 0px 0px 20px 0px ;
2924 }
2925
2926 div.sidetoccontents {
2927 overflow-y: auto ;
2928 width: 100% ;
2929 text-align: left ;
2930 }
2931
2932
2933 nav.sidetoc p {line-height:1.2 ; margin: 1ex .5em 1ex .5em ;
2934 text-indent: 0 ; }
2935
2936 nav.sidetoc p a {color:black ; font-size: .7em ;}
2937
2938 div.sidetoctitle {font-size: 1.2em; font-weight:bold; text-align:center;
2939 border-bottom: 1px solid silver ; }
2940
2941 nav.sidetoc a:hover {text-decoration: underline ; }
2942
2943
2944
2945 section.textbody { margin: 0ex 1em 0ex 1em ;}
2946
2947
2948 div.multicolshheading { -webkit-column-span: all;
2949 -moz-column-span: all; column-span: all; }
2950 div.multicols { -webkit-columns: 3 380px ;
2951 -moz-columns: 3 380px ; columns: 3 380px ; }
2952 div.multicols p {margin-top: 0ex}
2953
2954
2955 /* Used for xfrac and nicefrac: */
2956 span.numerator {
2957 font-size: 60% ;
2958 vertical-align: .4em ;
2959 }
2960
```

```
2961 span.denominator {
2962 font-size: 60%
2963 }
2964
2965
2966 /* Used for algorithm2e: */
2967 div.alg2evline{
2968 margin-left: 1em ;
2969 padding-left: 1em ;
2970 border-left: 1px solid black ;
2971 border-radius: 0px 0px 0px 1ex ;
2972 }
2973
2974 div.alg2evsline{
2975 margin-left: 1em ;
2976 padding-left: 1em ;
2977 border-left: 1px solid black ;
2978 }
2979
2980 div.alg2enoline{
2981 margin-left: 1em ;
2982 padding-left: 1em ;
2983 }
2984
2985 span.alg2elinenumber{
2986 margin-right: .5em ;
2987 font-size: 50% ;
2988 color: red ;
2989 }
2990
2991
2992 /* Used for algorithmicx: */
2993 span.floatright { float: right ; }
2994
2995
2996 /* keyfloat and tocdata: */
2997 .floatnotes {
2998 margin: 0ex 5% 0ex 5% ;
2999 padding: 0ex 1em 0ex 1em ;
3000 font-size:.80em ;
3001 text-align: left ;
3002 }
3003
3004 .authorartist{
3005 font-size:.70em ;
3006 font-style: italic;
3007 }
3008
3009
3010
3011 /* Native LaTeX theorems: */
3012
3013 .theoremcontents { font-style: italic; margin-top: 3ex ; margin-bottom: 3ex ; }
3014 .theoremlabel { font-style: normal; font-weight: bold ; margin-right: .5em ; }
3015
```

```
3016
3017 /* theorem, amsthm, and ntheorem packages */
3018
3019 span.theoremheader,
3020 span.theoremheaderplain,
3021 span.theoremheaderdefinition,
3022 span.theoremheaderbreak,
3023 span.theoremheadermarginbreak,
3024 span.theoremheaderchangebreak,
3025 span.theoremheaderchange,
3026 span.theoremheadermargin
3027 {
3028 font-style:normal ; font-weight: bold ; margin-right: 1em ;
3029 }
3030
3031 span.amsthmnameplain,
3032 span.amsthmnamedefinition,
3033 span.amsthmnumberplain,
3034 span.amsthmnumberdefinition
3035 {
3036 font-style:normal ; font-weight: bold ;
3037 }
3038
3039
3040 span.amsthmnameremark,
3041 span.amsthmnumberremark
3042 {font-style:italic ; font-weight: normal ; }
3043
3044
3045 span.amsthmnoteplain,
3046 span.amsthmnotedefinition
3047 {font-style:normal ;}
3048
3049
3050 span.theoremheaderremark,
3051 span.theoremheaderproof,
3052 span.amsthmproofname
3053 {font-style:italic ; font-weight: normal ; margin-right: 1em ; }
3054
3055 span.theoremheadersc
3056 {
3057 font-style:normal ;
3058 font-variant: small-caps ;
3059 font-weight: normal ;
3060 margin-right: 1em ;
3061 }
3062
3063 .theoremdemark {float:right}
3064
3065 div.amsthmbodyplain, div.theorembodyplain, div.theorembodynonumberplain,
3066 div.theorembodybreak, div.theorembodynonumberbreak,
3067 div.theorembodymarginbreak,
3068 div.theorembodychangebreak,
3069 div.theorembodychange,
3070 div.theorembodymargin
```

```
3071 {
3072 font-style:italic;
3073 margin-top: 3ex ; margin-bottom: 3ex ;
3074 }
3075
3076 div.theorembodydefinition, div.theorembodyremark, div.theorembodyproof,
3077 div.theorembodyplainupright, nonumberplainuprightsc,
3078 div.amsthmbodydefinition, div.amsthmbodyremark,
3079 div.amsthmproof
3080 {
3081 font-style: normal ;
3082 margin-top: 3ex ; margin-bottom: 3ex ;
3083 }
3084
3085 span.amsthmnoteremark {}
3086
3087
3088 /* For the notes package: */
3089 div.notesimportantnote, div.noteswarningnote, div.notesinformationnote {
3090 clear: both ;
3091 margin: 2ex 2em 2ex 2em ;
3092 border: 1px solid silver ;
3093 }
3094
3095 div.notesicon {
3096 float:left ;
3097 display: inline-block ;
3098 background: gold ;
3099 padding: 0ex 1em 0ex 1em ;
3100 margin-right: 1em ;
3101 font-weight: bold ;
3102 }
3103
3104 div.notescontents { font-style: italic }
3105
3106
3107 /*
3108 For CSS LaTeX and related logos:
3109 Based on spacing demonstrated by the metafont package.
3110 */
3111
3112 .latexlogofont {
3113 font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3114 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3115 font-variant: normal ;
3116 }
3117
3118 .latexlogo {
3119 font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3120 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3121 font-size: 1.1em;
3122 }
3123
3124 .latexlogosup {
3125 text-transform: uppercase;
```

```
3126 letter-spacing: .03em ;
3127 font-size: 0.7em;
3128 vertical-align: 0.25em;
3129 margin-left: -0.4em;
3130 margin-right: -0.15em;
3131 }
3132
3133 .latexlogosub {
3134 text-transform: uppercase;
3135 vertical-align: -0.27ex;
3136 margin-left: -0.08em;
3137 margin-right: -0.07em;
3138 font-size: 1em;
3139 }
3140
3141 .latexlogotwoe {
3142 text-transform: none ;
3143 font-variant-numeric: oldstyle-nums ;
3144 }
3145
3146 .latexlogotwoesub {
3147 font-style:italic ;
3148 vertical-align: -0.27ex;
3149 margin-left: -0.11em;
3150 margin-right: -0.1em;
3151 font-size: 1em;
3152 }
3153
3154 .xelatexlogo {
3155 font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3156 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3157 letter-spacing: .03em ;
3158 font-size: 1.1em;
3159 }
3160
3161 .xelatexlogosub {
3162 vertical-align: -0.27ex;
3163 margin-left: -0.0667em;
3164 margin-right: -.05em;
3165 font-size: 1em;
3166 letter-spacing: .03em ;
3167 }
3168
3169 .amslogo {
3170 font-family: "TeXGyreChorus", "URW Chancery L",
3171 "Apple Chancery", "ITC Zapf Chancery", "Monotype Corsiva",
3172 "Linux Libertine O", "Nimbus Roman No 9 L", "FreeSerif",
3173 "Hoefler Text", Times, "Times New Roman", serif ;
3174 font-style: italic ;
3175 }
3176
3177 .lyxlogo {
3178 font-family: "URW Classico", Optima, "Linux Biolinum O",
3179 "DejaVu Sans", "Bitstream Vera Sans", Geneva,
3180 Verdana, sans-serif ;
```



```
3181 }
3182
3183
3184 /* Only display top and bottom navigation if a small screen: */
3185 /* Hide the sidetoc if a small screen: */
3186 nav.topnavigation { display:none; }
3187 nav.botnavigation { display:none; }
3188
3189 /* Only display the sidetoc's webpage title if a small screen */
3190 span.sidetocthetitle { display: none }
3191
3192 @media screen and (max-width: 50em) {
3193 div.sidetoccontainer {
3194 float: none ;
3195 width: 100% ;
3196 padding: 0 ;
3197 border-radius: 0 ;
3198 border-bottom: 1px solid black ;
3199 border-top: 1px solid black ;
3200 box-shadow: none ;
3201 }
3202 span.sidetocthetitle { display: inline }
3203 nav.botnavigation { display:block }
3204 div.bodycontainer { width: 100% }
3205 .marginpar {
3206 max-width: 100%;
3207 float: none;
3208 display:block ;
3209 margin: 1ex 1em 1ex 1em ;
3210 }
3211 }
3212
3213 @media print {
3214 body {
3215 font-family: "Linux Libertine O",
3216 "DejaVu Serif", "Bitstream Vera Serif",
3217 "Liberation Serif", "Nimbus Roman No 9 L",
3218 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3219 }
3220 div.sidetoccontainer { display:none; }
3221 nav.topnavigation { display: none; }
3222 nav.botnavigation { display: none; }
3223 div.bodycontainer { width: 100% }
3224 }
3225
3226 @media handheld {
3227 div.sidetoccontainer { display:none; }
3228 nav.topnavigation { display:block }
3229 nav.botnavigation { display:block }
3230 div.bodycontainer { width: 100% }
3231 }
3232
3233 @media projection {
3234 div.sidetoccontainer { display:none; }
3235 nav.topnavigation { display:block }
```

```

3236 nav.botnavigation { display:block }
3237 div.bodycontainer { width: 100% }
3238 }
3239 \end{filecontents*}
3240 % \end{Verbatim}% for syntax highlighting
3241 \end{LWRwriteconf}

```

## 41.5 lwarp\_sagebrush.css

File `lwarp_sagebrush.css` An optional css which may be used for a semi-modern appearance.

If used, this must be present both when compiling the project and also when distributing the HTML files.

```

Config file: 3242 \begin{LWRwriteconf}
3243 \begin{filecontents*}{lwarp_sagebrush.css}
3244 @import url("lwarp.css") ;
3245
3246
3247 A:link {color:#105030 ; text-decoration: none ; }
3248 A:visited {color:#705030 ; text-shadow:1px 1px 2px #a0a0a0;}
3249 A:hover {color:#006000 ; text-decoration: underline ; text-shadow:0px 0px 2px #a0a0a0;}
3250 A:active {color:#00C000 ; text-shadow:1px 1px 2px #a0a0a0;}
3251
3252
3253
3254 h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
3255 {
3256 font-family: "URW Classico", Optima, "Linux Biolinum 0",
3257 "Linux Libertine 0", "Liberation Serif",
3258 "Nimbus Roman No 9 L", "FreeSerif",
3259 "Hoefler Text", Times, "Times New Roman", serif;
3260 font-variant: small-caps ;
3261 font-weight: normal ;
3262 color: #304070 ;
3263 text-shadow: 2px 2px 3px #808080;
3264 }
3265
3266 h1 { /* title of the entire website, used on each page */
3267 font-variant: small-caps ;
3268 color: #304070 ;
3269 text-shadow: 2px 2px 3px #808080;
3270 background-color: #F7F7F0 ;
3271 background-image: linear-gradient(to bottom, #F7F7F0, #C0C0C4);
3272 }
3273
3274 h1 {
3275 border-bottom: 1px solid #304070;
3276 /* border-top: 2px solid #304070; */
3277 }
3278
3279 h2 {
3280 border-bottom: 1px solid #304070;
3281 /* border-top: 2px solid #304070; */

```

```
3282 background-color: #F7F7F0 ;
3283 background-image: linear-gradient(to bottom, #F7F7F0, #DAD0C0);
3284 }
3285
3286
3287
3288 div.abstract {
3289 background: #f5f5eb ;
3290 background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3291
3292 border: 1px solid silver;
3293 border-radius: 1em ;
3294 }
3295
3296 div.abstract dl {line-height:1.5;}
3297 div.abstract dt {color:#304070;}
3298
3299 div.abstracttitle{
3300 font-family: "URW Classico", Optima, "Linux Biolinum O",
3301 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3302 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3303 font-weight:bold;
3304 font-variant: small-caps ;
3305 font-size:1.5em;
3306 border-bottom: 1px solid silver ;
3307 color: #304070 ;
3308 text-align: center ;
3309 text-shadow: 1px 1px 2px #808080;
3310 }
3311
3312 span.abstracrunintitle{
3313 font-family: "URW Classico", Optima, "Linux Biolinum O",
3314 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3315 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3316 font-weight:bold;
3317 }
3318
3319
3320 div.epigraph, div.dictum {
3321 background: #f5f5eb ;
3322 background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3323
3324 border: 1px solid silver ;
3325 border-radius: 1ex ;
3326 box-shadow: 3px 3px 3px #808080 ;
3327 }
3328
3329
3330 .example {
3331 background-color: #f5f5eb ;
3332 background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3333
3334 }
3335
3336 div.exampletitle{
```

```
3337 font-family: "URW Classico", Optima, "Linux Biolinum O",
3338 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3339 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3340 font-weight:bold;
3341 font-variant: small-caps ;
3342 border-bottom: 1px solid silver ;
3343 color: #304070 ;
3344 text-align: center ;
3345 text-shadow: 1px 1px 2px #808080;
3346 }
3347
3348
3349 .sidebar {
3350 background-color: #f5f5eb ;
3351 background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3352
3353 }
3354
3355 div.sidebartitle{
3356 font-family: "URW Classico", Optima, "Linux Biolinum O",
3357 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3358 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3359 font-weight:bold;
3360 font-variant: small-caps ;
3361 border-bottom: 1px solid silver ;
3362 color: #304070 ;
3363 text-align: center ;
3364 text-shadow: 1px 1px 2px #808080;
3365 }
3366
3367
3368 .fancyvrblabel {
3369 font-family: "URW Classico", Optima, "Linux Biolinum O",
3370 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3371 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3372 font-weight:bold;
3373 font-variant: small-caps ;
3374 font-size: 1.5em ;
3375 color: #304070 ;
3376 text-align: center ;
3377 text-shadow: 1px 1px 2px #808080;
3378 }
3379
3380 div.minipage {
3381 background-color: #eeeeee7 ;
3382 border: 1px solid silver ;
3383 border-radius: 1ex ;
3384 }
3385
3386 table div.minipage { background: none ; border: none ; }
3387
3388 div.framebox div.minipage {border:none ; background:none}
3389
3390 section.textbody > div.minipage {
3391 box-shadow: 3px 3px 3px #808080 ;
```

```
3392 }
3393
3394 div.fboxBlock div.minipage { box-shadow: none ; }
3395
3396 .framed .minipage , .framedleftbar .minipage {
3397 border: none ;
3398 background: none ;
3399 padding: 0ex ;
3400 margin: 0ex ;
3401 }
3402
3403 figure.figure .minipage, div.figurecaption .minipage { border: none; }
3404
3405 div.marginblock div.minipage ,
3406 div.marginparblock div.minipage
3407 { border: none; }
3408
3409 figure , div.marginblock {
3410 background-color: #eeeeee7 ;
3411 border: 1px solid silver ;
3412 border-radius: 1ex ;
3413 box-shadow: 3px 3px 3px #808080 ;
3414 }
3415
3416 figure figure {
3417 border: 1px solid silver ;
3418 margin: 0em ;
3419 box-shadow: none ;
3420 }
3421
3422 /*
3423 div.figurecaption {
3424 border-top: 1px solid silver ;
3425 border-bottom: 1px solid silver ;
3426 background-color: #e8e8e8 ;
3427 }
3428 */
3429
3430
3431 div.table {
3432 box-shadow: 3px 3px 3px #808080 ;
3433 }
3434
3435 /*
3436 .tnotes {
3437 background: #e8e8e8;
3438 border: 1px solid silver;
3439 }
3440 */
3441
3442
3443 nav.topnavigation{
3444 background-color: #b0b8b0 ;
3445 background-image: linear-gradient(to bottom,#e0e0e0,#b0b8b0) ;
3446 }
```

```

3447
3448 nav.botnavigation{
3449 background-color: #b0b8b0 ;
3450 background-image: linear-gradient(to top,#e0e0e0,#b0b8b0) ;
3451 }
3452
3453
3454
3455 header{
3456 background-color: #F7F7F0 ;
3457 background-image: linear-gradient(to top, #F7F7F0, #b0b8b0);
3458 }
3459
3460 footer{
3461 background-color: #F7F7F0 ;
3462 background-image: linear-gradient(to bottom, #F7F7F0, #b0b8b0);
3463 }
3464
3465
3466
3467 div.sidetoccontainer {
3468 background-color: #F7F7F0 ;
3469 background-image: linear-gradient(to bottom, #F7F7F0, #C0C0C0);
3470 box-shadow: 3px 3px 3px #808080 ;
3471 }
3472
3473 div.sidetocitle {color: #304070 ; }
3474
3475 nav.sidetoc a:hover {
3476 color:#006000 ;
3477 text-decoration: none ;
3478 text-shadow:0px 0px 2px #a0a0a0;
3479 }
3480
3481
3482 @media screen and (max-width: 45em) {
3483 div.sidetoccontainer { border-radius: 0 ; }
3484 }
3485
3486
3487 \end{filecontents*}
3488 % \end{Verbatim}% for syntax highlighting
3489 \end{LWRwriteconf}

```

## 41.6 lwarp\_formal.css

File `lwarp_formal.css` An optional css which may be used for a more formal appearance.

If used, this must be present both when compiling the project and also when distributing the HTML files.

**Config file:** 3490 \begin{LWRwriteconf}  
3491 \begin{filecontents\*}{lwarp\_formal.css}  
3492 @import url("lwarp.css") ;

```
3493
3494
3495
3496 A:link {color:#802020 ; text-decoration:none; }
3497 A:visited {color:#802020 ; text-shadow:none ;}
3498 A:hover {color:#400000 ; text-shadow:none ;}
3499 A:active {color:#C00000 ; text-shadow:none ;}
3500
3501
3502 body {
3503 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3504 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3505 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3506 "Times New Roman", serif;
3507 background: #fffcf5;
3508 }
3509
3510 span.textrm {
3511 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3512 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3513 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3514 "Times New Roman", serif;
3515 }
3516
3517 span.textsf {
3518 font-family: "DejaVu Sans", "Bitstream Vera Sans",
3519 Geneva, Verdana, sans-serif ;
3520 }
3521
3522
3523
3524 h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
3525 {
3526 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3527 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3528 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3529 "Times New Roman", serif;
3530 color: #800000 ;
3531 text-shadow: none ;
3532 }
3533
3534 h1, h2 {
3535 background-color: #fffcf5 ;
3536 background-image: none ;
3537 border-bottom: 1px solid #808080;
3538 /* border-top: 2px solid #808080; */
3539 }
3540
3541 div.abstracttitle {
3542 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3543 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3544 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3545 "Times New Roman", serif;
3546 color: black ;
3547 text-shadow: none ;
```

```
3548 }
3549
3550 span.abstractrunintitle {
3551 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3552 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3553 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3554 "Times New Roman", serif;
3555 color: black ;
3556 text-shadow: none ;
3557 }
3558
3559 div.abstract { font-size: 100% }
3560
3561 .sidebar {
3562 background: #fffcf5;
3563 background-image: none ;
3564 margin: 2em 5% 2em 5%;
3565 padding: 0.5em 1em;
3566 border: none ;
3567 border-top : 1px solid silver;
3568 border-bottom : 1px solid silver;
3569 font-size: 90% ;
3570 }
3571
3572 div.sidebartitle{
3573 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3574 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3575 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3576 "Times New Roman", serif;
3577 color: #800000 ;
3578 text-shadow: none ;
3579 border: none ;
3580 }
3581
3582 .example {
3583 background: #fffcf5;
3584 background-image: none ;
3585 margin: 2em 5% 2em 5%;
3586 padding: 0.5em 1em;
3587 border: none ;
3588 border-top : 1px solid silver;
3589 border-bottom : 1px solid silver;
3590 }
3591
3592 div.exampletitle{
3593 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3594 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3595 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3596 "Times New Roman", serif;
3597 color: #800000 ;
3598 text-shadow: none ;
3599 border: none ;
3600 }
3601
3602 div.fancyvrlabel{
```



```
3603 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3604 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3605 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3606 "Times New Roman", serif;
3607 color: #800000 ;
3608 text-shadow: none ;
3609 border: none ;
3610 }
3611
3612
3613
3614 figure {
3615 margin: 5ex 5% 5ex 5% ;
3616 padding: 1ex 1em 1ex 1em ;
3617 background-color: #fffcf5 ;
3618 overflow-x: auto ;
3619 border: none ;
3620 /* border-top: 1px solid silver; */
3621 /* border-bottom: 1px solid silver; */
3622 }
3623
3624
3625 div.figurecaption , .lstlisting {
3626 border: none ;
3627 /* border-top: 1px solid silver ; */
3628 /* border-bottom: 1px solid silver ; */
3629 background-color: #fffcf5 ;
3630 }
3631
3632 .tnotes {
3633 background: #fffcf5 ;
3634 border-top: 1px solid silver ;
3635 border-bottom: 1px solid silver ;
3636 }
3637
3638 .theorem {
3639 background: none ;
3640 }
3641
3642 .minipage {
3643 background-color: #fffcf5 ;
3644 border: none ;
3645 }
3646
3647 div.floatrow figure { border: none ; }
3648
3649 figure figure { border: none ; }
3650
3651
3652 nav.toc, nav.lof, nav.lot, nav.lol {
3653 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3654 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3655 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3656 "Times New Roman", serif;
3657 }
```

```

3658
3659 div.sidetoccontainer {
3660 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3661 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3662 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3663 "Times New Roman", serif;
3664 background-image: linear-gradient(to bottom, #fffcf5, #C0C0C0);
3665 }
3666
3667 div.sidetocitle{
3668 color: #800000 ;
3669 }
3670
3671 header{
3672 background-color: #e0e0e0 ;
3673 background-image: linear-gradient(to top, #fffcf5, #b0b0b0);
3674 text-align:center ;
3675 }
3676
3677 footer{
3678 background-color: #e0e0e0 ;
3679 background-image: linear-gradient(to bottom, #fffcf5, #b0b0b0);
3680 padding: 2ex 1em 2ex 1em ;
3681 text-align:left ;
3682 }
3683
3684 nav.botnavigation {
3685 background: #dedcd5 ;
3686 border-top: 1px solid black ;
3687 }
3688 \end{filecontents*}
3689 % \end{Verbatim}% for syntax highlighting
3690 \end{LWRwriteconf}

```

## 41.7 sample\_project.css

File `sample_project.css` The project-specific css file. Use with `\CSSFilename`.

If used, this must be present both when compiling the project and also when distributing the HTML files.

**Config file:**

```

3691 \begin{LWRwriteconf}
3692 \begin{filecontents*}{sample_project.css}
3693 /* (--- Start of project.css ---) */
3694 /* (--- A sample project-specific CSS file for lwarp ---) */
3695
3696 /* Uncomment one of the following: */
3697 @import url("lwarp.css") ;
3698 /* @import url("lwarp_formal.css") ; */
3699 /* @import url("lwarp_sagebrush.css") ; */
3700
3701 /* Project-specific CSS setting follow here. */
3702 /* . . . */
3703

```

```

3704 /* (--- End of project.css ---) */
3705 \end{filecontents*}
3706 % \end{Verbatim}% for syntax highlighting
3707 \end{LWRwriteconf}

```

## 41.8 lwarp.ist

File `lwarp.ist` Used to modify the index for `lwarp`.

This must be present when compiling the project, but does not need to be present when distributing the resulting HTML files.

The page compositor line is for memoir's `\specialindex`.

**Config file:**

```

3708 \begin{LWRwriteconf}
3709 \begin{filecontents*}{lwarp.ist}
3710 preamble
3711 "\begin{theindex}
3712 \providecommand*\lettergroupDefault[1]{}
3713 \providecommand*\lettergroup[1]{%
3714 \par\textbf{#1}\par
3715 \nopagebreak
3716 }
3717 "
3718 headings_flag 1
3719 heading_prefix "
3720 \lettergroup{"
3721 heading_suffix "}"
3722 delim_0 " , \hyperindexref{"
3723 delim_1 " , \hyperindexref{"
3724 delim_2 " , \hyperindexref{"
3725 delim_n " }, \hyperindexref{"
3726 delim_r "} -- \hyperindexref{"
3727 delim_t "}"
3728 page_compositor "."
3729 \end{filecontents*}
3730 % \end{Verbatim}% for syntax highlighting
3731 \end{LWRwriteconf}

```

## 41.9 lwarp.xdy

File `lwarp.xdy` Used to modify the index for `lwarp`.

This must be present when compiling the project, but does not need to be present when distributing the resulting HTML files.

See:

<https://tex.stackexchange.com/questions/80300/how-can-i-convince-hyperref-and-xindy-to-play-together-nicely>

**Config file:**

```

3732 \begin{LWRwriteconf}
3733 \begin{filecontents*}{lwarp.xdy}
3734 (require "tex/inputenc/latin.xdy")
3735 (merge-rule "\\PS *" "Postscript")
3736 (require "texindy.xdy")
3737 (require "page-ranges.xdy")
3738 (require "book-order.xdy")
3739 (define-location-class "arabic-page-numbers"
3740 ("arabic-numbers") :min-range-length 1)
3741 (require "makeindex.xdy")
3742 (define-attributes ((("hyperindexref")))
3743 (markup-locref :open "\hyperindexref{" :close "}")
3744 (markup-locref :open "\hyperindexref{" :close "}" :attr "hyperpage")
3745 (markup-locref :open "\textbf{\hyperindexref{" :close "}" :attr "textbf")
3746 (markup-locref :open "\textit{\hyperindexref{" :close "}" :attr "textit")
3747 (define-location-class-order ("roman-page-numbers"
3748 "arabic-page-numbers"
3749 "alpha-page-numbers"
3750 "Roman-page-numbers"
3751 "Alpha-page-numbers"
3752 "see"
3753 "seealso"))
3754 \end{filecontents*}
3755 % \end{Verbatim}% for syntax highlighting
3756 \end{LWRwriteconf}

```

## 41.10 lwarp\_one\_limage.cmd

File `lwarp_one_limage.cmd` Used by `lwarp` to help make `lateximages` when using `WINDOWS`.

This must be present when compiling the project, but does not need to be present when distributing the resulting `HTML` files.

The arguments are each of the three fields from `<project>-images.txt`, and also the base name of the source file.

*MiKTeX* does not allow file `lwarp_one_limage.cmd` to be created directly by *lwarpmk*, so `lwarp_one_limage.txt` is created instead, then copied to `lwarp_one_limage.cmd` by *lwarpmk*. This occurs each time *lwarpmk* used to create `lateximages`.

**Config file:**

```

3757 \begin{LWRwriteconf}
3758 \immediate\openout\LWR@quickfile=lwarp_one_limage.txt
3759 \immediate\write\LWR@quickfile{%
3760 pdfseparate -f \LWRpercent 1 -l \LWRpercent 1 \LWRpercent 4_html.pdf %
3761 \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent\LWRpercent d.pdf%
3762 }
3763 \immediate\write\LWR@quickfile{%
3764 pdfcrop --hires \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent 1.pdf %
3765 \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf%
3766 }
3767 \immediate\write\LWR@quickfile{%
3768 pdftocairo -svg -noshrink \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf %
3769 \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.svg%

```

```

3770 }
3771 \immediate\write\LWR@quickfile{%
3772 del \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf%
3773 }
3774 \immediate\write\LWR@quickfile{%
3775 del \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent 1.pdf%
3776 }
3777 \immediate\write\LWR@quickfile{exit}
3778 \immediate\closeout\LWR@quickfile
3779 \end{LWRwriteconf}

```

### 41.11 lwarp\_mathjax.txt

File `lwarp_mathjax.txt` The default MathJax script used by `lwarp` when using `MATHJAX`. A recent version of MathJax is used, as served by the recommended repository. Adjustments are made to allow  $\LaTeX$  to control the equation tags.

`\MathJaxFilename` determines which script file is copied into the HTML pages, and defaults to `lwarp_mathjax.txt`. The script files must be present when compiling the project, but do not need to be present when distributing the resulting HTML files.

**custom script** To generate a custom script, such as to use a local repository, copy `lwarp_mathjax.txt` to a new file, make changes while keeping `lwarp`'s adjustments for equation numbering, and use `\MathJaxFilename` to select new filename.

**Config file:**

```

3780 \begin{LWRwriteconf}
3781 \begin{filecontents*}{lwarp_mathjax.txt}
3782 <!-- https://groups.google.com/forum/#!topic/
3783 mathjax-users/jUtewUcE2bY -->
3784 <script type="text/x-mathjax-config">
3785 MathJax.Hub.Register.StartupHook("TeX AMSmath Ready",function () {
3786 var seteqsectionDefault = {name: "", num: 0};
3787 var seteqsections = {}, seteqsection = seteqsectionDefault;
3788 var TEX = MathJax.InputJax.TeX, PARSE = TEX.Parse;
3789 var AMS = MathJax.Extension["TeX/AMSmath"];
3790 TEX.Definitions.Add({
3791 macros: {
3792 seteqsection: "mySection",
3793 seteqnumber: "mySetEqNumber"
3794 }
3795 });
3796
3797 PARSE.Augment({
3798 mySection: function (name) {
3799 seteqsection.num = AMS.number;
3800 var n = this.GetArgument(name);
3801 if (n === "") {
3802 seteqsection = seteqsectionDefault;
3803 } else {
3804 if (!seteqsections["_"+n])
3805 seteqsections["_"+n] = {name:n, num:0};
3806 seteqsection = seteqsections["_"+n];
3807 }

```

```
3808 AMS.number = seteqsection.num;
3809 },
3810 mySetEqNumber: function (name) {
3811 var n = this.GetArgument(name);
3812 if (!n || !n.match(/^ *[0-9]+ *$/))
3813 n = "";
3814 else
3815 n = parseInt(n)-1;
3816 <!-- $ syntax highlighting -->
3817 if (n === "" || n < 1)
3818 TEX.Error
3819 ("Argument to "+name+" should be a positive integer");
3820 AMS.number = n;
3821 }
3822 });
3823 MathJax.Hub.Config({
3824 TeX: {
3825 equationNumbers: {
3826 formatTag: function (n) {
3827 <!-- if not numeric, don't include the chapter -->
3828 if (!n.match(/^ *[0-9]+ *$/))
3829 <!-- $ syntax highlighting -->
3830 return "("+n.replace(/\^.\/, "")+")" ;
3831 else
3832 return "("+(seteqsection.name+"."+n).replace(/\^.\/, "")+")" ;
3833 },
3834 formatID: function (n) {
3835 n = (seteqsection.name+'.'+n).replace
3836 (/[:"<>&]/g, "").replace(/\^.\/, "");
3837 return 'mjx-eqn-' + n;
3838 }
3839 }
3840 }
3841 });
3842 });
3843 </script>
3844
3845 <!-- http://docs.mathjax.org/en/latest/options/ThirdParty.html -->
3846 <script type="text/x-mathjax-config">
3847 MathJax.Ajax.config.path["Contrib"] =
3848 "https://cdn.mathjax.org/mathjax/contrib";
3849 </script>
3850
3851 <script type="text/x-mathjax-config">
3852 MathJax.Hub.Config({
3853 TeX: {
3854 extensions: ["autoload-all.js"] ,
3855 equationNumbers: {
3856 autoNumber: "AMS"
3857 }
3858 }
3859 });
3860 </script>
3861
3862 <!-- Alternative CDN provider: -->
```

```

3863 <script type="text/javascript" async
3864 src="https://cdnjs.cloudflare.com/ajax/libs/mathjax/2.7.5/MathJax.js?config=TeX-AMS_HTML-full">
3865 </script>
3866
3867 <!-- No longer supported after April 30, 2017: -->
3868 <!--
3869 <script
3870 src="https://cdn.mathjax.org/mathjax/latest/MathJax.js?config=TeX-AMS_HTML-full">
3871 </script>
3872 -->
3873
3874 \end{filecontents*}
3875 % \end{Verbatim}% for syntax highlighting
3876 \end{LWRwriteconf}

```

## 41.12 lwarpmk.lua — lwarpmk option

Opt lwarpmk Creates a local copy of *lwarpmk*.

Prog lwarpmk Command-line utility to process lwarp files and images.

**parallel processing** lateximages and SVG math images are generated using multiple processes in parallel. For UNIX and LINUX, every 32 images the wait command is issued to wait for the previous batch of images to finish processing before starting a new batch. For WINDOWS, every 32 images one task is dispatched with

```
START /B /WAIT /BELOWNORMAL
```

which causes the operating system to wait until this lesser-priority tasks finishes, hopefully also waiting for the normal priority tasks which were already in progress to also complete. Afterwards, the next batch of images is started.

The following is only generated if the lwarpmk option was given to lwarp.

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3877 \begin{LWR@createlwarpmk}

3878 \begin{filecontents*}{lwarpmk.lua}
3879 #!/usr/bin/env texlua
3880
3881 -- Copyright 2016-2018 Brian Dunn
3882
3883
3884 printversion = "v0.70"
3885 requiredconfversion = "2" -- also at *lwarpmk.conf
3886
3887 function printhelp ()
3888 print ("lwarpmk: Use lwarpmk -h or lwarpmk --help for help.") ;
3889 end
3890
3891
3892 function printusage ()
3893 --
3894 -- Print the usage of the lwarpmk command:

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3895 --
3896 print ([[
3897
3898 lwarpmk print [-p project]: Compile the print version if necessary.
3899 lwarpmk print1 [-p project]: Forced single compile of the print version.
3900 lwarpmk printindex [-p project]: Process print indexes.
3901 lwarpmk printglossary [-p project]: Process the glossary for the print version.
3902 lwarpmk html [-p project]: Compile the HTML version if necessary.
3903 lwarpmk html1 [-p project]: Forced single compile of the HTML version.
3904 lwarpmk htmlindex [-p project]: Process HTML indexes.
3905 lwarpmk htmlglossary [-p project]: Process the glossary for the html version.
3906 lwarpmk again [-p project]: Touch the source code to trigger recompiles.
3907 lwarpmk limages [-p project]: Process the "lateximages" created by lwarp.sty.
3908 lwarpmk pdftohtml [-p project]:
3909 For use with latexmk or a Makefile:
3910 Converts project_html.pdf to project_html.html and individual HTML files.
3911 Finishes the HTML conversion even if there was a compile error.
3912 lwarpmk pdftosvg <list of file names>: Converts each PDF file to SVG.
3913 lwarpmk epstopdf <list of file names>: Converts each EPS file to PDF.
3914 lwarpmk clean [-p project]: Remove *.aux, *.toc, *.lof/t,
3915 *.idx, *.ind, *.log, *_html_inc.*, .gl*
3916 lwarpmk cleanall [-p project]: Remove auxiliary files, project.pdf, *.html
3917 lwarpmk cleanimages: Removes all images from the "lateximages" directory.
3918 lwarpmk -h: Print this help message.
3919 lwarpmk --help: Print this help message.
3920
3921]])
3922 -- printconf ()
3923 end
3924
3925
3926 function splitfile (destfile,sourcefile)
3927 --
3928 -- Split one large sourcefile into a number of files,
3929 -- starting with destfile.
3930 -- The file is split at each occurrence of <!--|Start file|newfilename|*
3931 --
3932 print ("lwarpmk: Splitting " .. sourcefile .. " into " .. destfile) ;
3933 local sfile = io.open(sourcefile)
3934 io.output(destfile)
3935 for line in sfile:lines() do
3936 i,j,copen,cstart,newfilename = string.find (line,"(.*)|(.*)|(.*|)") ;
3937 if ((i~= nil) and (copen == "<!--") and (cstart == "Start file")) then
3938 -- split the file
3939 io.output(newfilename) ;
3940 else
3941 -- not a splitpoint
3942 io.write (line .. "\n") ;
3943 end
3944 end -- do
3945 io.close(sfile)
3946 end -- function
3947
3948
3949 function cvalueerror (line, linenum , cvalue)
```



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3950 --
3951 -- Incorrect value, so print an error and exit.
3952 --
3953 print ("lwarpmk: ===")
3954 print ("lwarpmk: " .. linenum .. " : " .. line) ;
3955 print (
3956 "lwarpmk: incorrect variable value \"" .. cvalue ..
3957 "\"" in lwarpmk.conf.\n"
3958) ;
3959 print ("lwarpmk: ===")
3960 -- printconf () ;
3961 os.exit(1) ;
3962 end
3963
3964
3965 function ignoreconf ()
3966 -- Global argument index
3967 argindex = 2
3968 end
3969
3970 function loadconf ()
3971 --
3972 -- Load settings from the project's "lwarpmk.conf" file:
3973 --
3974 -- Default configuration filename:
3975 local conffile = "lwarpmk.conf"
3976 local confroot = "lwarpmk"
3977 -- Global argument index
3978 argindex = 2
3979 -- Optional configuration filename:
3980 if (arg[argindex] == "-p") then
3981 argindex = argindex + 1
3982 confroot = arg[argindex]
3983 conffile = confroot.."lwarpmkconf"
3984 argindex = argindex + 1
3985 end
3986 -- Additional defaults:
3987 confversion = "0"
3988 opsystem = "Unix"
3989 imagesdirectory = "lateximages"
3990 imagesname = "image-"
3991 latexmk = "false"
3992 printlatexcmd = ""
3993 HTMLlatexcmd = ""
3994 printindexcmd = ""
3995 HTMLindexcmd = ""
3996 latexmkindexcmd = ""
3997 -- to be removed:
3998 -- indexprog = "makeindex"
3999 -- makeindexstyle = "lwarp.ist"
4000 -- xindylanguage = "english"
4001 -- xindycodepage = "utf8"
4002 -- xindystyle = "lwarp.xdy"
4003 -- pdftotextenc = "UTF-8"
4004 glossarycmd = "makeglossaries"
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4005 -- Verify the file exists:
4006 if (lfs.attributes(conffile,"mode")==nil) then
4007 -- file not exists
4008 print ("lwarpmk: ===")
4009 print ("lwarpmk: File \" .. conffile ..\" does not exist.")
4010 print ("lwarpmk: Move to the project's source directory,")
4011 print ("lwarpmk: recompile using pdflatex, xelatex, or luatex,")
4012 print ("lwarpmk: then try using lwarpmk again.")
4013 if (arg[argindex] ~= nil) then
4014 print (
4015 "lwarpmk: (\" .. confroot ..
4016 "\" does not appear to be a project name.)"
4017)
4018 end
4019 print ("lwarpmk: ===")
4020 printhelp () ;
4021 os.exit(1) -- exit the entire lwarpmk script
4022 else -- file exists
4023 -- Read the file:
4024 print ("lwarpmk: Reading " .. conffile ..".")
4025 local cfile = io.open(conffile)
4026 -- Scan each line, parsing each line as: name = [[string]]
4027 local linenum = 0
4028 for line in cfile:lines() do -- scan lines
4029 linenum = linenum + 1
4030 i,j,cvarname,cvalue = string.find (line,"([%w-]*)%s*=%s*%[[%^]]*%]") ;
4031 -- Error if incorrect enclosing characters:
4032 if (i == nil) then
4033 print ("lwarpmk: ===")
4034 print ("lwarpmk: " .. linenum .. " : " .. line) ;
4035 print ("lwarpmk: Incorrect entry in " .. conffile ..".\n") ;
4036 print ("lwarpmk: ===")
4037 -- printconf () ;
4038 os.exit(1) ;
4039 end -- nil
4040 if (cvarname == "confversion") then
4041 confversion = cvalue
4042 elseif (cvarname == "opssystem") then
4043 -- Verify choice of opssystem:
4044 if ((cvalue == "Unix") or (cvalue == "Windows")) then
4045 opssystem = cvalue
4046 else
4047 cvalueerror (line, linenum , cvalue)
4048 end
4049 elseif (cvarname == "sourcename") then sourcename = cvalue
4050 elseif (cvarname == "homehtmlfilename") then homehtmlfilename = cvalue
4051 elseif (cvarname == "htmlfilename") then htmlfilename = cvalue
4052 elseif (cvarname == "imagesdirectory") then imagesdirectory = cvalue
4053 elseif (cvarname == "imagesname") then imagesname = cvalue
4054 elseif (cvarname == "latexmk") then latexmk = cvalue
4055 elseif (cvarname == "printlatexcmd") then printlatexcmd = cvalue
4056 elseif (cvarname == "HTMLlatexcmd") then HTMLlatexcmd = cvalue
4057 elseif (cvarname == "printindexcmd") then printindexcmd = cvalue
4058 elseif (cvarname == "HTMLindexcmd") then HTMLindexcmd = cvalue
4059 elseif (cvarname == "latexmkindexcmd") then latexmkindexcmd = cvalue
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4060 elseif (cvarname == "glossarycmd") then glossarycmd = cvalue
4061 elseif (cvarname == "pdftotextenc") then pdftotextenc = cvalue
4062 else
4063 print ("lwarpmk: ===")
4064 print ("lwarpmk: " .. linenum .. " : " .. line);
4065 print (
4066 "lwarpmk: Incorrect variable name \"" .. cvarname .. "\" in " ..
4067 conffile .. ".\n"
4068);
4069 print ("lwarpmk: ===")
4070 -- printconf ();
4071 os.exit(1) ;
4072 end -- cvarname
4073 end -- do scan lines
4074 io.close(cfile)
4075 end -- file exists
4076 -- Error if sourcename is "lwarp".
4077 -- This could happen if a local copy of lwarp has recently been recompiled.
4078 if sourcename=="lwarp" then
4079 print ("lwarpmk: ===")
4080 print ("lwarpmk: lwarp.sty has recently been recompiled in this directory,")
4081 print ("lwarpmk: and \"lwarpmk.conf\" is no longer set for your own project.")
4082 print ("lwarpmk: Recompile your own project using pdf/luaxelatex <projectname>.")
4083 print ("lwarpmk: After a recompile, \"lwarpmk.conf\" will be set for your project,")
4084 print ("lwarpmk: and you may again use lwarpmk.")
4085 print ("lwarpmk: ===")
4086 os.exit(1)
4087 end -- sourcename of "lwarp"
4088 -- Select some operating-system commands:
4089 if opsystem=="Unix" then -- For Unix / Linux / Mac OS:
4090 rmname = "rm"
4091 mvname = "mv"
4092 cpname = "cp"
4093 touchnamepre = "touch"
4094 touchnamepost = ""
4095 newtouchname = "touch"
4096 dirslash = "/"
4097 opquote= "\""
4098 cmdgroupopenname = " ("
4099 cmdgroupclosename = ") "
4100 seqname = " && "
4101 bgname = " & "
4102 elseif opsystem=="Windows" then -- For Windows
4103 rmname = "DEL"
4104 mvname = "MOVE"
4105 cpname = "COPY"
4106 touchnamepre = "COPY /b"
4107 touchnamepost = "+,,"
4108 newtouchname = "echo empty >"
4109 dirslash = "\\\"
4110 opquote= "\""
4111 cmdgroupopenname = ""
4112 cmdgroupclosename = ""
4113 seqname = " & "
4114 bgname = ""
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4115 else
4116 print ("lwarpmk: ===")
4117 print ("lwarpmk: Select Unix or Windows for opsystem.")
4118 print ("lwarpmk: ===")
4119 os.exit(1)
4120 end --- for Windows
4121 -- Warning if the operating system does not appear to be correct,
4122 -- in case files were transferred to another system.
4123 if ((package.config:sub(1,1)) ~= dirslash) then
4124 print ("lwarpmk: ===")
4125 print ("lwarpmk: It appears that lwarpmk.conf is for a different operating system.")
4126 print ("lwarpmk: To adjust lwarpmk.conf for the current operating system,")
4127 print ("lwarpmk: recompile the original document using xe/luatex.")
4128 print ("lwarpmk: ")
4129 print ("lwarpmk: lwarpmk shall attempt to continue...")
4130 print ("lwarpmk: ===")
4131 end
4132 -- Error if the configuration file's version is not current:
4133 if (confversion ~= requiredconfversion) then
4134 print ("lwarpmk: ===")
4135 print ("lwarpmk: The configuration files lwarpmk.conf and "..sourcename.."lwarpmkconf")
4136 print ("lwarpmk: must be updated. To update the configuration files,")
4137 print ("lwarpmk: recompile "..sourcename..".tex using xe/luatex,")
4138 print ("lwarpmk: then use lwarpmk again.")
4139 print ("lwarpmk: ===")
4140 os.exit(1)
4141 end
4142 end -- loadconf
4143
4144
4145 function executecheckerror (executecommands , errormessage)
4146 --
4147 -- Execute an operating system call,
4148 -- and maybe exit with an error message.
4149 --
4150 local err
4151 err = os.execute (executecommands)
4152 if (err ~= 0) then
4153 print ("lwarpmk: ===")
4154 print ("lwarpmk: " .. errormessage)
4155 print ("lwarpmk: ===")
4156 os.exit(1)
4157 end
4158 end -- executecheckerror
4159
4160
4161 function refreshdate ()
4162 os.execute(touchnamepre .. " " .. sourcename .. ".tex " .. touchnamepost)
4163 end
4164
4165
4166
4167 function reruntoget (filesorce)
4168 --
4169 -- Scan the LaTeX log file for the phrase "Rerun to get",
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4170 -- indicating that the file should be compiled again.
4171 -- Return true if found.
4172 --
4173 local fsource = io.open(filesource)
4174 for line in fsource:lines() do
4175 if (string.find(line,"Rerun to get") ~= nil) then
4176 io.close(fsource)
4177 return true
4178 end -- if
4179 end -- do
4180 io.close(fsource)
4181 return false
4182 end
4183
4184
4185
4186 function onetime (latexcmd, fsuffix)
4187 --
4188 -- Compile one time, return true if should compile again.
4189 -- fsuffix is "" for print, "_html" for HTML output.
4190 --
4191 print("lwarpmk: Compiling with: " .. latexcmd)
4192 executecheckerror (
4193 latexcmd ,
4194 "Compile error."
4195)
4196 return (reruntoget(sourcename .. fsuffix .. ".log")) ;
4197 end
4198
4199
4200 function manytimes (latexcmd, fsuffix)
4201 --
4202 -- Compile up to five times.
4203 -- fsuffix is "" for print, "_html" for HTML output
4204 --
4205 if onetime(latexcmd, fsuffix) == true then
4206 if onetime(latexcmd, fsuffix) == true then
4207 if onetime(latexcmd, fsuffix) == true then
4208 if onetime(latexcmd, fsuffix) == true then
4209 if onetime(latexcmd, fsuffix) == true then
4210 end end end end end
4211 end
4212
4213
4214 function verifyfileexists (filename)
4215 --
4216 -- Exit if the given file does not exist.
4217 --
4218 if (lfs.attributes (filename , "modification") == nil) then
4219 print ("lwarpmk: ===")
4220 print ("lwarpmk: " .. filename .. " not found.") ;
4221 print ("lwarpmk: ===")
4222 os.exit (1) ;
4223 end
4224 end
```

```
4225
4226
4227
4228 function pdftohtml ()
4229 --
4230 -- Convert <project>_html.pdf into HTML files:
4231 --
4232 -- Convert to text:
4233 print ("lwarpmk: Converting " .. sourcename
4234 .. "_html.pdf to " .. sourcename .. "_html.html")
4235 os.execute("pdftotext -enc " .. pdftotextenc .. " -nopgbrk -layout "
4236 .. sourcename .. "_html.pdf " .. sourcename .. "_html.html")
4237 -- Split the result into individual HTML files:
4238 splitfile (homehtmlfilename .. ".html" , sourcename .. "_html.html")
4239 end
4240
4241
4242 function removeaux ()
4243 --
4244 -- Remove auxiliary files:
4245 -- All .aux files are removed since there may be many bbl*.aux files.
4246 --
4247 os.execute (rmname .. " *.aux " ..
4248 sourcename .. ".toc " .. sourcename .. "_html.toc " ..
4249 sourcename .. ".lof " .. sourcename .. "_html.lof " ..
4250 sourcename .. ".lot " .. sourcename .. "_html.lot " ..
4251 " *.idx " ..
4252 " *.ind " ..
4253 sourcename .. ".ps " .. sourcename .. "_html.ps " ..
4254 sourcename .. ".log " .. sourcename .. "_html.log " ..
4255 sourcename .. ".gl*" .. sourcename .. "_html.gl*" ..
4256 " *_html_inc.* "
4257)
4258 end
4259
4260 function checkhtmlpdfexists ()
4261 --
4262 -- Error if the HTML document does not exist.
4263 -- The lateximages are drawn from the HTML PDF version of the document,
4264 -- so "lwarpmk html" must be done before "lwarpmk limages".
4265 --
4266 local htmlpdffile = io.open(sourcename .. "_html.pdf", "r")
4267 if (htmlpdffile == nil) then
4268 print ("")
4269 print ("lwarpmk: ===")
4270 print ("lwarpmk: The HTML version of the document does not exist.")
4271 print ("lwarpmk: Enter \"lwarpmk html\" to compile the HTML version.")
4272 print ("lwarpmk: ===")
4273 os.exit(1)
4274 end
4275 io.close (htmlpdffile)
4276 end -- checkhtmlpdfexists
4277
4278
4279 function warnlimages ()
```

```
4280 --
4281 -- Warning of a missing <sourcename>-images.txt file:
4282 print ("lwarpmk: ===")
4283 print ("lwarpmk: \"" .. sourcename .. "-images.txt\" does not exist.")
4284 print ("lwarpmk: Your project does not use SVG math or other lateximages,")
4285 print ("lwarpmk: or the file has been deleted somehow.")
4286 print ("lwarpmk: Use \"lwarpmk html1\" to recompile your project")
4287 print ("lwarpmk: and recreate \"" .. sourcename .. "-images.txt\".")
4288 print ("lwarpmk: If your project does not use SVG math or other lateximages,")
4289 print ("lwarpmk: then \"" .. sourcename .. "-images.txt\" will never exist, and")
4290 print ("lwarpmk: \"lwarpmk limages\" will not be necessary.")
4291 print ("lwarpmk: ===")
4292 end -- warnlimages
4293
4294
4295 function warnlimagesrecompile ()
4296 -- Warning if must recompile before creating limages:
4297 print ("")
4298 print ("lwarpmk: ===")
4299 print ("lwarpmk: Cross-references are not yet correct.")
4300 print ("lwarpmk: The document must be recompiled before creating the lateximages.")
4301 print ("lwarpmk: Enter \"lwarpmk html1\" again, then try \"lwarpmk limages\" again.")
4302 print ("lwarpmk: ===")
4303 end --warnlimagesrecompile
4304
4305
4306 function checklimages ()
4307 --
4308 -- Check <sourcename>.txt to see if need to recompile first.
4309 -- If any entry has a page number of zero, then there were incorrect images.
4310 --
4311 print ("lwarpmk: Checking for a valid " .. sourcename .. "-images.txt file.")
4312 local limagesfile = io.open(sourcename .. "-images.txt", "r")
4313 if (limagesfile == nil) then
4314 warnlimages ()
4315 os.exit(1)
4316 end
4317 -- Track warning to recompile if find a page 0
4318 local pagezerowarning = false
4319 -- Scan <sourcename>.txt
4320 for line in limagesfile:lines() do
4321 -- lwimpage is the page number in the PDF which has the image
4322 -- lwimghash is true if this filename is a hash
4323 -- lwimgname is the lateximage filename root to assign for the image
4324 i,j,lwimpage,lwimghash,lwimgname = string.find (line,"|(.*)|(.*)|(.*)|")
4325 -- For each entry:
4326 if ((i~=nil)) then
4327 -- If the page number is 0, image references are incorrect
4328 -- and must recompile the soure document:
4329 if (lwimpage == "0") then
4330 pagezerowarning = true
4331 end
4332 end -- if i~=nil
4333 end -- do
4334 -- The last line should be |end|end|end|.
```

```
4335 -- If not, the compile must have aborted, and the images are incomplete.
4336 if (lwimpage ~= "end") then
4337 warnimagesrecompile()
4338 os.exit(1) ;
4339 end
4340 if (pagezerowarning) then
4341 warnimagesrecompile()
4342 os.exit(1) ;
4343 end -- pagezerowarning
4344 end -- checklimages
4345
4346
4347 function createuniximage (lwimgfullname)
4348 --
4349 -- Create one lateximage for Unix / Linux / Mac OS.
4350 --
4351 executecheckerror (
4352 cmdgroupopenname ..
4353 "pdfseparate -f " .. lwimpage .. " -l " .. lwimpage .. " " ..
4354 sourcename .. "_html.pdf" ..
4355 imagesdirectory .. dirslash .. "lateximagetemp-%d" .. ".pdf" ..
4356 seqname ..
4357 -- Crop the image:
4358 "pdfcrop --hires " .. imagesdirectory .. dirslash .. "lateximagetemp-" ..
4359 lwimpage .. ".pdf" ..
4360 imagesdirectory .. dirslash .. lwimgname .. ".pdf" ..
4361 seqname ..
4362 -- Convert the image to svg:
4363 "pdftocairo -svg -noshrink " .. imagesdirectory .. dirslash .. lwimgname .. ".pdf" ..
4364 imagesdirectory .. dirslash .. lwimgname .. ".svg" ..
4365 seqname ..
4366 -- Remove the temporary files:
4367 rmname .. " " .. imagesdirectory .. dirslash .. lwimgname .. ".pdf" .. seqname ..
4368 rmname .. " " .. imagesdirectory .. dirslash .. "lateximagetemp-" .. lwimpage .. ".pdf" ..
4369 cmdgroupclosename .. " >/dev/null " .. bname
4370 ,
4371 "File error trying to convert " .. lwimgfullname
4372)
4373 -- Every 32 images, wait for completion at below normal priority,
4374 -- allowing other image tasks to catch up.
4375 numimageprocesses = numimageprocesses + 1
4376 if (numimageprocesses > 32) then
4377 numimageprocesses = 0
4378 print ("lwarpmk: waiting")
4379 executecheckerror ("wait" , "File error trying to wait.")
4380 end
4381 end -- createuniximage
4382
4383
4384 function createwindowsimage (lwimgfullname)
4385 --
4386 -- Create one lateximage for Windows.
4387 --
4388 -- Every 32 images, wait for completion at below normal priority,
4389 -- allowing other image tasks to catch up.
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4390 numimageprocesses = numimageprocesses + 1
4391 if (numimageprocesses > 32) then
4392 numimageprocesses = 0
4393 thiswaitcommand = "/WAIT /BELOWNORMAL"
4394 print ("lwarpmk: waiting")
4395 else
4396 thiswaitcommand = ""
4397 end
4398 -- Execute the image generation command
4399 executecheckerror (
4400 "start /B " .. thiswaitcommand .. " \"\" lwarp_one_limage " ..
4401 lwimgpage .. " " ..
4402 lwimghash .. " " ..
4403 lwimgname .. " " ..
4404 sourcename .. " <nul >nul"
4405 ,
4406 "File error trying to create image."
4407)
4408 end -- createwindowsimage
4409
4410
4411 function createonelateximage (line)
4412 --
4413 -- Given the next line of <sourcename>.txt, convert a single image.
4414 --
4415 -- lwimgpage is the page number in the PDF which has the image
4416 -- lwimghash is true if this filename is a hash
4417 -- lwimgname is the lateximage filename root to assign for the image
4418 i,j,lwimgpage,lwimghash,lwimgname = string.find (line,"|(.*)|(.*)|(.*)|")
4419 -- For each entry:
4420 if (i~=nil) then
4421 -- Skip if the page number is 0:
4422 if (lwimgpage == "0") then
4423 pagezerowarning = true
4424 -- Skip if the page number is "end":
4425 else if (lwimgpage == "end") then
4426 else
4427 -- Skip is this image is hashed and already exists:
4428 local lwimgfullname = imagesdirectory .. dirslash .. lwimgname .. ".svg"
4429 if (
4430 (lwimghash ~= "true") or
4431 (lfs.attributes(lwimgfullname,"mode")==nil) -- file not exists
4432)
4433 then -- not hashed or not exists:
4434 -- Print the name of the file being generated:
4435 print ("lwarpmk: " .. lwimgname)
4436 -- Touch/create the dest so that only once instance tries to build it:
4437 executecheckerror (
4438 newtouchname .. " " .. lwimgfullname ,
4439 "File error trying to touch " .. lwimgfullname
4440)
4441 -- Separate out the image into its own single-page pdf:
4442 if opsystem=="Unix" then
4443 createuniximage (lwimgfullname)
4444 elseif opsystem=="Windows" then

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4445 createwindowsimage (lwimgfullname)
4446 end
4447 end -- not hashed or not exists
4448 end -- not page "end"
4449 end -- not page 0
4450 end -- not nil
4451 end -- createonelateximage
4452
4453
4454 function createlateximages ()
4455 --
4456 -- Create lateximages based on <sourcename>-images.txt:
4457 --
4458 -- See if the document must be recompiled first:
4459 checklimages ()
4460 -- See if the print version exists:
4461 checkhtmlpdfexists ()
4462 -- Attempt to create the lateximages:
4463 print ("lwarpmk: Creating lateximages.")
4464 local limagesfile = io.open(sourcename .. "-images.txt", "r")
4465 if (limagesfile == nil) then
4466 warnlimages ()
4467 os.exit(1)
4468 end
4469 -- Create the lateximages directory, ignore error if already exists
4470 err = os.execute("mkdir " .. imagesdirectory)
4471 -- For Windows, create lwarp_one_limage.cmd from lwarp_one_limage.txt:
4472 if opsystem=="Windows" then
4473 executecheckerror (
4474 cpname .. " lwarp_one_limage.txt lwarp_one_limage.cmd" ,
4475 "File error trying to copy lwarp_one_limage.txt to lwarp_one_limage.cmd"
4476)
4477 end -- create lwarp_one_limage.cmd
4478 -- Track the number of parallel processes
4479 numimageprocesses = 0
4480 -- Track warning to recompile if find a page 0
4481 pagezerowarning = false
4482 -- Scan <sourcename>.txt
4483 for line in limagesfile:lines() do
4484 createonelateximage (line)
4485 end -- do
4486 io.close(limagesfile)
4487 print ("lwarpmk limages: ===")
4488 print ("lwarpmk limages: Wait a moment for the images to complete")
4489 print ("lwarpmk limages: before reloading the page.")
4490 print ("lwarpmk limages: ===")
4491 print ("lwarpmk limages: Done.")
4492 if (pagezerowarning == true) then
4493 print ("lwarpmk limages: WARNING: Images will be incorrect.")
4494 print ("lwarpmk limages: Enter \"lwarpmk cleanlimages\", then")
4495 print ("lwarpmk limages: recompile the document one more time, then")
4496 print ("lwarpmk limages: repeat \"lwarpmk images\" again.")
4497 end -- pagezerowarning
4498 end -- function
4499
```

```
4500
4501 function convertepstopdf ()
4502 --
4503 -- Converts EPS files to PDF files.
4504 -- The filenames are arg[argindex] and up.
4505 -- arg[1] is the command "pdftosvg".
4506 --
4507 ignoreconf ()
4508 for i = argindex , #arg do
4509 if (lfs.attributes(arg[i],"mode")==nil) then
4510 print ("lwarpmk: File \"" .. arg[i] .. "\" does not exist.")
4511 else
4512 print ("lwarpmk: Converting \"" .. arg[i] .. "\"")
4513 os.execute ("epstopdf " .. arg[i])
4514 end -- if
4515 end -- do
4516 end --function
4517
4518
4519 function convertpdftosvg ()
4520 --
4521 -- Converts PDF files to SVG files.
4522 -- The filenames are arg[argindex] and up.
4523 -- arg[1] is the command "pdftosvg".
4524 --
4525 ignoreconf ()
4526 for i = argindex , #arg do
4527 if (lfs.attributes(arg[i],"mode")==nil) then
4528 print ("lwarpmk: File \"" .. arg[i] .. "\" does not exist.")
4529 else
4530 print ("lwarpmk: Converting \"" .. arg[i] .. "\"")
4531 os.execute ("pdftocairo -svg " .. arg[i])
4532 end -- if
4533 end -- do
4534 end --function
4535
4536
4537 -- Force an update and conclude processing:
4538 function updateanddone ()
4539 print ("lwarpmk: Forcing an update of " .. sourcename .. ".tex.")
4540 refreshdate ()
4541 print ("lwarpmk: " .. sourcename .. ".tex is ready to be recompiled.")
4542 print ("lwarpmk: Done.")
4543 end -- function
4544
4545
4546 -- Start of the main code: --
4547
4548
4549 -- lwarpmk --version :
4550
4551 if (arg[1] == "--version") then
4552 print ("lwarpmk: " .. printversion)
4553
4554 else -- not --version
```

```
4555
4556
4557 -- print intro:
4558
4559 print ("lwarpmk: " .. printversion .. " Automated make for the LaTeX lwarp package.")
4560
4561
4562 -- lwarpmk print:
4563
4564 if arg[1] == "print" then
4565 loadconf ()
4566 if (latexmk == "true") then
4567 print ("lwarpmk: Compiling with: " .. printlatexcmd)
4568 executecheckerror (
4569 printlatexcmd ,
4570 "Compile error."
4571)
4572 print ("lwarpmk: Done.")
4573 else -- not latexmk
4574 verifyfileexists (sourcename .. ".tex") ;
4575 -- See if up to date:
4576 if (
4577 (lfs.attributes (sourcename .. ".pdf" , "modification") == nil) or
4578 (
4579 lfs.attributes (sourcename .. ".tex" , "modification") >
4580 lfs.attributes (sourcename .. ".pdf" , "modification")
4581)
4582) then
4583 -- Recompile if not yet up to date:
4584 manytimes(printlatexcmd, "")
4585 print ("lwarpmk: Done.") ;
4586 else
4587 print ("lwarpmk: " .. sourcename .. ".pdf is up to date.") ;
4588 end
4589 end -- not latexmk
4590
4591
4592 -- lwarpmk print1:
4593
4594 elseif arg[1] == "print1" then
4595 loadconf ()
4596 verifyfileexists (sourcename .. ".tex") ;
4597 onetime(printlatexcmd, "")
4598 print ("lwarpmk: Done.") ;
4599
4600
4601 -- lwarpmk printindex:
4602 -- Compile the index then touch the source
4603 -- to trigger a recompile of the document:
4604
4605 elseif arg[1] == "printindex" then
4606 loadconf ()
4607 os.execute (printindexcmd)
4608 print ("lwarpmk: -----")
4609 updateanddone ()
```

```
4610
4611
4612 -- lwarpmk printglossary:
4613 -- Compile the glossary then touch the source
4614 -- to trigger a recompile of the document:
4615
4616 elseif arg[1] == "printglossary" then
4617 loadconf ()
4618 print ("lwarpmk: Processing the glossary.")
4619
4620 os.execute(glossarycmd .. " " .. sourcename)
4621 updateanddone ()
4622
4623
4624 -- lwarpmk html:
4625
4626 elseif arg[1] == "html" then
4627 loadconf ()
4628 if (latexmk == "true") then
4629 print ("lwarpmk: Compiling with: " .. HTMLlatexcmd)
4630 executecheckerror (
4631 HTMLlatexcmd ,
4632 "Compile error."
4633)
4634 pdftohtml ()
4635 print ("lwarpmk: Done.")
4636 else -- not latexmk
4637 verifyfileexists (sourcename .. ".tex") ;
4638 -- See if exists and is up to date:
4639 if (
4640 (lfs.attributes (homehtmlfilename .. ".html" , "modification") == nil) or
4641 (
4642 lfs.attributes (sourcename .. ".tex" , "modification") >
4643 lfs.attributes (homehtmlfilename .. ".html" , "modification")
4644)
4645) then
4646 -- Recompile if not yet up to date:
4647 manytimes(HTMLlatexcmd, "_html")
4648 pdftohtml ()
4649 print ("lwarpmk: Done.")
4650 else
4651 print ("lwarpmk: " .. homehtmlfilename .. ".html is up to date.")
4652 end
4653 end -- not latexmk
4654
4655
4656 -- lwarpmk html1:
4657
4658 elseif arg[1] == "html1" then
4659 loadconf ()
4660 verifyfileexists (sourcename .. ".tex") ;
4661 onetime(HTMLlatexcmd, "_html")
4662 pdftohtml ()
4663 print ("lwarpmk: Done.")
4664
```

```
4665
4666 -- lwarpmk pdftohtml:
4667 elseif arg[1] == "pdftohtml" then
4668 loadconf ()
4669 pdftohtml ()
4670
4671
4672 -- lwarpmk htmlindex:
4673 -- Compile the index then touch the source
4674 -- to trigger a recompile of the document:
4675
4676 elseif arg[1] == "htmlindex" then
4677 loadconf ()
4678 os.execute (HTMLindexcmd)
4679 print ("lwarpmk: -----")
4680 updateanddone ()
4681
4682
4683 -- lwarpmk htmlglossary:
4684 -- Compile the glossary then touch the source
4685 -- to trigger a recompile of the document.
4686 -- The <sourcename>.xdy file is created by the glossaries package.
4687
4688 elseif arg[1] == "htmlglossary" then
4689 loadconf ()
4690 print ("lwarpmk: Processing the glossary.")
4691 os.execute(glossarycmd .. " " .. sourcename .. "_html")
4692 updateanddone ()
4693
4694
4695 -- lwarpmk limages:
4696 -- Scan the <sourcename>.txt file to create lateximages.
4697
4698 elseif arg[1] == "limages" then
4699 loadconf ()
4700 print ("lwarpmk: Processing images.")
4701 createlateximages ()
4702 print ("lwarpmk: Done.")
4703
4704
4705 -- lwarpmk again:
4706 -- Touch the source to trigger a recompile.
4707
4708 elseif arg[1] == "again" then
4709 loadconf ()
4710 updateanddone ()
4711
4712
4713 -- lwarpmk clean:
4714 -- Remove project.aux, .toc, .lof, .lot, .log, *.idx, *.ind, *_html_inc.*, .gl*
4715
4716 elseif arg[1] == "clean" then
4717 loadconf ()
4718 removeaux ()
4719 print ("lwarpmk: Done.")
```

```
4720
4721
4722 -- lwarpmk cleanall
4723 -- Remove project.aux, .toc, .lof, .lot, .log, *.idx, *.ind, *_html_inc.*, .gl*
4724 -- and also project.pdf, project.dvi, *.html
4725
4726 elseif arg[1] == "cleanall" then
4727 loadconf ()
4728 removeaux ()
4729 os.execute (rmname .. " " ..
4730 sourcename .. ".pdf " .. sourcename .. "_html.pdf " ..
4731 sourcename .. ".dvi " .. sourcename .. "_html.dvi " ..
4732 "*.html"
4733)
4734 print ("lwarpmk: Done.")
4735
4736
4737 -- lwarpmk cleanimages
4738 -- Remove images from the imagesdirectory.
4739
4740 elseif arg[1] == "cleanimages" then
4741 loadconf ()
4742 os.execute (rmname .. " " .. imagesdirectory .. dirslash .. "*")
4743 print ("lwarpmk: Done.")
4744
4745 -- lwarpmk epstopdf <list of file names>
4746 -- Convert EPS files to PDF using epstopdf
4747 elseif arg[1] == "epstopdf" then
4748 convertepstopdf ()
4749 print ("lwarpmk: Done.")
4750
4751
4752 -- lwarpmk pdftosvg <list of file names>
4753 -- Convert PDF files to SVG using pdftocairo
4754 elseif arg[1] == "pdftosvg" then
4755 convertpdftosvg ()
4756 print ("lwarpmk: Done.")
4757
4758
4759 -- lwarpmk with no argument :
4760
4761 elseif (arg[1] == nil) then
4762 printhehelp ()
4763
4764
4765 -- lwarpmk -h or lwarpmk --help :
4766
4767 elseif (arg[1] == "-h") or (arg[1] == "--help") then
4768 printusage ()
4769
4770
4771 -- Unknown command:
4772
4773 else
4774 printhehelp ()
```

```

4775 print ("\nlwarpmk: ***** Unknown command \".arg[1]..\". *****\n")
4776 end
4777
4778 end -- not --version
4779 \end{filecontents*}
4780 % \end{Verbatim}% for syntax highlighting

4781 \end{LWR@createlwarpmk}

```

## 42 Stacks

for HTML output: 4782 \begin{warpHTML}



Stacks are used to remember how to close sections and list items. Before a new section is started, previously nested sections and items must be closed out (un-nested) in proper order. Note that starting a new section may close several levels of previously nested items at the same time. For example, starting a new `\section` would close any currently open subsection, subsubsection, and paragraph. General environments are not nested on the stack since they have their own close mechanism. List environments are nested, and items inside those environments are nested one level deeper still. List environments may be nested inside other list environments, and list items are nested inside list environments as well. Thus, the stack may have items which are not necessarily in order, since a description may contain an enumerate, for example. Depths to be recorded in `\LWR@closedepthone`, etc.

### 42.1 Assigning depths

initial depths for empty stack entries:

```
4783 \newcommand*{\LWR@depthnone}{-5}
```

all sectioning depths are deeper than `LWR@depthfinished`:

```

4784 \newcommand*{\LWR@depthfinished}{-4}
4785 \newcommand*{\LWR@depthpart}{-1}
4786 \newcommand*{\LWR@depthchapter}{0}
4787 \newcommand*{\LWR@depthsection}{1}
4788 \newcommand*{\LWR@depthsubsection}{2}
4789 \newcommand*{\LWR@depthsubsubsection}{3}
4790 \newcommand*{\LWR@depthparagraph}{4}
4791 \newcommand*{\LWR@depthsubparagraph}{5}

```

used by `\itemize`, `\enumerate`, `\description`:

```
4792 \newcommand*{\LWR@depthlist}{6}
```

used by `\item`:

```
4793 \newcommand*{\LWR@depthlistitem}{7}
```



## 42.2 Closing actions

A stack to record the action to take to close each nesting level: Add more levels of stack if necessary for a very deeply nested document, adding to `\pushclose` and `\popclose` as well.

```
4794 \newcommand*\LWR@closeone{}% top of the stack
4795 \newcommand*\LWR@closetwo{}
4796 \newcommand*\LWR@closethree{}
4797 \newcommand*\LWR@closefour{}
4798 \newcommand*\LWR@closefive{}
4799 \newcommand*\LWR@closesix{}
4800 \newcommand*\LWR@closeseven{}
4801 \newcommand*\LWR@closeeight{}
4802 \newcommand*\LWR@closenine{}
4803 \newcommand*\LWR@closeten{}
4804 \newcommand*\LWR@closeeleven{}
4805 \newcommand*\LWR@closetwelve{}
```

## 42.3 Closing depths

A stack to record the depth of each level:



Note that nested  $\LaTeX$  structures may push depths which are non-sequential.

*Ex:*

---

```
\begin{itemize}
 \item{A}
 \begin{description}
 \item{B}
 \end{description}
\end{itemize}
```

---

```
4806 \newcommand*\LWR@closedepthone{\LWR@depthnone}% top of the stack
4807 \newcommand*\LWR@closedepthtwo{\LWR@depthnone}
4808 \newcommand*\LWR@closedepththree{\LWR@depthnone}
4809 \newcommand*\LWR@closedepthfour{\LWR@depthnone}
4810 \newcommand*\LWR@closedepthfive{\LWR@depthnone}
4811 \newcommand*\LWR@closedepthsix{\LWR@depthnone}
4812 \newcommand*\LWR@closedepthseven{\LWR@depthnone}
4813 \newcommand*\LWR@closedeptheight{\LWR@depthnone}
4814 \newcommand*\LWR@closedepthnine{\LWR@depthnone}
4815 \newcommand*\LWR@closedephten{\LWR@depthnone}
4816 \newcommand*\LWR@closedeptheleven{\LWR@depthnone}
4817 \newcommand*\LWR@closedephtwelve{\LWR@depthnone}
```

## 42.4 Pushing and popping the stack

`\pushclose`  $\{\langle action \rangle\} \{\langle depth \rangle\}$

Pushes one return action and its L<sup>A</sup>T<sub>E</sub>X depth onto the stacks.

```

4818 \NewDocumentCommand{\pushclose}{m m}
4819 {
4820 \global\let\LWR@closetwelve\LWR@closeeleven
4821 \global\let\LWR@closeeleven\LWR@closeten
4822 \global\let\LWR@closeten\LWR@close-nine
4823 \global\let\LWR@close-nine\LWR@close-eight
4824 \global\let\LWR@close-eight\LWR@close-seven
4825 \global\let\LWR@close-seven\LWR@close-six
4826 \global\let\LWR@close-six\LWR@close-five
4827 \global\let\LWR@close-five\LWR@close-four
4828 \global\let\LWR@close-four\LWR@close-three
4829 \global\let\LWR@close-three\LWR@close-two
4830 \global\let\LWR@close-two\LWR@close-one
4831 \global\let\LWR@close-one#1
4832 \global\let\LWR@closedepthtwelve\LWR@closedeptheleven
4833 \global\let\LWR@closedeptheleven\LWR@closedepthten
4834 \global\let\LWR@closedepthten\LWR@closedepthnine
4835 \global\let\LWR@closedepthnine\LWR@closedeptheight
4836 \global\let\LWR@closedeptheight\LWR@closedepthseven
4837 \global\let\LWR@closedepthseven\LWR@closedepthsix
4838 \global\let\LWR@closedepthsix\LWR@closedepthfive
4839 \global\let\LWR@closedepthfive\LWR@closedepthfour
4840 \global\let\LWR@closedepthfour\LWR@closedepththree
4841 \global\let\LWR@closedepththree\LWR@closedepthtwo
4842 \global\let\LWR@closedepthtwo\LWR@closedepthone
4843 \global\let\LWR@closedepthone#2
4844 }

```

`\popclose` Pops one action and its depth off the stacks.

```

4845 \newcommand*{\popclose}
4846 {
4847 \global\let\LWR@closeone\LWR@closetwo
4848 \global\let\LWR@closetwo\LWR@closethree
4849 \global\let\LWR@closethree\LWR@closefour
4850 \global\let\LWR@closefour\LWR@closefive
4851 \global\let\LWR@closefive\LWR@closesix
4852 \global\let\LWR@closesix\LWR@close-seven
4853 \global\let\LWR@close-seven\LWR@close-eight
4854 \global\let\LWR@close-eight\LWR@close-nine
4855 \global\let\LWR@close-nine\LWR@closeten
4856 \global\let\LWR@closeten\LWR@closeeleven
4857 \global\let\LWR@closeeleven\LWR@closetwelve
4858 \global\let\LWR@closedepthone\LWR@closedepthtwo
4859 \global\let\LWR@closedepthtwo\LWR@closedepththree
4860 \global\let\LWR@closedepththree\LWR@closedepthfour
4861 \global\let\LWR@closedepthfour\LWR@closedepthfive
4862 \global\let\LWR@closedepthfive\LWR@closedepthsix

```

```

4863 \global\let\LWR@closedepthsix\LWR@closedepthseven
4864 \global\let\LWR@closedepthseven\LWR@closedeptheight
4865 \global\let\LWR@closedeptheight\LWR@closedepthnine
4866 \global\let\LWR@closedepthnine\LWR@closedepthten
4867 \global\let\LWR@closedepthten\LWR@closedeptheleven
4868 \global\let\LWR@closedeptheleven\LWR@closedepthtwelve
4869 }

4870 \end{warpHTML}

```

### 43 Data arrays

These macros are similar to the `arrayjobx` package, except that `\LWR@setexparray's` argument is expanded only once when assigned.

`name` has no backslash, `index` can be a number or a text name, and an empty value must be `\relax` instead of empty.

To assign an empty value:

```
\LWR@setexparray{name}{index}{}
```

**for HTML output:** 4871 \begin{warpHTML}

```
\LWR@setexparray {<name>} {<index>} {<contents>}
```

```

4872 \NewDocumentCommand{\LWR@setexparray}{m m m}{%
4873 \begingroup%
4874 \let\par\relax%
4875 \def\LWR@thisexparrayname{#1#2}%
4876 \ifstrempy{#3}%
4877 {\csgdef{\LWR@thisexparrayname}{}}%
4878 {\csxdef{\LWR@thisexparrayname}{#3}}%
4879 \endgroup%
4880 }

```

```
\LWR@getexparray {<name>} {<index>}
```

```


4881 \newcommand*{\LWR@getexparray}[2]{%
4882 \@nameuse{#1#2}%
4883 }

```

```
4884 \end{warpHTML}
```

### 44 Localizing catcodes

**for HTML & PRINT:** 4885 \begin{warpall}

 **Misplaced alignment tab character &** Place `\StartDefiningTabulars` and `\StopDefiningTabulars` before and after defining macros or environments which include the tabular & character in their definitions.

The catcode of & must be changed before the definitions begin, and must be restored afterwards. Doing so avoids the error

Misplaced alignment tab character &.

`\StartDefiningTabulars` Place before defining something with & in it.

```
4886 \newcommand{\StartDefiningTabulars}{%
4887 \LWR@traceinfo{StartDefiningTabulars}%
4888 \warpHTMLonly{\catcode'\&=\active}%
4889 }
```

`\StopDefiningTabulars` Place after defining something with & in it.

```
4890 \newcommand{\StopDefiningTabulars}{%
4891 \LWR@traceinfo{StopDefiningTabulars}%
4892 \warpHTMLonly{\catcode'\&=4}%
4893 }
```

Bool `LWR@mathmacro` True if currently defining math macros. Used to disable svg math hashing and MathJax math contents while defining a macro using inline math. Begin a macro, it is not guaranteed that the contents are static, and so the image must be unique. The contents also almost certainly will not be parsed correctly by MathJax.

```
4894 \newbool{LWR@mathmacro}
4895 \boolfalse{LWR@mathmacro}
```

`\StartDefiningMath` Place before defining something with \$ in it.

```
4896 \newcommand{\StartDefiningMath}{%
4897 \LWR@traceinfo{StartDefiningMath}%
4898 \warpHTMLonly{\catcode'\$=\active}%
4899 }
```

`\StopDefiningMath` Place after defining something with \$ in it.

```
4900 \newcommand{\StopDefiningMath}{%
4901 \LWR@traceinfo{StopDefiningMath}%
4902 \warpHTMLonly{\catcode'\$=3}% math shift
4903 }

4904 \end{warpall}
```

## 45 Localizing dynamic math

Inline svg math usually uses a hash of its contents to generate `lateximages` which are reusable for multiple instances with the same contents. If the contents may change for

each use, such as depending on the current value of a counter, then `\inlinemathother` must be used before the inline math expression, and `\inlinemathnormal` must be used after.

For MathJax, the inline math expression is usually printed for MathJax to interpret. When marked as dynamic math, the following inline math expression will be displayed as an unhashed inline SVG image instead.

For existing code and packages, it may be possible to patch macros after they have been defined, using the `xpatch` package, which is pre-loaded by `lwarp`:

---

```
\xpatchcmd{\macroname}
 {$math expression$}
 {\inlinemathother$math expression$\inlinemathnormal}
 {}
 {\typeout{Error patching macroname.}}
```

---

**for HTML & PRINT:** 4905 `\begin{warpall}`

Bool `LWR@dynamicmath` True to mark inline math which is dynamic in nature, thus should not be hashed for reuse.  
 Default: `false`

```
4906 \newbool{LWR@dynamicmath}
4907 \boolfalse{LWR@dynamicmath}
```

`\inlinemathother` Place before using `$...$` or `\(...\)` if the contents of the math are not static, depending on counters or dynamic macros.

```
4908 \newcommand{\inlinemathother}{%
4909 \LWR@traceinfo{inlinemathother}%
4910 \booltrue{LWR@dynamicmath}%
4911 }
```

`\inlinemathnormal` Place after using `$...$` or `\(...\)` with dynamic contents.

```
4912 \newcommand{\inlinemathnormal}{%
4913 \LWR@traceinfo{inlinemathnormal}%
4914 \boolfalse{LWR@dynamicmath}%
4915 }
```

```
4916 \end{warpall}
```

## 46 HTML entities

**for HTML output:** 4917 `\begin{warpHTML}`

**HTML Unicode entities:**

```
4918 \let\LWR@origampersand\&
```

```
\HTMLentity {⟨entitytag⟩}
```

```
4919 \newcommand*{\HTMLentity}[1]{%
4920 % \LWR@traceinfo{HTMLentity \detokenize{#1}}%
4921 \begingroup%
4922 \LWR@FBcancel%
4923 \LWR@origampersand#1;%
4924 \endgroup%
4925 % \LWR@traceinfo{HTMLentity done}%
4926 }
```

```
\HTMLunicode {⟨hex_unicode⟩}
```

```
4927 \newcommand*{\HTMLunicode}[1]{\HTMLentity{\LWR@origpound{x#1}}}
```

```
\&
```

```
4928 \renewrobustcmd*{\&}{\HTMLentity{amp}}
```

```
\textless
```

```
4929 \let\LWR@origtextless\textless
4930 \renewrobustcmd*{\textless}{\HTMLentity{lt}}
```

```
\textgreater
```

```
4931 \let\LWR@origtextgreater\textgreater
4932 \renewrobustcmd*{\textgreater}{\HTMLentity{gt}}

4933 \end{warpHTML}
```

## 47 HTML filename generation

The filename of the homepage is set to `\HomeHTMLFilename.html`. The filenames of additional sections start with `\HTMLFilename`, to which is appended a section number or a simplified section name, depending on `FileSectionNames`.

**for HTML & PRINT:** 4934 `\begin{warpall}`

`\BaseJobname` The `\jobname` of the printed version, even if currently compiling the HTML version. I.e. this is the `\jobname` without `_html` appended. This is used to set `\HomeHTMLFilename` if the user did not provide one.

```
4935 \providecommand*{\BaseJobname}{\jobname}
```

`\HTMLFilename` The prefix for all generated HTML files other than the home page, defaulting to empty. See section 8.4.1.

```
4936 \providecommand*\HTMLFilename{}
```

`\HomeHTMLFilename` The filename of the home page, defaulting to the `\BaseJobname`. See section 8.4.1.

```
4937 \providecommand*\HomeHTMLFilename{\BaseJobname}
```

`\SetHTMLFileNumber`  $\{\langle number \rangle\}$

Sets the file number for the next file to be generated. 0 is the home page. Use just before the next sectioning command, and set it to one less than the desired number of the next section. May be used to generate numbered groups of nodes such as 100+ for one chapter, 200+ for another chapter, etc.

```
4938 \newcommand*\SetHTMLFileNumber[1]{%
4939 \setcounter{LWR@htmlfilenumber}{#1}%
4940 }
```

Bool `FileSectionNames` Selects how to create HTML file names.

Defaults to use section names in the filenames.

```
4941 \newbool{FileSectionNames}
4942 \booltrue{FileSectionNames}

4943 \end{warpall}
```

**for HTML output:** 4944 `\begin{warpHTML}`

Ctrl `LWR@htmlfilenumber` Records the number of each HTML file as it is being created. Number 0 is the home page.

```
4945 \newcounter{LWR@htmlfilenumber}
4946 \setcounter{LWR@htmlfilenumber}{0}
```

`\LWR@htmlsectionfilename`  $\{\langle htmlfilenumber \text{ or } name \rangle\}$

Prints the filename for a given section: `\HTMLFilename{}filenumber/name.html`

```
4947 \newcommand*\LWR@htmlsectionfilename[1]{%
4948 \LWR@traceinfo{LWR@htmlsectionfilename A !\detokenize{#1}!}%
```

Section 0 or empty is given the home filename. The filename must be detokenized for underscores.

```
4949 % \LWR@traceinfo{about to assign temp}%
4950 \LWR@sanitize{#1}%
4951 \LWR@traceinfo{about to compare with ??}%
4952 \ifthenelse{\equal{\LWR@sanitized}{??}}%
```

```

4953 {\LWR@traceinfo{found ??}}%
4954 {\LWR@traceinfo{not found ??}}%
4955 \LWR@traceinfo{about to compare with zero or empty}%
4956 \ifthenelse{%
4957 \equal{\LWR@sanitized}{0}%
4958 \OR \equal{\LWR@sanitized}{}%
4959 \OR \equal{\LWR@sanitized}{?}}%
4960 }%
4961 {%
4962 \LWR@traceinfo{LWR@htmlsectionfilename B \HomeHTMLFilename.html}%
4963 \HomeHTMLFilename.html%
4964 }%

```

For a L<sup>A</sup>T<sub>E</sub>X section named “Index” or “index” without a prefix, create a filename with a leading underscore to avoid colliding with the HTML filename `index.html`:

```

4965 {%
4966 \LWR@traceinfo{LWR@htmlsectionfilename C \LWR@sanitized}%
4967 \ifthenelse{%
4968 \equal{\HTMLFilename}{ } \AND
4969 \equal{\LWR@sanitized}{Index} \OR
4970 \equal{\LWR@sanitized}{index}}%
4971 }%
4972 {%
4973 \LWR@traceinfo{Prefixing the index name with an underscore.}%
4974 _\LWR@sanitized.html%
4975 }%

```

Otherwise, create a filename with the chosen prefix:

```

4976 {%
4977 \HTMLFilename\LWR@isolate{\LWR@sanitized}.html%
4978 }%
4979 }%
4980 \LWR@traceinfo{LWR@htmlsectionfilename Z}%
4981 }

```

`\LWR@htmlrefsectionfilename`  $\langle label \rangle$

Prints the filename for the given label

```

4982 \newcommand*{\LWR@htmlrefsectionfilename}[1]{%
4983 \LWR@traceinfo{LWR@htmlrefsectionfilename: !\detokenize{#1}!}%

```

`\LWR@nullfonts` to allow math in a section name.

```

4984 \begingroup%
4985 \LWR@nullfonts%
4986 \LWR@htmlsectionfilename{\LWR@htmlfileref{#1}}%
4987 \endgroup%
4988 \LWR@traceinfo{LWR@htmlrefsectionfilename: done}%
4989 }

```

```

4990 \end{warpHTML}

```



## 48 Homepage link

**for HTML & PRINT:** 4991 \begin{warpall}

\linkhomename Holds the default name for the home link.

```
4992 \newcommand{\linkhomename}{Home}
```

```
4993 \end{warpall}
```

**for HTML output:** 4994 \begin{warpHTML}

\LinkHome May be used wherever you wish to place a link back to the homepage. The filename must be detokenized for underscores.

```
4995 \newcommand*\LinkHome{%
```

```
4996 \LWR@subhyperrefclass{\HomeHTMLFilename.html}{\linkhomename}{\linkhome}%
```

```
4997 }
```

```
4998 \end{warpHTML}
```

**for PRINT output:** 4999 \begin{warpprint}

\LinkHome May be used wherever you wish to place a link back to the homepage. For print output, if `hyperref` is available a hyperlink to the first page is used, named by `\linkhomename`. If `hyperref` is not available, a `pageref` is used instead.

`\BaseJobname` is included in the link label in case multiple documents are cross-referenced.

```
5000 \AtBeginDocument{
```

```
5001 \ifundefined{hyperref}{
```

```
5002 \newcommand*\LinkHome{%
```

```
5003 \linkhomename\ --- page \pageref{\BaseJobname-page-LWRfirstpage}%
```

```
5004 }
```

```
5005 }{
```

```
5006 \newcommand*\LinkHome{%
```

```
5007 \hyperref[\BaseJobname-page-LWRfirstpage]{\linkhomename}%
```

```
5008 }
```

```
5009 }
```

```
5010 }
```

```
5011
```

```
5012 \AfterEndPreamble{\label{\BaseJobname-page-LWRfirstpage}}
```

```
5013 \end{warpprint}
```

**for HTML output:** 5014 \begin{warpHTML}

\LWR@topnavigation Creates a link to the homepage at the top of the page for use when the window is too narrow for the sideroc.

```

5015 \newcommand*{\LWR@topnavigation}{
5016 \LWR@html@element@class@line{nav}{topnavigation}{\LinkHome}
5017 }

```

`\LWR@botnavigation` Creates a link to the homepage at the bottom of the page for use when the window is too narrow for the sideroc.

```

5018 \newcommand*{\LWR@botnavigation}{
5019 \LWR@html@element@class@line{nav}{botnavigation}{\LinkHome}
5020 }

5021 \end{warpHTML}

```

## 49 \LWRPrintStack diagnostic tool



Diagnostics tool: Prints the L<sup>A</sup>T<sub>E</sub>X nesting depth values for the stack levels. `\LWR@startpars` is used before printing the stack, so that `\LWRPrintStack` may be called from anywhere in the normal text flow.

**for HTML output:** 5022 `\begin{warpHTML}`

`\LWRPrintStack` Prints the closedepth stack.

```

5023 \newcommand*{\LWR@subprintstack}{
5024 \LWR@closedepthone\ \LWR@closedepthtwo\ \LWR@closedepththree\
5025 \LWR@closedepthfour\ \LWR@closedepthfive\ \LWR@closedepthsix\
5026 \LWR@closedepthseven\ \LWR@closedeptheight\ \LWR@closedepthnine\
5027 \LWR@closedepthten\ \LWR@closedeptheleven\ \LWR@closedepthtwelve\
5028 }
5029
5030 \newcommand*{\LWRPrintStack}{
5031 \LWR@startpars
5032 \LWR@subprintstack
5033 }

5034 \end{warpHTML}

```

**for PRINT output:** 5035 `\begin{warpprint}`

```

5036 \newcommand*{\LWRPrintStack}{}

5037 \end{warpprint}

```

## 50 Closing stack levels

**for HTML output:** 5038 `\begin{warpHTML}`

Close one nested level:

```
5039 \newcommand*{\LWR@closeoneprevious}{%
5040
5041 \LWR@closeone
5042
5043 \popclose
5044 }
```

`\LWR@closeprevious`  $\{ \langle depth \rangle \}$  Close everything up to the given depth:

```
5045 \newcommand*{\LWR@closeprevious}[1]{
5046 \LWR@traceinfo{\LWR@closeprevious to depth #1, depths are \LWR@subprintstack}%
```

Close any pending paragraph:

```
5047 \LWR@stoppars%
```

Close anything nested deeper than the desired depth. First close anything deeper, then at most one of the same level.

```
5048 \whileboolexpr{test{\ifnumcomp{\LWR@closedepthone}{>}{#1}}}%
5049 {%
5050 \LWR@traceinfo{\LWR@closeprevious: closing out depth \LWR@closedepthone}%
5051 \LWR@closeoneprevious%
5052 }%
5053 \ifboolexpr{test{\ifnumcomp{\LWR@closedepthone}{=}{#1}}}%
5054 {%
5055 \LWR@traceinfo{\LWR@closeprevious: closing out depth \LWR@closedepthone}%
5056 \LWR@closeoneprevious%
5057 }{}%
5058 \LWR@traceinfo{\LWR@closeprevious: done, depths are \LWR@subprintstack}%
5059 }

5060 \end{warpHTML}
```

## 51 PDF pages and styles

**for HTML output:** 5061 `\begin{warpHTML}`

`\LWR@forcenewpage` New PDF page a before major environment.

This is used just before major environments, such as `verse`. Reduces the chance of an environment overflowing the HTML PDF output page.

```
5062 \newcommand{\LWR@forcenewpage}{%
5063 \LWR@traceinfo{\LWR@forcenewpage}%
5064 \ifinner\else%
5065 \LWR@stoppars\LWR@orignewpage\LWR@startpars%
5066 \fi%
5067 }
```

`\pagestyle`, etc. are nullified for HTML output.

`\pagestyle`  $\langle style \rangle$

5068 `\renewcommand*\pagestyle}[1]{}`

`\thispagestyle`  $\langle style \rangle$

5069 `\renewcommand*\thispagestyle}[1]{}`

`\markboth`  $\langle left \rangle$   $\langle right \rangle$

5070 `\renewcommand*\markboth}[2]{}`

`\markright`  $\langle right \rangle$

5071 `\renewcommand*\markright}[1]{}`

`\raggedbottom`

5072 `\renewcommand*\raggedbottom{}`

`\flushbottom`

5073 `\renewcommand*\flushbottom{}`

`\sloppy`

5074 `\renewcommand*\sloppy{}`

`\fussy`

5075 `\renewcommand*\fussy{}`

`\pagenumbering` \*  $\langle commands \rangle$

5076 `\RenewDocumentCommand{\pagenumbering}{s m}{}`

5077 `\end{warpHTML}`

## 52 HTML tags, spans, divs, elements

**for HTML output:** 5078 `\begin{warpHTML}`

## 52.1 Mapping L<sup>A</sup>T<sub>E</sub>X sections to HTML sections

```

5079 \newcommand*\LWR@tagtitle}{h1}
5080 \newcommand*\LWR@tagtitleend}{/h1}
5081 \newcommand*\LWR@tagpart}{h2}
5082 \newcommand*\LWR@tagpartend}{/h2}
5083 \newcommand*\LWR@tagchapter}{h3}
5084 \newcommand*\LWR@tagchapterend}{/h3}
5085 \newcommand*\LWR@tagsection}{h4}
5086 \newcommand*\LWR@tagsectionend}{/h4}
5087 \newcommand*\LWR@tagsubsection}{h5}
5088 \newcommand*\LWR@tagsubsectionend}{/h5}
5089 \newcommand*\LWR@tagsubsubsection}{h6}
5090 \newcommand*\LWR@tagsubsubsectionend}{/h6}
5091 \newcommand*\LWR@tagparagraph}{span class="paragraph"}
5092 \newcommand*\LWR@tagparagraphend}{/span}
5093 \newcommand*\LWR@tagsubparagraph}{span class="subparagraph"}
5094 \newcommand*\LWR@tagsubparagraphend}{/span}
5095
5096 \newcommand*\LWR@tagregularparagraph}{p}

```

## 52.2 Babel-French tag modifications

Adjust babel-french for HTML spaces. So far, this only works for *pdf<sub>l</sub>atex* and *xelatex*.

*(Emulates or patches code by DANIEL FLIPO.)*

```

5097 \providecommand*\LWR@FBcancel{}
5098
5099 \AtBeginDocument{%
5100 \ifundefined{frenchbsetup}%
5101 {}%
5102 {%
5103 \frenchbsetup{FrenchFootnotes=false}%
5104 %
5105 \LetLtxMacro\LWR@FBcancel\NoAutoSpacing%
5106 \renewrobustcmd*\FBcolonspace{%
5107 \begingroup%
5108 \LWR@FBcancel%
5109 \LWR@origampersand{}nbsp;%
5110 \endgroup%
5111 }%
5112 \renewrobustcmd*\FBthinspace{%
5113 \begingroup%
5114 \LWR@FBcancel%
5115 \LWR@origampersand\LWR@origpound{x202f;% \,
5116 \endgroup%
5117 }%
5118 \renewrobustcmd*\FBguillspace{%
5119 \begingroup%
5120 \LWR@FBcancel%
5121 \LWR@origampersand{}nbsp;% ~, for \og xyz \fg{}
5122 \endgroup%

```

```

5123 }%
5124 \DeclareDocumentCommand{\FBmedkern}{}{%
5125 \begingroup%
5126 \LWR@FBcancel%
5127 \LWR@origampersand\LWR@origpound{x202f;% \,
5128 \endgroup%
5129 }%
5130 \DeclareDocumentCommand{\FBthickkern}{}{%
5131 \begingroup%
5132 \LWR@FBcancel%
5133 \LWR@origampersand{}nbsp;% ~
5134 \endgroup%
5135 }%
5136 \renewrobustcmd*{~}{\HTMLentity{nbsp}}% was overwritten by babel-french
5137 \iffBunicode%
5138 \else%
5139 \DeclareTextSymbol{\FBtextellipsis}{LY1}{133}%
5140 \DeclareTextCommandDefault{\FBtextellipsis}{\textellipsis\xspace}%
5141 \fi%
5142 }%
5143 }

```

### 52.3 HTML output formatting

Helps format the output HTML code for human readability.

`\LWR@indentHTML` Newline and indent the output HTML code.

```

5144 \newcommand*\LWR@indentHTML{%
5145 \LWR@orignewline\LWR@origrule{2em}{0pt}%
5146 }

```

### 52.4 HTML tags

`\LWR@htmltagc` `{<tag>}` Break ligatures and use upright apostrophes in HTML tags.

`\protect` is in case the tag appears in TOC, LOF, LOT.

```

5147 \newcommand*\LWR@htmltagc[1]{%
5148 \LWR@traceinfo{\LWR@htmltagc !\detokenize{#1}!}%
5149 \begingroup%
5150 \LWR@FBcancel%
5151 \ifmode\else\protect\LWR@origttfamily\fi%
5152 \protect\LWR@origtextless%
5153 \LWR@isolate{#1}%
5154 \protect\LWR@origtextgreater%
5155 \endgroup%
5156 }

```

Env LWR@nestspan Disable minipage, \parbox, and HTML <div>s inside a <span>.

⚠ `\begin{LWR@nestspan}` must follow the opening `<span>` tag to allow a paragraph to start if the span is at the beginning of a new paragraph.

⚠ `\end{LWR@nestspan}` must follow the `</span>` or a `<p>` may appear inside the span.

```

5157 \newcommand*{\LWR@nestspanitem}{%
5158 \if@newlist\else{\LWR@htmltagc{br /}}\fi%
5159 \LWR@origitem%
5160 }
5161
5162 \newenvironment*{LWR@nestspan}
5163 {%
5164 \LWR@traceinfo{LWR@nestspan starting}%
5165 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
5166 {%
5167 \LWR@traceinfo{LWR@nestspan: inside a lateximage}%
5168 }%
5169 {% not in a lateximage
5170 \LWR@traceinfo{LWR@nestspan: NOT inside a lateximage}%
5171 \addtocounter{LWR@spandepth}{1}%
5172 \RenewDocumentEnvironment{minipage}{O{t} o O{t} m}%
5173 {\LWR@subhtmltagc{span}{inlineminipage}}%
5174 {\LWR@htmltagc{/span}}%
5175 \RenewDocumentEnvironment{BlockClass}{o m}{}{}%
5176 \renewcommand{\BlockClassSingle}[2]{##2}%
5177 \renewcommand{\LWR@forcenewpage}{}%
5178 \renewcommand{\LWR@liststart}{}%
5179 \let\item\LWR@nestspanitem%
5180 }%
5181 \renewcommand{\LWR@listend}{\LWR@htmltagc{br /}\LWR@htmltagc{br /}}%
5182 }% not in a lateximage
5183 \LWR@traceinfo{LWR@nestspan starting: done}%
5184 }% starting env
5185 }% ending env
5186 \LWR@traceinfo{LWR@nestspan ending}%
5187 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
5188 }%
5189 {\addtocounter{LWR@spandepth}{-1}}%
5190 \LWR@traceinfo{LWR@nestspan ending: done}%
5191 }
5192
5193 \AfterEndEnvironment{LWR@nestspan}{\global\let\par\LWR@closeparagraph}

```

`\LWR@htmlspan` `{<tag>}{<text>}`

⚠ `\LWR@spandepth` is used to ensure that paragraph tags are not generated inside a span. The exact sequence of when to add and subtract the counter is important to correctly handle the paragraph tags before and after the span.

```

5194 \NewDocumentCommand{\LWR@htmlspan}{m +m}{%
5195 \LWR@ensuredoingapar%
5196 \LWR@htmltagc{#1}%
5197 \begin{LWR@nestspan}%

```

```

5198 #2%
5199 \LWR@htmltagc{/#1}%
5200 \end{LWR@nestspan}%
5201 }

```

`\LWR@htmlspanclass` [*style*] {*class*} {*text*}

```

5202 \NewDocumentCommand{\LWR@htmlspanclass}{o m +m}{%
5203 \LWR@traceinfo{LWR@htmlspanclass |#1|#2|}%
5204 \LWR@ensuredoingapar%
5205 \LWR@subhtmlElementclass{span}[#1][#2]%
5206 \begin{LWR@nestspan}%
5207 #3%
5208 \LWR@htmltagc{/span}%
5209 \LWR@traceinfo{LWR@htmlspanclass done}%
5210 \end{LWR@nestspan}%
5211 }

```

`\LWR@htmltag` {*tag*}

Print an HTML tag: <tag>

```

5212 \newcommand*{\LWR@htmltag}[1]{%
5213 % \LWR@traceinfo{LWR@htmltagb !\detokenize{#1}!}%
5214 \LWR@htmltagc{#1}%
5215 % \LWR@traceinfo{LWR@htmltagb: done}%
5216 }

```

## 52.5 Block tags and comments

In the following, `\origttfamily` breaks ligatures, which may not be used for HTML codes:

```

\LWR@htmlOpencomment
\LWR@htmlClosecomment
5217 \newcommand*{\LWR@htmlOpencomment}{%
5218 {%
5219 % \LWR@traceinfo{LWR@htmlOpencomment}%
5220 \begingroup%
5221 \LWR@FBcancel%
5222 \ifmmode\else\protect\LWR@origttfamily\fi
5223 \LWR@print@mbx{\LWR@origtextless{}!-\/-}%
5224 \endgroup%
5225 }%
5226 }
5227
5228 \newcommand*{\LWR@htmlClosecomment}{%
5229 {%
5230 % \LWR@traceinfo{LWR@htmlClosecomment}%
5231 \begingroup%

```



```

5232 \LWR@FBcancel%
5233 \ifmode\else\protect\LWR@origttfamily\fi%
5234 \LWR@print@mbox{-\/-\LWR@origtextgreater}%
5235 \endgroup%
5236 }%
5237 }

```

`\LWR@htmlcomment` {*comment*}

```

5238 \newcommand{\LWR@htmlcomment}[1]{%
5239 \LWR@htmlopencomment}%
5240 {%
5241 \LWR@origttfamily% break ligatures
5242 #1%
5243 }%
5244 \LWR@htmlclosecomment{}}

```

`\LWR@htmlblockcomment` {*comment*}

```

5245 \newcommand{\LWR@htmlblockcomment}[1]
5246 {\LWR@stoppars\LWR@htmlcomment{#1}\LWR@startpars}

```

`\LWR@htmlblocktag` {*tag*} print a stand-alone HTML tag

```

5247 \newcommand*\LWR@htmlblocktag}[1]{%
5248 \LWR@stoppars%
5249 \LWR@htmltag{#1}%
5250 \LWR@startpars%
5251 }

```

## 52.6 Div class and element class

`\LWR@subhtmlclass` {*element*} [*style*] {*class*}

Factored and reused in several places.

The trailing spaces allow more places for a line break.

The use of `\textquotedbl` instead of " provides improved compatibility with xeCJK.

```

5252 \NewDocumentCommand{\LWR@subhtmlclass}{m O{ } m}{%
5253 \LWR@traceinfo{\LWR@subhtmlclass !#1!#2!#3!}%
5254 \ifblank{#2}%
5255 {% empty option
5256 \LWR@htmltag{%
5257 #1 % space
5258 class=\textquotedbl#3\textquotedbl\ % space
5259 }%
5260 }%
5261 {% non-empty option

```

```

5262 \LWR@htmltag{%
5263 #1\LWR@indentHTML%
5264 class=\textquotedbl#3\textquotedbl\LWR@indentHTML%
5265 style=\textquotedbl#2\textquotedbl\LWR@orignewline%
5266 }%
5267 }%
5268 \LWR@traceinfo{LWR@subhtmlclass done}%
5269 }

```

`\LWR@htmlclass` {*element*} {*class*} [*style*]

```

5270 \NewDocumentCommand{\LWR@htmlclass}{m o m}{%
5271 \LWR@stoppars%
5272 \LWR@subhtmlclass{#1}[#2]{#3}%
5273 \LWR@startpars%
5274 }

```

`\LWR@htmlclassend` {*element*} {*class*}

```

5275 \newcommand*{\LWR@htmlclassend}[2]{%
5276 \LWR@stoppars%
5277 \LWR@htmltag{/#1}%
5278 \ifbool{HTMLDebugComments}{%
5279 \LWR@htmlcomment{End of #1 ‘#2’}%
5280 }{}%
5281 \LWR@startpars%
5282 }

```

`\LWR@htmldivclass` [*style*] {*class*}

```

5283 \NewDocumentCommand{\LWR@htmldivclass}{o m}{%
5284 \LWR@htmlclass{div}[#1]{#2}%
5285 }

```

`\LWR@htmldivclassend` {*class*}

```

5286 \newcommand*{\LWR@htmldivclassend}[1]{%
5287 \LWR@htmlclassend{div}{#1}%
5288 }

```

## 52.7 Single-line elements

A single-line element, without a paragraph tag for the line of text:

`\LWR@htmlclassline` {*element*} [*style*] {*class*} {*text*}

```

5289 \NewDocumentCommand{\LWR@htmlclassline}{m o m +m}{%
5290 \LWR@stoppars

```

```

5291 \LWR@subhtmlElementclass{#1}[#2]{#3}%
5292 #4%
5293 \LWR@htmltag{/#1}
5294 \LWR@startpars
5295 }

```

## 52.8 HTML5 semantic elements

`\LWR@htmlElement` {*element*}

```

5296 \newcommand*{\LWR@htmlElement}[1]{%
5297 \LWR@htmlblocktag{#1}
5298 }

```

`\LWR@htmlElementend` {*element*}

```

5299 \newcommand*{\LWR@htmlElementend}[1]{%
5300 \LWR@stoppars
5301 \LWR@htmltag{/#1}
5302 \LWR@startpars
5303 }
5304
5305 \end{warpHTML}

```

## 52.9 High-level block and inline classes

These are high-level commands which allow the creation of arbitrary block or inline sections which may be formatted with CSS.

Nullified versions are provided for print mode.

For other direct-formatting commands, see section [91](#).

Env `BlockClass` [*style*] {*class*} High-level interface for `<div>` classes.

Ex: `\begin{BlockClass}{class} text \end{BlockClass}`

**for PRINT output:** `5306 \begin{warpprint}`  
`5307 \NewDocumentEnvironment{BlockClass}{o m}{\}\%`  
`5308 \end{warpprint}`

**for HTML output:** `5309 \begin{warpHTML}`  
`5310 \NewDocumentEnvironment{LWR@print@BlockClass}{o m}{\}\%`  
`5311 \NewDocumentEnvironment{LWR@HTML@BlockClass}{o m}%`  
`5312 {%`  
`5313 \LWR@origpar%`  
`5314 \LWR@htmldivclass[#1]{#2}%`  
`5315 }`

```

5316 {\LWR@htmldivclassend{#2}}
5317
5318 \LWR@formattedenv{BlockClass}
5319 \end{warpHTML}

```

`\BlockClassSingle` `{\langle class \rangle}{\langle text \rangle}` A single-line `<div>`, without a paragraph tag for the line of text.

**for HTML & PRINT:**

```

5320 \begin{warpall}
5321 \newcommand{\BlockClassSingle}[2]{#2}
5322 \end{warpall}

```

**for HTML output:**

```

5323 \begin{warpHTML}
5324 \newcommand{\LWR@HTML@BlockClassSingle}[2]{%
5325 \LWR@origpar%
5326 \LWR@html@elementclassline{div}{#1}{#2}%
5327 }
5328
5329 \LWR@formatted{BlockClassSingle}
5330 \end{warpHTML}

```

`\InlineClass` `(\langle WP style \rangle)[\langle style \rangle]{\langle class \rangle}{\langle text \rangle}`

High-level interface for inline span classes.

`(\langle WP style \rangle)` is CSS styling to add when formatting for a word processor import.

`[\langle style \rangle]` is the CSS styling to add when not formatting for a word processor.

**for PRINT output:**

```

5331 \begin{warpprint}
5332 \NewDocumentCommand{\InlineClass}{D{()}{} o m +m}{#4}%
5333 \end{warpprint}

```

**for HTML output:**

```

5334 \begin{warpHTML}
5335 \NewDocumentCommand{\LWR@print@InlineClass}{D{()}{} o m +m}{#4}%
5336
5337 \NewDocumentCommand{\LWR@HTML@InlineClass}{D{()}{} o m +m}{%
5338 \ifbool{FormatWP}{%
5339 \LWR@htmlspanclass[#1]{#3}{#4}%
5340 }{%
5341 \LWR@htmlspanclass[#2]{#3}{#4}%
5342 }%
5343 }
5344
5345 \LWR@formatted{InlineClass}
5346 \end{warpHTML}

```

`Env` `LWR@BlockClassWP` `{\langle WP style \rangle}{\langle HTML style \rangle}{\langle class \rangle}` Low-level interface for `<div>` classes with an automatic float ID. These are often used when `\ifbool{FormatWP}`.

The use of `\textquotedbl` instead of `"` provides improved compatibility with `xeCJK`.

**for PRINT output:**

```

5347 \begin{warpprint}
5348 \NewDocumentEnvironment{LWR@BlockClassWP}{m m m}{ }{}%
5349 \end{warpprint}

```

```

for HTML output: 5350 \begin{warpHTML}
5351 \NewDocumentEnvironment{LWR@print@LWR@BlockClassWP}{m m m}{}{}%
5352 \NewDocumentEnvironment{LWR@HTML@LWR@BlockClassWP}{m m m}%
5353 {%
5354 \LWR@stoppars%
5355 \ifbool{FormatWP}%
5356 {%
5357 \addtocounter{LWR@thisautoidWP}{1}%

5358 \LWR@htmltag{%
5359 div class=\textquotedbl#3\textquotedbl\ % space
5360 id=\textquotedbl%
5361 \LWR@print@mbox{autoidWP-\arabic{LWR@thisautoidWP}}%
5362 \textquotedbl%
5363 \ifblank{#1}{}{ style=\textquotedbl#1\textquotedbl}%
5364 }%
5365 }% FormatWP
5366 {% not FormatWP
5367 \LWR@htmltag{%
5368 div class=\textquotedbl#3\textquotedbl%
5369 \ifblank{#2}{}{ style=\textquotedbl#2\textquotedbl}%
5370 }%
5371 }% not FormatWP
5372 \LWR@startpars%
5373 }
5374 {\LWR@htmldivclassend{#3}}
5375
5376 \LWR@formattedenv{LWR@BlockClassWP}
5377 \end{warpHTML}

```

## 52.10 Closing HTML tags

```

for HTML output: 5378 \begin{warpHTML}

```

Sections H1, H2, etc. do not need a closing HTML tag, but we add a comment for readability:

```

5379 \newcommand*{\LWR@printclosepart}
5380 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing part}}{}}
5381 \newcommand*{\LWR@printclosechapter}
5382 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing chapter}}{}}
5383 \newcommand*{\LWR@printclosesection}
5384 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing section}}{}}
5385 \newcommand*{\LWR@printclosesubsection}
5386 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subsection}}{}}
5387 \newcommand*{\LWR@printclosesubsubsection}
5388 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subsubsection}}{}}
5389 \newcommand*{\LWR@printcloseparagraph}
5390 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing paragraph}}{}}
5391 \newcommand*{\LWR@printclose subparagraph}
5392 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subparagraph}}{}}

```

Lists require closing HTML tags:

```

5393 \newcommand*{\LWR@printcloseitem}
5394 {\LWR@htmltag{/li}}
5395 \newcommand*{\LWR@printclosedescitem}
5396 {\LWR@htmltag{/dd}}
5397 \newcommand*{\LWR@printcloseitemize}
5398 {\LWR@htmltag{/ul}}
5399 \newcommand*{\LWR@printcloseenumerate}
5400 {\LWR@htmltag{/ol}}
5401 \newcommand*{\LWR@printclosedescription}
5402 {\LWR@htmltag{/dl}}

5403 \end{warpHTML}

```

## 53 Paragraph handling

These commands generate the HTML paragraph tags when allowed and required.

Paragraph tags are or are not allowed depending on many conditions. Section 54 has high-level commands which allow paragraph-tag generation to start/stop. Even when allowed (`\LWR@doingstartpars`), tags are not generated until a  $\LaTeX$  paragraph is being used (`\LWR@doingapar`). `LWR@lateximagedepth` is used to prevent nesting tags inside a `lateximage`. `LWR@spandepth` is used to prevent nesting paragraph tags inside a paragraph, which became important inside `\fbox` commands and other spans.

**for HTML output:** 5404 `\begin{warpHTML}`

Ctrl `LWR@spandepth` Do not create paragraph tags inside of an HTML span.

```

5405 \newcounter{LWR@spandepth}
5406 \setcounter{LWR@spandepth}{0}

```

Bool `LWR@doingstartpars` Tells whether paragraphs may be generated.

```

5407 \newbool{LWR@doingstartpars}
5408 \boolfalse{LWR@doingstartpars}

```

Bool `LWR@doingapar` Tells whether have actually generated and are currently processing paragraph text.

```

5409 \newbool{LWR@doingapar}
5410 \global\boolfalse{LWR@doingapar}

```

`\LWR@ensuredoingapar` If are about to print something visible, and if allowed to start a new paragraph, ensure that are `LWR@doingapar`, so that paragraph tags are placed:

```

5411 \newcommand*{\LWR@ensuredoingapar}{%
5412 \ifbool{LWR@doingstartpars}%
5413 {\global\booltrue{LWR@doingapar}}%
5414 }%
5415 }

```

`\PN@parnotes@auto` Redefined by `parnotes` to print paragraph notes at the end of each paragraph.

```
5416 \def\PN@parnotes@auto{}
```

`\LWR@openparagraph`

```
5417 \newcommand*\LWR@openparagraph
```

```
5418 {%
```

See if paragraph handling is enabled:

```
5419 \ifbool{LWR@doingstartpars}%
```

```
5420 {% handling pars
```

See if have already started a `lateximage` or a `<span>`. If so, do not generate nested paragraph tags.

```
5421 \ifboolexpr{
5422 test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
5423 test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
5424 }{% nested par tags?
```

If so: Do nothing if already started a `lateximage` page. Cannot nest a `lateximage`. Also do nothing if already inside a `<span>`. Do not nest paragraph tags inside a `<span>`.

```
5425 {}% no nested par tags
```

Else: No `lateximage` or `<span>` has been started yet, so it's OK to generate paragraph tags.

```
5426 {% yes nest par tags
```

If `parnotes` is used, paragraph notes are inserted before starting the next paragraph:

```
5427 \PN@parnotes@auto%
```

The opening paragraph tag:

```
5428 \LWR@htmltagc{\LWR@tagregularparagraph}\LWR@originewline%
```

Now have started a paragraph.

```
5429 \global\booltrue{LWR@doingapar}%
```

At the end of each paragraph, generate closing tag and do regular `/par` stuff. (Attempting to use the `everyhook` `cr` hook for `\LWR@closeparagraph` does not work well.)

```
5430 \let\par\LWR@closeparagraph%
5431 }% end of yes nest par tags
5432 }% end of handling pars
5433 {}% not handling pars
5434 }
```

`\LWR@closeparagraph@br` Add an HTML break if in a span, and not in a lateximage, and not in tabular metadata. Factored from `\LWR@closeparagraph`.

```

5435 \newcommand*{\LWR@closeparagraph@br}
5436 {%
5437 \ifboolexpr{
5438 test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}} and
5439 test {\ifnumcomp{\value{LWR@lateximagedepth}}{=}{0}} and
5440 not bool {LWR@intabularmetadata}
5441 }%
5442 {\unskip\LWR@htmltagc{br /}}%
5443 {}%
5444 }

```

`\LWR@closeparagraph`

```

5445 \newcommand*{\LWR@closeparagraph}
5446 {%
5447 % \LWR@traceinfo{LWR@closeparagraph}%

```

See if paragraph handling is enabled:

```
5448 \ifbool{LWR@doingapar}%
```

If currently in paragraph mode:

```
5449 {% handling pars
```

See if already started a lateximage or a `<span>`:

```

5450 \ifboolexpr{
5451 test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
5452 test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
5453 }%

```

Add a parbreak if in a span, not in a lateximage, and not in table metadata.

```

5454 {% no nested par tags
5455 \LWR@closeparagraph@br%
5456 }% no nested par tags

```

If have not already started a lateximage or a `<span>`:

```
5457 {% yes nest par tags
```

Print a closing tag and some extra vertical space.

```

5458 \leavevmode\LWR@orignewline%
5459 \LWR@htmltagc{/\LWR@tagregularparagraph}%
5460 \LWR@origpar%

```

No longer doing a paragraph:

```
5461 \global\boolfalse{LWR@doingapar}%
```



Disable the special minipage & \hspace interaction until a new minipage is found:

```
5462 \global\boolfalse{LWR@minipagethispar}%
```

If parnotes is used, paragraph notes are inserted after ending the previous paragraph:

```
5463 \PN@parnotes@auto%
5464 }% end of yes nest par tags
5465 }% end of handling pars
```

Add a parbreak if in a span, not in a lateximage, and not in table metadata.

```
5466 {% not handling pars
5467 \LWR@closeparagraph@br%
5468 }% not handling pars
```

In most cases, finish with a  $\LaTeX$  `\par`, but in the case of paragraphs between lines in a tabular fetch the next token instead:

```
5469 \ifboolexpr{%
5470 not bool {LWR@doingapar} and
5471 test {\ifnumcomp{\value{LWR@tabulardepth}}{>}{0}} and
5472 test {
5473 \ifnumcomp{\value{LWR@tabulardepth}}{=}{\value{LWR@tabularpardepth}}
5474 } and
5475 bool {LWR@intabularmetadata} and
5476 not bool {LWR@tableparcell} and
5477 test {\ifnumcomp{\value{LWR@lateximagedepth}}{=}{0}}
5478 }%
5479 {%
5480 \LWR@getmynexttoken%
5481 }{%
5482 \LWR@origpar%
5483 }%
5484 }

5485 \end{warpHTML}
```

## 54 Paragraph start/stop handling

These commands allow/disallow the generation of HTML paragraph tags.

Section 53 has the commands which actually generate the tags.

The everyhook package is used to generate the opening paragraph tags. The closing tags are generated by `\par`.

**for HTML output:** `5486 \begin{warpHTML}`

`\LWR@startpars` Begin handling HTML paragraphs. This allows an HTML paragraph to start, but one has not yet begun.

```
5487 \newcommand*{\LWR@startpars}%
5488 {%
5489 % \LWR@traceinfo{\LWR@startpars}%
```

Ignore if inside a span:

```
5490 \ifnumcomp{\value{\LWR@spandepth}}{>}{0}%
5491 {%}
5492 {%
```

See if currently handling HTML paragraphs:

```
5493 \ifbool{\LWR@doingstartpars}%
```

If already in paragraph mode, do nothing.

```
5494 {}%
```

If not currently in paragraph mode:

```
5495 {%
```

At the start of each paragraph, generate an opening tag:

```
5496 \PushPreHook{par}{\LWR@openparagraph}%
```

At the end of each paragraph, generate closing tag then do regular /par actions:

```
5497 \let\par\LWR@closeparagraph
5498
5499 }% an intentionally blank line
```

Are now handling paragraphs, but have not yet actually started one:

```
5500 \global\setbool{\LWR@doingstartpars}{true}%
```

No `<par>` tag yet to undo:

```
5501 \global\boolfalse{\LWR@doingapar}%
5502 }% nestspan
5503 % \LWR@traceinfo{\LWR@startpars: done}%
5504 }
```

`\LWR@stoppars` Stop handling HTML paragraphs. Any currently open HTML paragraph is closed, and no more will be opened.

```
5505 \newcommand*{\LWR@stoppars}%
5506 {%
```

Ignore if inside a span:

```
5507 \ifnumcomp{\value{LWR@spandepth}}{>}{0}%
5508 {}%
5509 {%
```

See if currently handling HTML paragraphs:

```
5510 \ifbool{LWR@doingapar}%
```

if currently in an HTML paragraph:

```
5511 {%
```

Print a closing tag:

```
5512 \leavevmode\LWR@orignewline%
5513 \LWR@htmltagc{/LWR@tagregularparagraph}%
5514 \LWR@orignewline%
```

No longer have an open HTML paragraph:

```
5515 \global\boolfalse{LWR@doingapar}%
```

Disable the special minipage & \hspace interaction until a new minipage is found:

```
5516 \global\boolfalse{LWR@minipagethispar}
5517
5518 }% an intentionally blank line
```

If was not in an HTML paragraph:

```
5519 {}%
```

See if currently allowing HTML paragraphs:

```
5520 \ifbool{LWR@doingstartpars}%
```

If so: clear the par hook to no longer catch paragraphs:

```
5521 {\ClearPreHook{par}}%
```

Else: Do nothing:

```
5522 {}%
```

No longer in paragraph mode:

```
5523 \global\setbool{LWR@doingstartpars}{false}%
```

No <p> tag to undo:

```

5524 \global\boolfalse{LWR@doingapar}%
5525 }% nestspan
5526 }

5527 \end{warpHTML}

```

## 55 Indentfirst

**Pkg indentfirst** `indentfirst` redefines `\@afterindentfalse` to be `\@afterindenttrue`. This is reversed `\AtBeginDocument` here.

**for HTML output:** 5528 `\begin{warpHTML}`

```

5529 \AtBeginDocument{
5530 \def\@afterindentfalse{\let\if@afterindent\iffalse}
5531 \@afterindentfalse
5532 }
5533 \let\LWR@afterindent@syntaxhighlight\fi% syntax highlighting

5534 \end{warpHTML}

```

## 56 Page headers and footers

**for HTML & PRINT:** 5535 `\begin{warpall}`

In the following, `catcode` is manually changed back and forth without groups, since new macros are being defined which must not be contained within the groups.

```

5536 \newcommand{\LWR@firstpagetop}{} % for the home page alone
5537 \newcommand{\LWR@pagetop}{} % for all other pages
5538 \newcommand{\LWR@pagebottom}{}

```

`\HTMLFirstPageTop` `{\langle text and logos \rangle}`

```

5539 \newcommand{\HTMLFirstPageTop}[1]{%
5540 \renewcommand{\LWR@firstpagetop}{#1}%
5541 }

```

`\HTMLPageTop` `{\langle text and logos \rangle}`

```

5542 \newcommand{\HTMLPageTop}[1]{%
5543 \renewcommand{\LWR@pagetop}{#1}%
5544 }

```

`\HTMLPageBottom` `{\langle text and logos \rangle}`

```

5545 \newcommand{\HTMLPageBottom}[1]{%
5546 \renewcommand{\LWR@pagebottom}{#1}%
5547 }

5548 \end{warpall}

```

## 57 CSS

**for HTML output:** 5549 \begin{warpHTML}

`\LWR@currentcss` The css filename to use. This may be changed mid-document using `\CSSFilename`, allowing different css files to be used for different sections of the document.

```
5550 \newcommand*{\LWR@currentcss}{lwarp.css}
```

`\CSSFilename` *{<new-css-filename.css>}* Assigns the css file to be used by the following HTML pages.

```

5551 \newcommand*{\CSSFilename}[1]{%
5552 \renewcommand*{\LWR@currentcss}{#1}%
5553 \@onelevel@sanitize\LWR@currentcss%
5554 }
5555
5556 \end{warpHTML}

```

**for PRINT output:** 5557 \begin{warpprint}  
5558 \newcommand\*{\CSSFilename}[1]{}  
5559 \end{warpprint}

## 58 MathJax script

**for HTML output:** 5560 \begin{warpHTML}  
Default: `lwarp_mathjax.txt`

`\LWR@mathjaxfilename` The MathJax script filename to use. This file is copied into the head of each HTML page. This may be changed mid-document using `\MathJaxFilename`, allowing the use of a custom MathJax script, such as for a local repository, or different MathJax script files to be used for different sections of the document.

```
5561 \newcommand*{\LWR@mathjaxfilename}{lwarp_mathjax.txt}
```

`\MathJaxFilename` *{<filename>}* Assigns the MathJax script file to be used by the following HTML pages.

```
5562 \newcommand*{\MathJaxFilename}[1]{%
```

```

5563 \renewcommand*\LWR@mathjaxfilename}{#1}%
5564 \@onelevel@sanitize\LWR@mathjaxfilename%
5565 }
5566
5567 \end{warpHTML}

```

**for PRINT output:**

```

5568 \begin{warpprint}
5569 \newcommand*\MathJaxFilename}[1]{}
5570 \end{warpprint}

```

## 59 Title, HTML meta author, HTML meta description

**for HTML output:**

```

5571 \begin{warpHTML}

```

`\title`  $\langle title \rangle$  Modified to remember `\thetitle`, which is used to set the HTML page titles.

```

5572 \let\LWR@origtitle\title
5573
5574 \renewcommand*\title}[1]{%
5575 \LWR@origtitle{#1}%
5576 \begingroup%
5577 \renewcommand{\thanks}[1]{}%
5578 \protected@xdef\thetitle{#1}%
5579 \endgroup%
5580 }

```

```

5581 \end{warpHTML}

```

**for HTML & PRINT:**

```

5582 \begin{warpall}

```

`\HTMLTitle`  $\langle Titlename \rangle$  The Title to place into an HTML meta tag. The default is to use the document `\title`'s setting.

```

5583 \providecommand{\thetitle}{}
5584
5585 \newcommand{\theHTMLTitle}{\thetitle}
5586
5587 \newcommand{\HTMLTitle}[1]{\renewcommand{\theHTMLTitle}{#1}}

```


`\HTMLAuthor`  $\langle authorname \rangle$  The author to place into an HTML meta tag. If none given, the default is `\theauthor`, which is empty unless the titling package is used.

```

5588 \providecommand{\theauthor}{}
5589
5590 \newcommand{\theHTMLAuthor}{\theauthor}
5591
5592 \newcommand{\HTMLAuthor}[1]{\renewcommand{\theHTMLAuthor}{#1}}

```

This is placed inside an HTML meta tag at the start of each file. This may be changed mid-document using `\HTMLDescription`, allowing different HTML descriptions to be used for different sections of the document.

 **HTML author** Do not use double quotes, and do not exceed 150 characters.

`\HTMLDescription` `{\langle New HTML meta description.\rangle}` Assigns the HTML file's description meta tag.

```
5593 \newcommand{\LWR@currentHTMLDescription}{}
5594
5595 \newcommand{\HTMLDescription}[1]{%
5596 \renewcommand{\LWR@currentHTMLDescription}{#1}
5597 }
5598
5599 \end{warpall}
```

## 60 Footnotes

lwarp uses native L<sup>A</sup>T<sub>E</sub>X footnote code, although with its own `\box` to avoid the L<sup>A</sup>T<sub>E</sub>X output routine. The usual functions mostly work as-is.

**footnote numbering** To have footnote numbers reset each time footnotes are printed:


```
\setcounter{footnoteReset}{1}
```

For bigfoot, manyfoot, or perpage:

```
\MakePerPage{footnoteX}
— or —
\MakeSortedPerPage{footnoteX}
```

The footnotes are reset when they are printed, according to section level as set by `FootnoteDepth`, which is not necessarily by HTML page. This is recommended for `\alph`, `\Alph`, or `\fnsymbol` footnotes, due to the limited number of symbols which are available.

**footmisc** The `footmisc` stable option is emulated by lwarp.

 **sectioning commands** When using footnotes in sectioning commands, to generate consistent results between print and HTML, use the `footmisc` package with the `stable` option, provide a short TOC entry, and `\protect` the `\footnote`:

```
\usepackage[stable]{footmisc}
...
\subsection[Subsection Name]
{Subsection Name\protect\footnote{A footnote.}}
```

**memoir with footmisc** If using memoir class, with which lwarp preloads `footmisc`, the `stable` option must be declared before lwarp is loaded:

 **memoir**

```

\PassOptionsToPackage{stable}{footmisc}
\usepackage{lwarp}
. . .

```

Do not use a starred sectioning command. As an alternative, it may be possible to adjust `\secnumdepth` instead.

Several kinds of footnotes are used: in a regular page, in a minipage, or as thanks in the titlepage. Each of these is handle differently.

## 60.1 Regular page footnotes

In HTML documents, footnotes are placed at the bottom of the web page or the section, depending on `FootnoteDepth`, using the L<sup>A</sup>T<sub>E</sub>X box `\LWR@footnotebox`. Using this instead of the original `\footins` box avoids having footnotes be printed by the output routine, since footnotes should be printed per HTML page instead of per PDF page.

See section 60.4 for the implementation.

## 60.2 Minipage footnotes

See section 60.5 for how minipage footnotes are gathered. See section 90.3 for how minipage footnotes are placed into the document.

## 60.3 Titlepage thanks

See section 67.7 for titlepage footnotes.

## 60.4 Regular page footnote implementation

**for HTML & PRINT:** 5600 `\begin{warpall}`

Ctrl `FootnoteDepth` Determines how deeply to place footnotes in the HTML files, similar to `tocdepth`. The default of 3 places footnotes before each `\subsubsection` or higher. See table 9 for a table of L<sup>A</sup>T<sub>E</sub>X section headings.

```

5601 \newcounter{FootnoteDepth}
5602 \setcounter{FootnoteDepth}{3}

```

Ctrl `footnoteReset` If non-zero, the footnote counter is reset to this value each time the footnotes are printed, as controlled by `FootnoteDepth`. For the `manyfoot` and `bigfoot` packages, additional counters such as `footnote<suffix>Reset` will be defined as well. These counters may be set non-zero by the user, and are also set if the `perpage`'s `\MakePerPage` or `\MakeSortedPerPage` macros are used for the `footnote` or `footnote<suffix>` counters.



(The name is not capitalized because it is made from the counter's name with "Reset" appended.)

```
5603 \newcounter{footnoteReset}
5604 \setcounter{footnoteReset}{0}

5605 \end{warpall}
```

**for HTML output:** 5606 \begin{warpHTML}

`\LWR@footnotebox` Patch L<sup>A</sup>T<sub>E</sub>X footnotes to use a new `\box` instead of an insert for `lwarp` footnotes. This avoids having the original `\footins` appear at the bottom of a `lateximage`, which is on its own new page.

```
5607 \newbox\LWR@footnotebox
```

Much of the following has unneeded print-mode formatting removed.

`\@makefn`text {*<text>*}

```
5608 \long\def\@makefn#1{\@thefnmark~#1}
```

`\@makefn`mark

```
5609 \def\@makefnmark{%
5610 \@thefnmark%
5611 }
```

Footnotes may be in regular text, in which case paragraphs are tagged, or in a table data cell or `lateximage`, in which case paragraph tags must be added manually.

In a `lateximage` during HTML output, the `lateximage` is placed inside a print-mode `minipage`, but the footnotes are broken out by:

```
\def\@mpfn{footnote}
\def\@thempfn{\thefootnote}
\let\@footnotetext\LWR@footnotetext
```

`\LWR@@footnotetext` {*<text>*} {*<footnote box name>*}

Factored to allow multiple footnote boxes for `manyfoot`.

```
5612 \long\def\LWR@@footnotetext#1#2{%
5613 \LWR@traceinfo{LWR@footnotetext}%
5614 \global\setbox\csname #2\endcsname=\vbox{%
```

Add to any current footnotes:

```
5615 \unvbox\csname #2\endcsname%
```

Remember the footnote number for `\ref`:

```
5616 \protected@edef\@currentlabel{%
5617 \csname p@footnote\endcsname\@thefnmark%
5618 }% @currentlabel
```

Open a group:

```
5619 \color@begingroup%
```

Use HTML superscripts in the footnote even inside a `lateximage`:

```
5620 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%
```

Use paragraph tags if in a tabular data cell or a `lateximage`:

```
5621 \ifthenelse{%
5622 \boolean{LWR@doingstartpars} \AND%
5623 \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
5624 }%
5625 {}%
5626 {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline}%
```

Append the footnote to the list:

```
5627 \@makefntext{#1}%
```

Closing paragraph tag:

```
5628 \ifthenelse{%
5629 \boolean{LWR@doingstartpars} \AND%
5630 \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
5631 }%
5632 {\par}%
5633 {}%
5634 \LWR@htmltagc{/\LWR@tagregularparagraph}%
5635 \LWR@orignewline%
5636 }%
```

Close the group:

```
5637 \color@endgroup%
5638 }% vbox
```

Paragraph handling:

```
5639 \LWR@ensuredoingapar%
5640 }%
```

```
\LWR@footnotetext {<text>}
```

```
5641 \long\def\LWR@footnotetext#1{\LWR@@footnotetext{#1}{\LWR@footnotebox}}
```

```
\@footnotetext {<text>}
```

```
5642 \let\ltxMacro\@footnotetext\LWR@footnotetext
```

## 60.5 Minipage footnote implementation

Patch L<sup>A</sup>T<sub>E</sub>X minipage footnotes to use a new `\box` instead of an insert for `lwarp` minipage footnotes. This avoids having the original `\@mpfootins` appear at the bottom of a `lateximage`, which is on its own new page.

```
5643 \newbox\LWR@mpfootnotes
```

```
\@mpfootnotetext {<text>}
```

```
5644 \long\def\@mpfootnotetext#1{%
5645 \LWR@traceinfo{\@mpfootnotetext}%
5646 \global\setbox\LWR@mpfootnotes\vbox{%
5647 \unvbox\LWR@mpfootnotes%
5648 \reset@font\footnotesize%
5649 \hsize\columnwidth%
5650 \@parboxrestore%
5651 \protected@edef\@currentlabel%
5652 {\csname p@mpfootnote\endcsname\@thefnmark}%
5653 \color@begingroup%
```

Use paragraph tags if in a tabular data cell or a `lateximage`:

```
5654 \ifthenelse{%
5655 \boolean{LWR@doingstartpars} \AND%
5656 \cinttest{\value{LWR@lateximagedepth}}{=}{0}%
5657 }%
5658 {}%
5659 {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline}%

5660 \@makefnstext{%
5661 \ignorespaces#1%
5662 }%
```

Don't add the closing paragraph tag if are inside a `lateximage`:

```
5663 \ifthenelse{\cinttest{\value{LWR@lateximagedepth}}{>}{0}}%
5664 {}%
5665 {%
5666 \LWR@htmltagc{/\LWR@tagregularparagraph}%
5667 \LWR@orignewline%
5668 }%
5669 \color@endgroup%
5670 }% \vbox
```

Paragraph handling:

```

5671 \LWR@ensuredoingapar%
5672 \LWR@traceinfo{@mpfootnotetext: done}%
5673 }

```

`\thempfootnote` Redefined to remove the `\itshape`, which caused an obscure compiling error in some situations.

```

5674 \AtBeginDocument{
5675 \def\thempfootnote{\@alph@c@mpfootnote}
5676 }

```

## 60.6 Printing pending footnotes

`\LWR@printpendingfootnotes`  $\langle footnote\ counter\ name \rangle$

```

5677 \newcommand*{\LWR@printpendingfootnotes}[1]{%
5678 \expandafter\ifvoid\csname LWR@#1box\endcsname\else
5679 \LWR@forcenewpage
5680 \begin{BlockClass}{footnotes}
5681 \LWR@origmedskip
5682 \unvbox\csuse{LWR@#1box}
5683 \setbox\csuse{LWR@#1box}=\vbox{}
5684 \end{BlockClass}
5685 \ifltxcounter{#1Reset}{%
5686 \ifnumgreater{\value{#1Reset}}{0}{%
5687 \setcounter{#1}{\value{#1Reset}}%
5688 \addtocounter{#1}{-1}%
5689 }{}%
5690 }{}%
5691 \fi
5692 }

```

`\LWR@printpendingfootnotes` Enclose the footnotes in a class, print, then clear. For `manynotes`, new footnotes may be added via `\appto`.

```

5693 \newcommand*{\LWR@printpendingfootnotes}{%
5694 \LWR@printpendingfootnotes{footnote}%
5695 }

```

`\LWR@maybeprintpendingfootnotes`  $\langle depth \rangle$  Used to print footnotes before sections only if formatting for an EPUB or word processor:

```

5696 \newcommand*{\LWR@maybeprintpendingfootnotes}[1]{%
5697 \ifboolexpr{
5698 not test{\ifnumcomp{#1}{>}{\value{FootnoteDepth}}} or
5699 bool{FormatEPUB} or
5700 bool{FormatWP}
5701 }%
5702 {\LWR@printpendingfootnotes}%
5703 {}%
5704 }

```

`\LWR@printpendingmpfootnotes` Enclose the minipage footnotes in a class, print, then clear.

```

5705 \newcommand*\LWR@printpendingmpfootnotes}{%
5706 \ifvoid\LWR@mpfootnotes\else
5707 \LWR@forcenewpage
5708 \begin{BlockClass}{footnotes}
5709 \LWR@print@vspace*\baselineskip}
5710 \unvbox\LWR@mpfootnotes
5711 \setbox\LWR@mpfootnotes=\vbox{}
5712 \end{BlockClass}
5713 \fi
5714 }

5715 \end{warpHTML}

```

## 61 Marginpars

`\marginpar` [*left*] [*right*] `\marginpar` may contain paragraphs, but in order to remain inline with the surrounding text `lwarp` nullifies block-related macros inside the `\marginpar`. Paragraph breaks are converted to `<br />` tags.

`\marginparBlock` [*left*] [*right*] To include block-related macros, use `\marginparBlock`, which takes the same arguments but creates a `<div>` instead of a `<span>`. A line break will occur in the text where the `\marginBlock` occurs.

**for HTML output:** 5716 `\begin{warpHTML}`

`\marginpar` [*left*] [*right*]

```

5717 \renewcommand{\marginpar}[2][]{%
5718 \ifbool{FormatWP}%
5719 {%
5720 \begin{LWR@BlockClassWP}{width:2in; float:right; margin:10pt}{\marginblock}
5721 #2
5722 \end{LWR@BlockClassWP}
5723 }%
5724 {%
5725 \LWR@htmlspanclass{marginpar}{#2}%
5726 }%
5727 }

```

`\marginparBlock` [*left*] [*right*]

For use when the marginpar will be more than one paragraph, and/or contains more than simple text.

**HTML version.**

```

5728 \newcommand{\marginparBlock}[2][]{%
5729 \ifbool{FormatWP}%

```

```

5730 {%
5731 \begin{LWR@BlockClassWP}{width:2in; float:right; margin:10pt}{\marginblock}
5732 #2
5733 \end{LWR@BlockClassWP}
5734 }%
5735 {%
5736 \begin{BlockClass}[width:2in; float:right; margin:10pt]{marginparblock}
5737 #2
5738 \end{BlockClass}
5739 }%
5740 }

```

`\reversemarginpar`

```
5741 \renewcommand*\reversemarginpar{}
```

`\normalmarginpar`

```
5742 \renewcommand*\normalmarginpar{}
```

```
5743 \end{warpHTML}
```

**for PRINT output:** 5744 `\begin{warpprint}`

`\marginparBlock` [*left*] [*right*]

For use when the marginpar will be more than one paragraph, and/or contains more than simple text.

Print version.

```
5745 \LetLtxMacro\marginparBlock\marginpar
```

```
5746 \end{warpprint}
```

## 62 Splitting HTML files

- Files are split according to `FileDepth` and `CombineHigherDepths`.
- Filenames are sanitized by `\LWR@filenameno blanks`.
- `\LWR@newhtmlfile` finishes an HTML page, adds a comment to tell where and how to split the file, then starts a new HTML page.

**for HTML & PRINT:** 5747 `\begin{warppall}`

`\ctr FileDepth` [*section depth*] determines how deeply to break into new HTML files, similar to `\tocdepth`. The default of `-5` produces one large HTML file.

```
5748 \newcounter{FileDepth}
5749 \setcounter{FileDepth}{-5}
```

Bool CombineHigherDepths    Combile higher-level sections together into one file?

```
5750 \newbool{CombineHigherDepths}
5751 \booltrue{CombineHigherDepths}
```

\FilenameLimit    Maximum length of the generated filenames.

```
5752 \newcommand*{\FilenameLimit}{80}

5753 \end{warpall}
```

**for HTML output:** 5754 \begin{warpHTML}

\LWR@thisfilename    The currently-active filename or number. At first, this is the homepage.

```
5755 \AtBeginDocument{
5756 \ifbool{FileSectionNames}%
5757 {\newcommand*{\LWR@thisfilename}{\HomeHTMLFilename}}
5758 {\newcommand*{\LWR@thisfilename}{0}}
5759 }
```

\LWR@thisnewfilename    The filename being sanitized.

```
5760 \newcommand*{\LWR@thisnewfilename}{}
```

\LWR@simplifiname    \* *{(expression)}*    Simplify \LWR@thisnewfilename.

If starred, detokenizes the input expression. If found, changes the expression to a single detokenized dash.

```
5761 \NewDocumentCommand{\LWR@simplifiname}{s m}{%
5762 \IfBooleanTF{#1}{%
5763 \StrSubstitute{\LWR@thisnewfilename}%
5764 {\detokenize{#2}}%
5765 {\detokenize{-}}[\LWR@thisnewfilename]%
5766 }{%
5767 \StrSubstitute{\LWR@thisnewfilename}%
5768 {#2}%
5769 {\detokenize{-}}[\LWR@thisnewfilename]%
5770 }
5771 }
```

\LWR@simplifycustom    User-defined filename simplifications. Redefine with \newcommand.

```
5772 \newcommand*{\LWR@simplifycustom}{}
```

`\FilenameSimplify` \* `{\phrase}` Assign a user-defined filename simplification. Appends to `\LWR@simplifycustom`.

```

5773 \NewDocumentCommand{\FilenameSimplify}{s m}{%
5774 \IfBooleanTF{#1}{%
5775 \appto{\LWR@simplifycustom}{%
5776 \LWR@simplifyname*{#2}%
5777 }%
5778 }{%
5779 \appto{\LWR@simplifycustom}{%
5780 \LWR@simplifyname*{#2}%
5781 }%
5782 }%
5783 }

```

`\LWR@filenamenoblanks` `{\filename}`

Convert blanks into dashes, removes short words, store result in `\LWR@thisfilename`.

Also see `\LWR@nullfonts` for nullified macros.

```

5784 \newcommand*\LWR@filenamenoblanks[1]{%
5785 \begingroup

```

Locally temporarily disable direct-formatting commands, not used in filenames:

```

5786 \LWR@nullfonts%
5787 \renewcommand*\LWR@htmltagc[1]{%

```

```

5788 \edef\LWR@thisnewfilename{#1}%

```

Replaces common macros with hyphens. (& is done by `\LWR@nullfonts`.)

```

5789 \RenewDocumentCommand{\LWR@subsingledollar}{s m m m}{%
5790 \LWR@simplifyname{_}
5791 \LWR@simplifyname{\#}
5792 \LWR@simplifyname{\textbackslash}
5793 \LWR@simplifyname{\protect}
5794 \LWR@simplifyname{\ }
5795 \LWR@simplifyname{\textless}
5796 \LWR@simplifyname{\textgreater}

```

```

5797 \edef\LWR@thisnewfilename{\detokenize\expandafter{\LWR@thisnewfilename}}%

```

```

5798 \LWR@traceinfo{\LWR@filenamenoblanks edef: !\LWR@thisnewfilename!}%
5799 \fullexpandarg%

```

Convert spaces into hyphens:

```

5800 \LWR@simplifyname*{ }

```



### Convert punctutation into hypkens:

```

5801 \LWR@simplifyname*{!}
5802 \LWR@simplifyname*{,}
5803 \LWR@simplifyname*{'}
5804 \LWR@simplifyname*{+}
5805 \LWR@simplifyname*{,}
5806 \LWR@simplifyname*{/}
5807 \LWR@simplifyname*{:}
5808 \LWR@simplifyname*{;}
5809 \LWR@simplifyname*{=}
5810 \LWR@simplifyname*{?}
5811 \LWR@simplifyname*{@}
5812 \LWR@simplifyname*{^}
5813 \LWR@simplifyname*{&}
5814 \LWR@simplifyname*{"}
5815 \LWR@simplifyname*{<}
5816 \LWR@simplifyname*{>}

5817 \LWR@simplifyname{\LWRbackslash}

```

### Braces are removed entirely to avoid extra dashes in the result.

```

5818 \StrSubstitute{\LWR@thisnewfilename}%
5819 {\LWRleftbrace}{\LWR@thisnewfilename}%
5820 \StrSubstitute{\LWR@thisnewfilename}%
5821 {\LWRrightbrace}{\LWR@thisnewfilename}%

5822 \LWR@simplifyname{\LWRpercent}
5823 \LWR@simplifyname{\LWRdollar}

5824 \LWR@simplifyname*{[]}
5825 \LWR@simplifyname*{^}
5826 \LWR@simplifyname*{~}
5827 \LWR@simplifyname*{[]}
5828 \LWR@simplifyname*{[]}]
5829 \LWR@simplifyname*{'}

```

### Convert short words:

```

5830 \LWR@simplifyname*{-s-}
5831 \LWR@simplifyname*{-S-}
5832 \LWR@simplifyname*{-a-}
5833 \LWR@simplifyname*{-A-}
5834 \LWR@simplifyname*{-an-}
5835 \LWR@simplifyname*{-AN-}
5836 \LWR@simplifyname*{-to-}
5837 \LWR@simplifyname*{-TO-}
5838 \LWR@simplifyname*{-by-}
5839 \LWR@simplifyname*{-BY-}
5840 \LWR@simplifyname*{-of-}
5841 \LWR@simplifyname*{-OF-}
5842 \LWR@simplifyname*{-and-}

```

```

5843 \LWR@simplifiname*{-AND-}
5844 \LWR@simplifiname*{-for-}
5845 \LWR@simplifiname*{-FOR-}
5846 \LWR@simplifiname*{-the-}
5847 \LWR@simplifiname*{-THE-}

```

Convert custom words:

```
5848 \LWR@simplifycustom%
```

Convert multiple hyphens:

```

5849 \LWR@simplifiname*{-----}
5850 \LWR@simplifiname*{----}
5851 \LWR@simplifiname*{---}
5852 \LWR@simplifiname*{--}

```

If pdfL<sup>A</sup>T<sub>E</sub>X and not utf8 encoding, don't try to convert emdash, endash:

```

5853 \ifPDFTeX% pdflatex or dvi latex
5854 \ifdefstring{\inputencodingname}{utf8}{%
5855 \LWR@simplifiname*{---}
5856 % emdash
5857 \LWR@simplifiname*{--}
5858 % endash
5859 }{)%
5860 \else% not PDFTeX
5861 \LWR@simplifiname*{---}
5862 \LWR@simplifiname*{--}
5863 \fi%

```

If starts with a dash, remove the leading dash:

```

5864 \IfBeginWith{\LWR@thisnewfilename}{\detokenize{-}}{%
5865 \StrGobbleLeft{\LWR@thisnewfilename}{1}[\LWR@thisnewfilename]%
5866 }{)%

```

If ends with a dash, remove the trailing dash:

```

5867 \IfEndWith{\LWR@thisnewfilename}{\detokenize{-}}{%
5868 \StrGobbleRight{\LWR@thisnewfilename}{1}[\LWR@thisnewfilename]%
5869 }{)%

```

Limits the length of the filename:

```
5870 \StrLeft{\LWR@thisnewfilename}{\FilenameLimit}[\LWR@thisnewfilename]%
```

Return the global result:

```

5871 \global\let\LWR@thisfilename\LWR@thisnewfilename%
5872 \endgroup%
5873 \LWR@traceinfo{\LWR@filenamenooblanks: result is \LWR@thisfilename}%
5874 }

```

Ctrl Remembers which autopage label was most recently generated. Used to avoid duplicates.  
LWR@previousautopageLabel

```
5875 \newcounter{LWR@previousautopageLabel}
5876 \setcounter{LWR@previousautopageLabel}{-1}
```

File \*\_html.aux A new entry in the \*\_html.aux file is used to help cross-references:

```
\newlabel{autopage-<nnn>}{<x>}{<y>}}
```

LWR@newautopageLabel {<pagenumber counter>}

```
5877 \newcommand*{LWR@newautopageLabel}[1]{%
5878 \ifnumequal{\value{LWR@previousautopageLabel}}{\value{page}}%
5879 }% no action if this autopage label has already been defined
5880 {%
5881 \label{autopage-\arabic{#1}}%
5882 \setcounter{LWR@previousautopageLabel}{\value{page}}
5883 }%
5884 }
```

## 62.1 Customizing MATHJAX

LWR@customizedMathJax Additional MATHJAX definitions to be added to the start of each HTML page.

```
5885 \newcommand*{LWR@customizedMathJax}{}
```

LWR@customizeMathJax MATHJAX does not have preexisting support every possible math function. Additional MATHJAX function definitions may be defined. These will be declared at the start of each HTML page, and thus will have a global effect.

Examples:

```
\CustomizeMathJax{
 \newcommand{\expval}[1]{\langle#1\rangle}
 \newcommand{\abs}[1]{\lvert#1\rvert}
}
\CustomizeMathJax{\newcommand{\arsinh}{\text{arsinh}}}
\CustomizeMathJax{\newcommand{\arcosh}{\text{arcosh}}}
\CustomizeMathJax{\newcommand{\NN}{\mathbb{N}}}
```

```
5886 \newcommand*{LWR@customizeMathJax}[1]{%
5887 \appto{LWR@customizedMathJax}{%
5888 \(#1)\par
5889 }%
5890 }
```

LWR@customizeMathJax

```
5891 \newcommand{LWR@customizeMathJax}{%
5892 \ifbool{mathjax}{
```

```

5893 \LWR@stoppars
5894 \LWR@htmlcomment{Nullify \textbackslash{}ensuremath, footnotes for MathJax:}
5895
5896 \(\newcommand\ensuremath[1]{##1}\)
5897
5898 \(\newcommand\footnote[2][\text{(Footnote ##1)}]\)
5899
5900 \(\newcommand\footnotemark[1][\text{(Footnote ##1)}]\)
5901
5902 \LWR@htmlcomment{Additional customizations for MathJax:}
5903
5904 \LWR@customizedMathJax
5905
5906 \LWR@startpars
5907 }{}
5908 }

5909 \end{warpHTML}

```

**for PRINT output:** 5910 \begin{warpprint}

\CustomizeMathJax The print-mode version:

```
5911 \newcommand*\CustomizeMathJax[1]{}

```

\FilenameSimplify \* {*expression*}

```
5912 \NewDocumentCommand{\FilenameSimplify}{s m}{}

```

```
5913 \end{warpprint}

```

**for HTML output:** 5914 \begin{warpHTML}

\LWR@newhtmlfile {*section name*}

Finishes the current HTML page with footnotes, footer, navigation, then starts a new HTML page with an HTML comment telling where to split the page and what the new filename and CSS are, then adds navigation, side TOC, header, and starts the text body.

```
5915 \newcommand*\LWR@newhtmlfile[1]{
5916 \LWR@traceinfo{\LWR@newhtmlfile}

```

At the bottom of the ending file:

```

5917 \LWR@htmlclassend{section}{tbody}
5918 \LWR@htmlclassend{div}{bodycontainer}
5919 \LWR@htmlclassend{div}{bodyandsidetoc}
5920
5921 \LWR@printpendingfootnotes
5922

```

No footer between files if EPUB:

```
5923 \ifbool{FormatEPUB}
5924 {}
5925 {
5926 \LWR@htmlElement{footer}
5927
5928 \LWR@pagebottom
5929
5930 \LWR@htmlElementend{footer}
5931 }
```

No bottom navigation if are finishing the home page or formatting for EPUB or a word-processor.

```
5932 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
5933 {}
5934 {\ifnumcomp{\value{LWR@htmlfilenumber}}{>}{0}{\LWR@botnavigation}{}}
```

End of this HTML file:

```
5935 \LWR@stoppars
5936 \LWR@htmltag{/body}\LWR@orignewline
5937 \LWR@htmltag{/html}\LWR@orignewline
5938 \LWR@traceinfo{LWR@newhtmlfile: about to LWR@orignewpage}
5939 \LWR@orignewpage
5940
5941 \addtocounter{LWR@htmlfilenumber}{1}%
```

If using a filename based on section name, create a version without blanks. The filename without blanks will be placed into \LWR@thisfilename. Duplicates will be detected using MD5 hashes.

If not using a filename, the file number will be used instead.

```
5942 \ifbool{FileSectionNames}%
5943 {%
```

Convert the section name to a filename with blanks and common words removed. The resulting filename is in \LWR@thisfilename.

```
5944 \LWR@filenamenoBlanks{#1}%
```

Create a macro name from the MD5 hash of the file name, to detect duplicates:

```
5945 \edef\LWR@hashedname{\LWR@mdfive{\LWR@thisfilename}}%
```

If the macro name is not yet defined, this filename is unique.

```
5946 \ifcsundef{LWR@filename\LWR@hashedname}{%
```

If the filename is unique, create a macro using the hashed name, to be used to test for additional duplicates in the future.

```
5947 \csdef{LWR@filename\LWR@hashedname}{}%
5948 }{%
```

If the filename is not unique, create an error.

```
5949 \PackageError{lwarp}
5950 {%
5951 Section name\MessageBreak
5952 ‘‘#1’’,\MessageBreak
5953 at the line number listed below,\MessageBreak
5954 generates the filename\MessageBreak
5955 ‘‘\LWR@thisfilename’’,\MessageBreak
5956 which appears to be a duplicate.\MessageBreak
5957 There is a previous section with an\MessageBreak
5958 identical or similar name%
5959 }
5960 {%
5961 Lwarp sanitizes most symbols and a few common short words
5962 when generating file names, and this may cause a conflict.
5963 }
5964 }
5965 }
```

If using file numbers instead of names, the name is set to the next file number.

```
5966 {\renewcommand*{\LWR@thisfilename}{\arabic{LWR@htmlfilenumber}}}
```

Include an HTML comment to instruct lwarpmk where to split the files apart. Uses pipe-separated fields for `split_html.gawk`. Uses monospaced font with ligatures disabled for everything except the title.

```
5967 \LWR@traceinfo{LWR@newhtmlfile: about to print start file}%
```

`\LWR@nullfonts` to allow math in a section name.

```
5968 \begingroup%
5969 \LWR@nullfonts%
5970 \LWR@htmlblockcomment{%
5971 |Start file|%
5972 \LWR@htmlsectionfilename{\LWR@thisfilename}|%
5973 }
5974 \endgroup%
```

At the top of the starting file:

```
5975 \LWR@stoppars
5976
```

Start a new file with the given section name:

```
5977 \LWR@filestart[#1]
5978
```

Track the page numbers:

```
5979 \setcounter{LWR@latestautopage}{\value{page}}%
5980 \LWR@newautopagelabel{LWR@latestautopage}%
```

No navigation between files if formatting for an EPUB or word processor:

```
5981 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
5982 {}
5983 {\LWR@topnavigation}
5984
```

No header if between files if formatting for an EPUB or word processor:

```
5985 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
5986 {}
5987 {
5988 \LWR@htmlElement{header}
5989
5990 \LWR@pagetop
5991
5992 \LWR@htmlElementend{header}
5993 }
5994
```

The container for the sidetoc and text body:

```
5995 \LWR@htmlElementclass{div}{bodyandsidetoc}
```

No sideroc if formatting for an EPUB or word processor:

```
5996 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
5997 {}
5998 {\LWR@sidetoc}
5999
```

Start of the <textbody>:

```
6000 \LWR@htmlElementclass{div}{bodycontainer}
6001 \LWR@htmlElementclass{section}{textbody}
6002
```

Print title only if there is one. Skip if formatting for an EPUB or word processor:

```
6003 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}%
6004 {}%
6005 {%
6006 \ifcvoid{thetitle}{}{}%
6007 \LWR@printthetitle%
6008 }%
6009 }%
```

Keep paragraph tags disabled for now:

```
6010 \LWR@stoppars
6011
```

If using `MATHJAX`, disable `\ensuremath` by printing a nullified definition at the start of each file, and add further customizations:

```
6012 \LWR@customizeMathJax

6013 \LWR@traceinfo{LWR@newhtmlfile: done}
6014 }

6015 \end{warpHTML}
```

## 63 Sectioning

Sectioning and cross-references have been emulated from scratch, rather than try to patch several layers of existing  $\text{\LaTeX}$  code and packages. Formatting is handled by `css`, so the emulated code has much less work to do than the print versions.

**Unicode** Section names and the resulting filenames with accented characters are partially supported, depending on the ability of `pdf $\text{\LaTeX}$`  to generate characters and `pdf $\text{\LaTeX}$`  to read them. If extra symbols appear in the text, it may be that `pdf $\text{\LaTeX}$`  is actually producing a symbol over or under a character, resulting in `pdf $\text{\LaTeX}$`  picking up the accent symbol separately.

 accents in filenames

$\text{\XeLaTeX}$  and  $\text{\LuaLaTeX}$  directly support accented section and file names.

**for HTML output:** `6016 \begin{warpHTML}`

### 63.1 User-level starred section commands

`\ForceHTMLPage` For HTML output, forces the next section to be on its own HTML page, if `FileDepth` allows, even if starred. For use with `\printindex` and others which generate a starred section which should be on its own HTML page. Also see `\ForceHTMLTOC`.

For print output, no effect.

```
6017 \newbool{LWR@forcinghtmlpage}
6018 \boolfalse{LWR@forcinghtmlpage}
6019
6020 \newcommand*{\ForceHTMLPage}{%
6021 \global\booltrue{LWR@forcinghtmlpage}%
6022 }
```

`\ForceHTMLTOC` For HTML output, forces the next section to have a TOC entry, even if starred. For use with `\printindex` and others which generate a starred section which should be in the TOC so that it may be accessed via HTML. Not necessary if used with `tocbibind`. Also see `\ForceHTMLPage`.



For print output, no effect.

```
6023 \newbool{LWR@forcinghtmltoc}
6024 \boolfalse{LWR@forcinghtmltoc}
6025
6026 \newcommand*{\ForceHTMLTOC}{%
6027 \global\booltrue{LWR@forcinghtmltoc}%
6028 }

6029 \end{warpHTML}
```

**for PRINT output:**

```
6030 \begin{warpprint}
6031 \newcommand*{\ForceHTMLPage}{}
6032 \newcommand*{\ForceHTMLTOC}{}
6033 \end{warpprint}
```

**for HTML output:**

```
6034 \begin{warpHTML}
```

## 63.2 Book class commands

`\mainmatter` Declare the main matter section of the document. Does not reset the page number, which must be consecutive arabic numbers for the HTML conversion.



```
6035 \newbool{LWR@mainmatter}
6036 \DeclareDocumentCommand{\mainmatter}{}{%
6037 \booltrue{LWR@mainmatter}%
6038 }
```

`\frontmatter` Declare the front matter section of the document, using arabic numbering for the internal numbering. Does not reset the page number.

```
6039 \DeclareDocumentCommand{\frontmatter}{}{%
6040 \boolfalse{LWR@mainmatter}%
6041 }
```

`\backmatter` Declare the back matter section of the document. Does not reset the page number.

```
6042 \DeclareDocumentCommand{\backmatter}{}{%
6043 \boolfalse{LWR@mainmatter}
6044 }
```

## 63.3 Sectioning support macros

`\LWR@sectionnumber` {<section type>}

Typeset a section number and its trailing space with css formatting:

```
6045 \newcommand*{\LWR@sectionnumber}[1]{%
6046 \InlineClass{sectionnumber}{#1}%
6047 }
```


autosec                    A tag used by the toc and index.

\LWR@createautosec    {<section type>}

Create an autosection tag.

```
6048 \newcommand*{\LWR@createautosec}[1]{%
6049 \LWR@htmltag{%
6050 #1 % space
6051 id=\textquotedbl\LWR@print@mbox{autosec-\arabic{page}}\textquotedbl%
6052 }%
6053 }
```


\LWR@pushoneclose    {<depth>} {<printclose>} Stacks the new sectioning level's closing tag, to be used when this section is closed some time later.

 \LWR@stoppars must be executed first.

```
6054 \NewDocumentCommand{\LWR@pushoneclose}{m m}{%
6055 \LWR@traceinfo{\LWR@pushoneclose #1}%
6056 \pushclose{#2}{#1}%
6057 }
```

\LWR@startnewdepth    {<depth>} {<printclose>}

Closes currently stacked tags of a lesser level, then opens the new nesting level by saving this new sectioning level's closing tag for later use.

 \LWR@stoppars must be executed first.

```
6058 \NewDocumentCommand{\LWR@startnewdepth}{m m}{%

```

Close any stacked sections up to this new one.

```
6059 \LWR@closeprevious{#1}%

```

Push a new section depth:

```
6060 \LWR@pushoneclose{#1}{#2}%
6061 }
```

Ctrl LWR@prevFileDepth    Remembers the previous LWR@FileDepth.

Initialized to a deep level so that any section will trigger a new HTML page after the home page.

```
6062 \newcounter{LWR@prevFileDepth}
6063 \setcounter{LWR@prevFileDepth}{\LWR@depthsubparagraph}
```

`\@secntformat`  $\{\langle sectiontype \rangle\}$

```
6064 \def\@secntformat#1{\csname the#1\endcsname\quad}
```

`\simplechapterdelim` Used by `tocbibind` and `anonchap`.

```
6065 \newcommand*\simplechapterdelim{}
```

`\@chaptcntformat`  $\{\langle sectiontype \rangle\}$

`\let` to `\@secntformat` by default, but may be redefined by `\simplechapter` and `\restorechapter` from `tocbibind` or `anonchap`.

```
6066 \let\@chaptcntformat\@secntformat
```

`\@partcntformat`  $\{\langle sectiontype \rangle\}$

`\let` to `\@secntformat` by default, but may be redefined by `ctex`.

```
6067 \let\@partcntformat\@secntformat
```

`\@partnameformat` Prints “Part” for part sections.

Nullified by `ctex`.

```
6068 \newcommand*\@partnameformat{\LWR@isolate{\partname}~}%
```

Ctrl `LWR@currentautosec` Records the page number when the section was created. If a math expression is included in the section name, and SVG math is used, the corresponding `lateximage` will cause the page number to change by the time the following `autosec` label is created.

```
6069 \newcounter{LWR@currentautosec}
```

```
6070 \setcounter{LWR@currentautosec}{1}
```

`\LWR@section` \* [`\langle TOC name \rangle`]  $\{\langle name \rangle\}$   $\{\langle sectiontype \rangle\}$

The common actions for the high-level sectioning commands.

```
6071 \DeclareDocumentCommand{\LWR@section}{m m m m}{%
```

```
6072 \LWR@traceinfo{LWR@section: starting}%
```

```
6073 \LWR@stoppars%
```

Cancel special minipage horizontal space interaction:

```
6074 \global\boolfalse{LWR@minipagethispar}%
```

Start a new HTML file unless starred, and if is a shallow sectioning depth.

Exception: Also start a new HTML file for `\part*`, for `appendix`.

Generate a new L<sup>A</sup>T<sub>E</sub>X page so that toc and index page number points to the section:

```

6075 \LWR@traceinfo{LWR@section: testing whether to start a new HTML file}%
6076 \IfBooleanT{#1}{\LWR@traceinfo{LWR@section: starred}}%
6077 \ifbool{LWR@forcinghtmlpage}{\LWR@traceinfo{LWR@section: forcinghtmlpage}}{}%
6078 \ifthenelse{%
6079 \(%
6080 \(\NOT\equal{#1}{\BooleanTrue})\OR%
6081 \(\cnttest{\@nameuse{LWR@depth#4}}{=}{\LWR@depthpart})\OR%
6082 \(\boolean{LWR@forcinghtmlpage})\)%
6083 \)%
6084 \AND%
6085 \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{FileDepth}}%
6086 \AND%
6087 \(%
6088 \NOT\boolean{CombineHigherDepths}\OR%
6089 \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{LWR@prevFileDepth}}%
6090 \)%
6091 \AND%

6092 \(% phantomsection
6093 \NOT\isempty{#3}%
6094 \OR%
6095 \(\NOT\equal{#1}{\BooleanTrue})\)%
6096 \)%
6097 }%

```

If so: start a new HTML file:

```

6098 {% new file
6099 \LWR@traceinfo{LWR@section: new HTML file}%

```

See if there was an optional toc name entry:

```

6100 \IfNoValueTF{#2}%

```

If no optional entry

```

6101 {\LWR@newhtmlfile{#3}}%

```

If yes an optional entry

```

6102 {\LWR@newhtmlfile{#2}}%
6103 }% new file

```

Else: No new HTML file:

```

6104 {% not new file

```

Generate a new L<sup>A</sup>T<sub>E</sub>X page so that toc and index page number points to the section:

```

6105 \LWR@traceinfo{LWR@section: not a new HTML file, about to LWR@orignewpage}%
6106 \LWR@orignewpage%

```

```
6107 }% not new file
6108
```

Remember this section's name for \nameref:

```
6109 \IfValueT{#3}{%
6110 \LWR@traceinfo{LWR@section: about to LWR@setlatestname}%
6111 \IfValueTF{#2}{\LWR@setlatestname{#2}}{\LWR@setlatestname{#3}}%
6112 }%
```

Print an opening comment with the level and the name; ex: "section" "Introduction"  
Footnotes may be used in section names, which would also appear in the HTML section opening comments, so the short toc entry is used if possible, and a limited opening comment is made if the sectional unit is starred.

```
6113 \ifbool{HTMLDebugComments}{%
6114 \begingroup%
6115 \LWR@nullfonts%
6116 \IfBooleanTF{#1}% starred
6117 {\LWR@htmlcomment{Opening #4*}}%
6118 {%
6119 \IfNoValueTF{#2}% short TOC
6120 {\LWR@htmlcomment{Opening #4 ‘#3’}}%
6121 {\LWR@htmlcomment{Opening #4 ‘#2’}}%
6122 }\LWR@orignewLine%
6123 \endgroup%
6124 }{}
```

For inline sections paragraph and subparagraph, start a new paragraph now:

```
6125 \ifthenelse{%
6126 \cnttest{\@nameuse{LWR@depth#4}}{>=}{\LWR@depthparagraph}%
6127 }%
6128 {\LWR@startpars}%
6129 }%
```

Create the opening tag with an autosec:

```
6130 \LWR@traceinfo{LWR@section: about to LWR@createautosec}%
6131 \LWR@createautosec{\@nameuse{LWR>tag#4}}%
```

```
6132 \setcounter{LWR@currentautosec}{\value{page}}%
```

Check if starred:

```
6133 \IfBooleanTF{#1}%
6134 {%
6135 \LWR@traceinfo{LWR@section: starred}%
```

Starred, but also forcing a toc entry, so add unnumbered toc name or regular name:

```
6136 \ifbool{LWR@forcinghtmltoc}%
6137 {%
```

```

6138 \addcontentsline{toc}{#4}{%
6139 \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
6140 }%
6141 }%
6142 {}%
6143 }% starred

```

Not starred, so step counter and add to toc:

```
6144 {% not starred
```

Only add a numbered toc entry if section number is not too deep:

```

6145 \ifthenelse{%
6146 \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{secnumdepth}}%
6147 }%
6148 {% if secnumdepth

```

If in the main matter, step the counter and add the toc entry. For article class, lwarp assumes that all is mainmatter.

```

6149 \LWR@traceinfo{LWR@section: about to test main matter}%
6150 \ifbool{LWR@mainmatter}%
6151 {%
6152 \LWR@traceinfo{LWR@section: yes mainmatter}%
6153 \refstepcounter{#4}%

```

Add main matter numbered toc entry with the toc name or the regular name:

```

6154 \LWR@traceinfo{LWR@section: about to addcontentsline}%
6155 \addcontentsline{toc}{#4}{%
6156 {%
6157 \protect\numberline{%
6158 \@nameuse{pre#4name}%
6159 \@nameuse{the#4}%
6160 \@nameuse{post#4name}%
6161 }%
6162 {%
6163 \ignorespaces%
6164 \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}\protect\relax%
6165 }%
6166 }%
6167 \LWR@traceinfo{LWR@section: finished addcontentsline}%
6168 }% end of if main matter

```

If not main matter, add unnumbered toc name or regular name:

```

6169 {% not main matter
6170 \LWR@traceinfo{LWR@section: no main matter}%
6171 \addcontentsline{toc}{#4}{%
6172 \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
6173 }%
6174 }% end of not main matter
6175 }% end of secnumdepth

```

Deeper than secnumdepth, so add an unnumbered toc entry:

```
6176 {%
6177 \addcontentsline{toc}{#4}{%
6178 \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
6179 }%
6180 }%
```

For part, print “Part”:

```
6181 \ifbool{LWR@mainmatter}%
6182 {%
6183 \ifthenelse{%
6184 \(\cnttest{\@nameuse{LWR@depth#4}}{<=}
6185 {\value{secnumdepth}}\)\ \AND%
6186 \(\cnttest{\@nameuse{LWR@depth#4}}{=}{\LWR@depthpart}\)%
6187 }%
6188 {\@partnameformat}%
6189 {}%
```

Print the section number:

```
6190 \LWR@traceinfo{LWR@section: about to print section number}%
6191 \ifthenelse{%
6192 \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{secnumdepth}}%
6193 }%
6194 {%
6195 \ifstrequal{#4}{part}%
6196 {\protect\LWR@sectionnumber{\@partcntformat{#4}}}%
6197 {%
6198 \ifstrequal{#4}{chapter}%
6199 {\protect\LWR@sectionnumber{\@chapcntformat{#4}}}%
6200 {\protect\LWR@sectionnumber{\@secntformat{#4}}}%
6201 }%
6202 }%
6203 {}%
6204 \LWR@traceinfo{LWR@section: finished print section number}%
6205 }{}%
6206 }% end of not starred
```

Print the section name:

```
6207 \LWR@traceinfo{LWR@section: about to print the section name}%
6208 \LWR@isolate{#3}%
```

Close the heading tag, such as /H2:

```
6209 \LWR@traceinfo{LWR@section: about to close the heading tag}%
6210 \LWR@htmltag{\@nameuse{LWR@tag#4end}}%
6211 \LWR@orignewline%
```

Generate a L<sup>A</sup>T<sub>E</sub>X label:

```
6212 \LWR@traceinfo{LWR@section: about to create the LaTeX label}%
```

```
6213 \setcounter{LWR@latestautopage}{\value{page}}%
6214 \LWR@newautopagelabel{LWR@currentautosec}\LWR@orignewline%
```

Start paragraph handing unless is an inline paragraph or subparagraph:

```
6215 \ifthenelse{%
6216 \cnttest{\@nameuse{LWR@depth#4}}{<}{\LWR@depthparagraph}%
6217 }%
6218 {\LWR@startpars}%
6219 {}%
```

If not starred, remember the previous depth to possibly trigger a new HTML page.

HOWEVER, allow a `\part*` to start a new HTML page. This is used by appendix.

A starred section does not trigger a new HTML page at the beginning of this macro, so it should not affect it here at the end either. This became an issue when a `\listoftables` was tested in the middle of the document. The `\chapter*` for the list was not allowing a new HTML page for the section following it while `CombineHigherDepths` was true.

```
6220 \ifthenelse{%
6221 \NOT\equal{#1}{\BooleanTrue}\OR%
6222 \cnttest{\@nameuse{LWR@depth#4}}{=} {\LWR@depthpart}%
6223 }%
6224 {% not starred
6225 \setcounter{LWR@prevFileDepth}{\@nameuse{LWR@depth#4}}%
6226 }% not starred
6227 {}%
```

Reset to defaults if not a phantomsection:

```
6228 \ifstrempy{#3}%
6229 {}%
6230 {%
6231 \global\boolfalse{LWR@forcinghtmlpage}%
6232 \global\boolfalse{LWR@forcinghtmltoc}%
6233 }%
6234 %
6235 \LWR@traceinfo{LWR@section: done}%
6236 }
```

### 63.4 Pre- and post- sectioning names

`\prepartname` Usually null, but is used by `uj*` and `ut*` Japanese classes.

`\postpartname`

```
6237 \providecommand*\prepartname{}
6238 \providecommand*\postpartname{}
```

`\prechaptername` Usually null, but is used by `uj*` and `ut*` Japanese classes.

`\postchaptername`

```
6239 \providecommand*\prechaptername{}
6240 \providecommand*\postchaptername{}
```



`\presectionname` Always null, but provided here for algorithmic simplicity in `\LWR@section`.  
`\postsectionname`

```
6241 \providecommand*{\presectionname}{}
6242 \let\postsectionname\presectionname
6243
6244 \let\presubsectionname\presectionname
6245 \let\postsubsectionname\postsectionname
6246
6247 \let\presubsubsectionname\presectionname
6248 \let\postsubsubsectionname\postsectionname
6249
6250 \let\preparagraphname\presectionname
6251 \let\postparagraphname\postsectionname
6252
6253 \let\presubparagraphname\presectionname
6254 \let\postsubparagraphname\postsectionname
```

### 63.5 `\section and friends`

`\part` \* [*TOC name*] {*name*}

```
6255 \newcommand{\part@preamble}{}% for koma-script
6256
6257 \DeclareDocumentCommand{\part}{s o m}{%
6258 \LWR@maybeprintpendingfootnotes{\LWR@depthpart}%
6259 \LWR@stoppars%
6260
6261 \LWR@startnewdepth{\LWR@depthpart}{\LWR@printclosepart}%
6262
6263 \LWR@section{#1}{#2}{#3}{part}%
6264
6265 \part@preamble% for koma-script
6266 \renewcommand{\part@preamble}{}%
6267 }
```

`\chapter` \* [*TOC name*] [*heading name*] {*name*}

```
6268 \let\@printcites\relax% for quotchap package
6269
6270 \newcommand{\chapter@preamble}{}% for koma-script
6271
6272 \@ifundefined{chapter}
6273 {}
6274 {%
6275 \DeclareDocumentCommand{\chapter}{s o o m}{%
6276 \IfValueTF{#2}{
6277 \LWR@traceinfo{chapter #2}%
6278 }{
6279 \LWR@traceinfo{chapter #4}%
6280 }
6281 \LWR@maybeprintpendingfootnotes{\LWR@depthchapter}%
```

```

6282 \LWR@stoppars%
6283
6284 \LWR@startnewdepth{\LWR@depthchapter}{\LWR@printclosechapter}%
6285
6286 \LWR@section{#1}{#2}{#4}{chapter}%
6287
6288 \@printcites% for quotchap package
6289
6290 \chapter@preamble% for koma-script
6291 \renewcommand{\chapter@preamble}{}%
6292 }
6293 }

```

`\section * [<TOC name>] [<heading name>] {<name>}`

```

6294 \DeclareDocumentCommand{\section}{s o m}{%
6295 \LWR@traceinfo{section: starting}%
6296 \LWR@maybeprintpendingfootnotes{\LWR@depthsection}%
6297 \LWR@stoppars%
6298
6299 \LWR@startnewdepth{\LWR@depthsection}{\LWR@printclosesection}%
6300
6301 \LWR@section{#1}{#2}{#4}{section}%
6302 }

```

`\subsection * [<TOC name>] {<name>}`

```

6303 \DeclareDocumentCommand{\subsection}{s o m}{%
6304 \LWR@maybeprintpendingfootnotes{\LWR@depthsubsection}%
6305 \LWR@stoppars%
6306
6307 \LWR@startnewdepth{\LWR@depthsubsection}{\LWR@printclosesubsection}%
6308
6309 \LWR@section{#1}{#2}{#3}{subsection}%
6310 }

```

`\subsubsection * [<TOC name>] {<name>}`

```

6311 \DeclareDocumentCommand{\subsubsection}{s o m}{%
6312 \LWR@maybeprintpendingfootnotes{\LWR@depthsubsubsection}%
6313 \LWR@stoppars%
6314
6315 \LWR@startnewdepth{\LWR@depthsubsubsection}%
6316 {\LWR@printclosesubsubsection}%
6317
6318 \LWR@section{#1}{#2}{#3}{subsubsection}%
6319 }

```

`\paragraph * [<TOC name>] {<name>}`

```

6320 \DeclareDocumentCommand{\paragraph}{s o m}{%
6321 \LWR@maybeprintpendingfootnotes{\LWR@depthparagraph}%

```

```

6322 \LWR@stoppars%
6323
6324 \LWR@startnewdepth{\LWR@depthparagraph}{\LWR@printcloseparagraph}%
6325
6326 \LWR@section{#1}{#2}{#3}{paragraph}%
6327 }

```

`\subparagraph` \* [*TOC name*] {*name*}

```

6328 \DeclareDocumentCommand{\subparagraph}{s o m}{%
6329 \LWR@maybeprintpendingfootnotes{\LWR@depthsubparagraph}%
6330 \LWR@stoppars%
6331
6332 \LWR@startnewdepth{\LWR@depthsubparagraph}{\LWR@printclosesubparagraph}%
6333
6334 \LWR@section{#1}{#2}{#3}{subparagraph}%
6335 }

6336 \end{warpHTML}

```

## 64 Starting a new file

**for HTML & PRINT:** 6337 \begin{warpall}

`\HTMLLanguage` Default language for the HTML lang tag.

```

6338 \newcommand*{\LWR@currentHTMLLanguage}{en-US}
6339
6340 \newcommand*{\HTMLLanguage}[1]{%
6341 \renewcommand*{\LWR@currentHTMLLanguage}{#1}%
6342 }

```

`\theHTMLTitleSeparator` May be used inside `\theHTMLTitleSection` to separate the website's overall HTML title and the particular page's section name.

```

6343 \ifPDFTeX% pdf\latex or dvi\latex
6344 \ifdefstring{\inputencodingname}{utf8}{%
6345 \newcommand*{\theHTMLTitleSeparator}{ --- }% EMDash
6346 }{%
6347 \newcommand*{\theHTMLTitleSeparator}{ - }% hyphen
6348 }%
6349 \else%
6350 \ifTeX
6351 \newcommand*{\theHTMLTitleSeparator}{ - }% hyphen
6352 \else
6353 \newcommand*{\theHTMLTitleSeparator}{ --- }% EMDash
6354 \fi%
6355 \fi%

```

`\HTMLTitleBeforeSection` Sets the HTML page's meta title tag to show the website title before the section name.

```
6356 \newcommand*{\HTMLTitleBeforeSection}{%
6357 \def\theHTMLTitleSection{%
6358 \theHTMLTitle\theHTMLTitleSeparator\theHTMLSection%
6359 }%
6360 }
```

`\HTMLTitleAfterSection` Sets the HTML page's meta title tag to show the section name before the website title.

```
6361 \newcommand*{\HTMLTitleAfterSection}{%
6362 \def\theHTMLTitleSection{%
6363 \theHTMLSection\theHTMLTitleSeparator\theHTMLTitle%
6364 }%
6365 }
```

`\theHTMLTitleSection` Forms the HTML page's meta title tag. The default is to show the website title before the section name.

```
6366 \HTMLTitleBeforeSection
```

`\theHTMLSection` The section name is passed to `\LWR@filestart`, which then sets `\theHTMLSection` for use inside `\theHTMLTitleSection` to create an HTML meta title tag.

```
6367 \newcommand*{\theHTMLSection}{%
6368 \end{warpall}}
```

**for HTML output:** `6369 \begin{warpHTML}`

`\LWR@filestart` [`\sectionname`] Creates the opening HTML tags.

```
6370 \newcommand*{\LWR@filestart}[1][{}]{%
6371 \LWR@traceinfo{\LWR@filestart !#1!}%
```

Locally temporarily disable direct-formatting commands:

```
6372 \begingroup%
6373 \LWR@nullfonts%
```

Save the section name for use while creating the HTML meta title tag:

```
6374 \edef\theHTMLSection{#1}%
```

Create the page's HTML header:

```
6375 \LWR@htmltag{!DOCTYPE html}\LWR@orignewline
```

The language is user-adjustable:

```
6376 \LWR@htmltag{%
6377 html lang=\LWR@orig@textquotedbl\LWR@currentHTMLLanguage\LWR@orig@textquotedbl%
6378 }\LWR@orignewline
```

Start of the meta data:

```
6379 \LWR@htmltag{head}\LWR@orignewline
```

Charset is fixed at UTF-8:

```
6380 \LWR@htmltag{%
6381 meta charset=\LWR@orig@textquotedbl{ }UTF-8\LWR@orig@textquotedbl \ /%
6382 }\LWR@orignewline
```

Author:

```
6383 \ifthenelse{\equal{\theHTMLAuthor}{}}%
6384 {}%
6385 {%
6386 \LWR@htmltag{%
6387 meta name=\LWR@orig@textquotedbl{ }author\LWR@orig@textquotedbl \ % space
6388 content=\LWR@orig@textquotedbl\theHTMLAuthor\LWR@orig@textquotedbl \ /%
6389 }\LWR@orignewline%
6390 }%
```

lwarp is the generator:

```
6391 \LWR@htmltag{%
6392 meta % space
6393 name=\LWR@orig@textquotedbl{ }generator\LWR@orig@textquotedbl \ % space
6394 content=\LWR@orig@textquotedbl{ }LaTeX lwarp package\LWR@orig@textquotedbl \ /%
6395 }\LWR@orignewline%
```

If there is a description, add it now:

```
6396 \ifdefempty{\LWR@currentHTMLDescription}{ }{%
6397 \LWR@htmltag{%
6398 meta name=\LWR@orig@textquotedbl{ }description\LWR@orig@textquotedbl \ % space
6399 content=\LWR@orig@textquotedbl\LWR@currentHTMLDescription\LWR@orig@textquotedbl \ /%
6400 }\LWR@orignewline
6401 }%
```

Mobile-friendly viewport:

```
6402 \LWR@htmltag{%
6403 meta % space
6404 name=\LWR@orig@textquotedbl{ }viewport\LWR@orig@textquotedbl \ % space
6405 content=\LWR@orig@textquotedbl{ }width=device-width, initial-scale=1.0\LWR@orig@textquotedbl \ /%
6406 }\LWR@orignewline
```

IE patch:

```
6407 \LWR@htmltag{!-\/-[if lt IE 9]}\LWR@orignewline
6408 \LWR@htmltag{%
```

```

6409 script % space
6410 src=\LWR@orig@textquotedbl{}%
6411 http://html5shiv.googlecode.com/svn/trunk/html5.js%
6412 \LWR@orig@textquotedbl%
6413 }%
6414 \LWR@htmltag{/script}\LWR@orignewline
6415 \LWR@htmltag![endif]-\/-}\LWR@orignewline

```

The page's title, if there is one. A section name is also added if given.

```

6416 \ifthenelse{\equal{\theHTMLTitle}{}}%
6417 {}%
6418 {%
6419 \LWR@htmltag{title}%
6420 \ifdefempty{\theHTMLSection}%
6421 {\theHTMLTitle}%
6422 {\theHTMLTitleSection}%
6423 \LWR@htmltag{/title}\LWR@orignewline%
6424 }%

```

The page's stylesheet:

```

6425 \LWR@htmltag{%
6426 link % space
6427 rel=\LWR@orig@textquotedbl{}stylesheet\LWR@orig@textquotedbl\ % space
6428 type=\LWR@orig@textquotedbl{}text/css\LWR@orig@textquotedbl\ % space
6429 href=\LWR@orig@textquotedbl\LWR@currentcss\LWR@orig@textquotedbl\ /%
6430 }%
6431 \LWR@orignewline

```

Optional MATHJAX support. The HTML tags must be turned off during the verbatim input, and the paragraph handling which was turned on at the end of verbatim input must be immediately turned off again.

```

6432 \ifbool{mathjax}%
6433 {%
6434 \begingroup%
6435 \LWR@restoreoriglists%
6436 \boolfalse{LWR@verbtags}%
6437
6438 \verbatiminput{\LWR@mathjaxfilename}%
6439
6440 \booltrue{LWR@verbtags}%
6441 \endgroup%
6442 \LWR@stoppars%
6443 }% end of mathjax
6444 {}%

```

End of the header:

```

6443 \LWR@htmltag{/head}\LWR@orignewline

```

Start of the body:

```

6444 \LWR@htmltag{body}\LWR@orignewline
6445 \endgroup
6446 \LWR@traceinfo{LWR@filestart: done}
6447 }

6448 \end{warpHTML}

```

## 65 Starting HTML output

**for HTML output:** 6449 \begin{warpHTML}

\LWR@LwarpStart Executed at the beginning of the entire document.

The use of \textquotedbl instead of " improves compatibility with xeCJK.

```

6450 \catcode'\$=\active
6451 \newcommand*{\LWR@LwarpStart}
6452 {%
6453 \LWR@traceinfo{LWR@lwarpStart}

```

If formatting for a word processor, force filedepth to single-file only, force HTML debug comments off.

```

6454 \ifbool{FormatWP}{%
6455 \setcounter{FileDepth}{-5}%
6456 \boolfalse{HTMLDebugComments}%
6457 }{}

```

Expand and detokenize \HomeHTMLFilename and \HTMLFilename:

```

6458 \edef\LWR@strresult{\HomeHTMLFilename}
6459 \edef\HomeHTMLFilename{\detokenize\expandafter{\LWR@strresult}}
6460 \edef\LWR@strresult{\HTMLFilename}
6461 \edef\HTMLFilename{\detokenize\expandafter{\LWR@strresult}}

```

Force onecolumn and empty page style:

```

6462 \LWR@origonecolumn%
6463 \LWR@origpagestyle{empty}%

```

No black box for overfull lines:

```

6464 \overfullrule=0pt

```

Reduce chance of line overflow when HTML tags are added:

```

6465 \LWR@print@footnotesize%

```

In PDF output, don't allow line breaks to interfere with HTML tags:

```
6466 \LWR@print@raggedright%
6467 \let\ltxMacro{\}\{\LWR@endofline}%
```

Spread the lines for *pdftotext* to read them well:

```
6468 \linespread{1.3}%
```

For *pdftotext* to reliably identify paragraph splits:

```
6469 \setlength{\parindent}{0pt}
6470 \setlength{\parskip}{2ex}
```

For the `lateximage` record file:

```
6471 \immediate\openout\LWR@lateximagesfile=\BaseJobname-images.txt
```

Removes space around the caption in the HTML:

```
6472 \setlength{\belowcaptionskip}{0ex}
6473 \setlength{\abovecaptionskip}{0ex}
```

Redefine the plain page style to be empty when used by index pages:

```
6474 \renewcommand{\ps@plain}{}
```

Plug in some new actions. This is done just before the document start so that they won't be over-written by some other package.

Float captions:

```
6475 \let\LWR@origcaption\caption
```

Labels: `\ltx@label` is used in `amsmath` environments and is also patched by `cleveref`.

#### Label in HTML

```
6476 \let\LWR@origltx@label\ltx@label
6477 \let\ltx@label\LWR@htmlmathlabel
```

Not yet started any paragraph handling:

```
6478 \global\boolfalse\LWR@doingapar}
6479 \global\boolfalse\LWR@doingstartpars}
```

Document and page settings:

```
6480 \mainmatter
6481 \LWR@origpagenumbering{arabic}
```

Start a new HTML file and a header:

```
6482 \LWR@traceinfo\LWR@lwarpStart: Starting new file.}
6483 \LWR@filestart
6484 \LWR@traceinfo\LWR@lwarpStart: Generating first header.}
```



```
6485 \LWR@htmltag{header}\LWR@orignewline
6486 \LWR@startpars
6487 \LWR@firstpagetop
6488 \LWR@stoppars
6489 \LWR@htmltag{/header}\LWR@orignewline
```

```
6490 \LWR@htmlclass{div}{bodywithoutsidetoc}
6491 \LWR@htmlclass{div}{bodycontainer}
6492 \LWR@traceinfo{LWR@lwarpStart: Generating textbody.}
6493 \LWR@htmlclass{section}{textbody}
```

Patch the `itemize`, `enumerate`, and `description` environments and `\item`. This works with the native L<sup>A</sup>T<sub>E</sub>X environments, as well as those provided by `enumitem`, `enumerate`, and `paralist`.

```
6494 \LWR@patchlists
```

Ensure that math mode is active to call lwarp's patches:

```
6495 \catcode'\$=\active
```

Required for `\nameref` to work with svg math:

```
6496 \immediate\write\@mainaux{\catcode'\string\$\active}%
6497 \LetLtxMacro\LWR@syntaxhighlightone$% balance for editor syntax highlighting
```

Allow HTML paragraphs to begin:

```
6498 \LWR@startpars
```

If using `MATHJAX`, disable `\ensuremath` by printing a nullified definition at the start of each file, and add further customizations:

```
6499 \LWR@customizeMathJax
```

First autopage label in case a figure occurs early.

```
6500 \setcounter{LWR@latestautopage}{\value{page}}%
6501 \LWR@newautopagelabel{LWR@currentautosec}%
```

```
6502 \LWR@traceinfo{LWR@lwarpStart: done}
6503 }
6504 \catcode'\$=3% math shift until lwarp starts
```

```
6505 \end{warpHTML}
```

## 66 Ending HTML output

for HTML output: 6506 \begin{warpHTML}

`\LWR@requesttoc` `{<boolean>}` `{<suffix>}` Requests that a TOC, LOF, or LOT be generated.

```
6507 \newcommand*{\LWR@requesttoc}[2]{%
6508 \ifbool{#1}
6509 {
6510 \expandafter\newwrite\@nameuse{tf@#2}
6511 \immediate\openout \@nameuse{tf@#2} \jobname.#2\relax
6512 }{}}
6513 }
```

`\LWR@LwarpEnd` Final stop of all HTML output:

```
6514 \newcommand*{\LWR@LwarpEnd}
6515 {
6516 \LWR@stoppars
6517 \LWR@closeprevious{\LWR@depthfinished}
```

At the bottom of the ending file:

Close the textbody:

```
6518 \LWR@htmlElementclassend{section}{textbody}
6519 \LWR@htmlElementclassend{div}{bodycontainer}
6520 \LWR@htmlElementclassend{div}{bodyandsidetoc}
```

Print any pending footnotes:

```
6521 \LWR@printpendingfootnotes
```

Create the footer:

```
6522 \LWR@htmlElement{footer}
6523
6524 \LWR@pagebottom
6525
6526 \LWR@htmlElementend{footer}
```

No bottom navigation if are finishing the home page, or if formatting for an EPUB or word processor.

Presumably has a table-of-contents.

```
6527 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6528 {}
6529 {
6530 \ifnumcomp{\value{LWR@htmlfilenumber}}{>}{0}{\LWR@botnavigation}{}
6531 }
```

```
6532 \LWR@stoppars% final stop of all paragraphs
```

Finish the HTML file:

```
6533 \LWR@htmltag{/body}\LWR@orignewline
6534 \LWR@htmltag{/html}\LWR@orignewline
```

Seems to be required sometimes:

```
6535 \LWR@orignewpage
6536 }
```

`\enddocument` If labels have not changed, mark successful completion of the `lateximages` file. Executed as everything is being shut down.

```
6537 \xpatchcmd{\enddocument}
6538 {%
6539 \if@tempswa
6540 \@latex@warning@no@line{Label(s) may have changed.
6541 Rerun to get cross-references right}%
6542 \fi
6543 }
6544 {%
6545 \if@tempswa
6546 \@latex@warning@no@line{Label(s) may have changed.
6547 Rerun to get cross-references right}%
6548 \else
6549 \immediate\write\LWR@lateximagesfile{%
6550 |end|end|end|%
6551 }%
6552 \fi
6553 }
6554 {}
6555 {
6556 \PackageWarningNoLine{lwarp}
6557 {%
6558 Could not patch \protect\enddocument.\MessageBreak
6559 If labels have changed, be sure to recompile before\MessageBreak
6560 creating lateximages with\MessageBreak
6561 \space\space lwarpmk limages,\MessageBreak
6562 or the images may be corrupt%
6563 }
6564 }

6565 \end{warpHTML}
```

## 67 Title page

**package support** `lwarp` supports the native L<sup>A</sup>T<sub>E</sub>X titling commands, and also supports the packages `authblk` and `titling`. If both are used, `authblk` should be loaded before `titling`.



**load order**

`\published` and `\subtitle` If using the `titling` package, additional titlepage fields for `\published` and `\subtitle` may be added by using `\AddSubtitlePublished` in the preamble. See section 67.8.

**affiliation** `lwarp` provides for the `\author` macro an additional `\affiliation` macro to provide

an affiliation and other additional information for each author in the title page. The affiliation information is removed when using `titlingpage's \theauthor` in the main text.

### reusing titlepage information

The titling package maintains the definitions of `\thetitle`, `\theauthor`, etc., after the title has been typeset. These commands are to be used to refer to the document's title and author, etc., in the main text. These definitions have the `\thanks` and `\affiliation` removed, and for `\author` the `\and` is replaced to generate a simple inline list of authors separated by commas. Note: `\theauthor` does not work well with `authblk` unless the traditional L<sup>A</sup>T<sub>E</sub>X syntax is used.

### ⚠ `\theauthor`, `authblk`

### custom titlepages

`\printtitle`, `\printauthor`, etc., are provided for use inside a custom titlepage or `titlingpage` environment, and these retain the `\thanks` and `\affiliation`.

`\printthanks` `\printthanks` has been added to force the printing of thanks inside a `titlingpage` environment when `\maketitle` is not used.

⚠ `\thanks` Inside a `\titlepage` or `\titlingpage` environment, use `\thanks` instead of `\footnote` for acknowledgements, etc.

## 67.1 Setting the title, etc.

The following provide setting commands for both HTML and print outputs.

`\author` `{\author}` While using `\maketitle` and print mode, the author is treated as a single-column `tabular` and the `\and` feature finishes the current `tabular` then starts a new one for the next author. Each author thus is placed into its own `tabular`, and an affiliation may be placed on its own line such as

```
\author{Name \ Affiliation \and Second Name \ Second Affiliation}
```

For HTML, the entire author block is placed inside a `<div>` of class `author`, and each individual author is inside a `<div>` of class `oneauthor`.

`\@title` `\@author` `\@date` `\@title`, `\@author`, and `\@date` store the values as originally assigned, including any `\thanks`, `\and`, or `\affiliation`. These are low-level macros intended to be used by other macros only inside a `titlepage` or `titlingpage`, and are used by `\maketitle`. The author is printed inside a single-column `tabular`, which becomes multiple single-column `tabulars` if multiples authors are included. For HTML, these `tabulars` become side-by-side `<div>s` of class `oneauthor`, all of which are combined into one `<div>` of class `author`.

`\printtitle` `\printauthor` `\printdate` `\printtitle`, etc. are user-level macros intended to be used in custom `titlepage` or `titlingpage` environments in cases where `\maketitle` is not desired. These commands preserve the `\thanks`, etc., and should not be used in the main text.

`\thetitle` `\theauthor` `\thedata` `\thetitle`, `\theauthor`, and `\thedata` are available if `titling` has been loaded, and are sanitized user-level versions from which have been removed the `\thanks` and `\affiliation`, and `\and` is changed for inline text usage. The author is printed inline without `\affiliation` or `\thanks`, with `\and` placing commas between multiple authors. Thus, these commands are to be used in the main text whenever the user

`\HTMLPageBottom`

wishes to refer to the document's title and such. One practical use for this is to place the authors at the bottom of each HTML page, such as:

```
\HTMLPageBottom{
 \begin{center}\textcopyright~2016 \theauthor\end{center}
}
```

⚠ **\theauthor, authblk** `\theauthor` does not work well if `authblk` is used. If `\theauthor` is important, it is recommended to use the standard L<sup>A</sup>T<sub>E</sub>X syntax for `\author`, optionally with `lwarp`'s `\affiliation` macro as well.

⚠ **affiliations** After `\maketitle` has completed, `\theauthor` retains the definition of the author, but `\and` is changed to become a comma and a space, intending to print the authors names separated by spaces. This fails when affiliations are included on their own table rows.

`\affiliation` A solution, provide here, is to define a macro `\affiliation` which, during `\maketitle`, starts a new row and adds the affiliation, but after `\maketitle` is finished `\affiliation` is re-defined to discard its argument, thus printing only the author names when `\author` is later used inline.

## 67.2 \if@titlepage

**for HTML & PRINT:** 6566 `\begin{warpall}`

`\if@titlepage` Some classes do not provide `\if@titlepage`. In this case, provide it and force it false.

```
6567 \ifcsvoid{@titlepagefalse}{
6568 \newif\if@titlepage
6569 \@titlepagefalse
6570 }{}

6571 \end{warpall}
```

## 67.3 Changes for \affiliation

`\affiliation` `{\text}`

Adds the affiliation to the author for use in `\maketitle`.

Inside `titlepage`, this macro prints its argument. Outside, it is null.

**for HTML & PRINT:** 6572 `\begin{warpall}`  
6573 `\providerobustcmd{\affiliation}[1]{}{}`  
6574 `\end{warpall}`

**for PRINT output:** 6575 `\begin{warpprint}`

```
6576 \AtBeginEnvironment{titlepage}{
```

```

6577 \renewrobustcmd{\affiliation}[1]{\ \ \textsc{\small#1}}
6578 }
6579
6580 \AtBeginDocument{
6581 \ifpackageloaded{titling}{
6582 \AtBeginEnvironment{titlingpage}{
6583 \renewrobustcmd{\affiliation}[1]{\ \ \textsc{\small#1}}
6584 }
6585 }{}% titling loaded
6586 }% AtBeginDocument

6587 \end{warpprint}

```

**for HTML output:** 6588 \begin{warpHTML}

Env titlepage Sets up a <div> of class titlepage. Provided even for memoir class, since it is used by \maketitle.

```

6589 \DeclareDocumentEnvironment{titlepage}{}
6590 {
6591 \renewrobustcmd{\affiliation}[1]{\ \ \InlineClass{affiliation}{##1}}
6592 \LWR@printpendingfootnotes
6593 \LWR@forcenewpage
6594 \BlockClass{titlepage}
6595 }
6596 {
6597 \endBlockClass
6598 \LWR@printpendingfootnotes
6599 }

6600 \end{warpHTML}

```

## 67.4 Printing the thanks

**for HTML & PRINT:** 6601 \begin{warpall}

\printthanks Forces the \thanks to be printed.

This is necessary in a titlingpage environment when \maketitle was not used.

```

6602 \newcommand*{\printthanks}{\@thanks}

6603 \end{warpall}

```

## 67.5 Printing the title, etc. in HTML

The following are for printing the title, etc. in a titlepage or a titlingpage in HTML:

**for HTML output:** 6604 \begin{warpHTML}

`\printtitle`

```

6605 \newcommand*{\printtitle}
6606 {%
6607 \LWR@stoppars%
6608 \LWR@htmltag{\LWR@tagtitle}%
6609 \@title%
6610 \LWR@htmltag{\LWR@tagtitleend}%
6611 \LWR@startpars%
6612 }

```

`\LWR@printthetitle` A private version which prints the title without footnotes, used to title each HTML page.

```

6613 \newcommand*{\LWR@printthetitle}
6614 {%
6615 \LWR@stoppars%
6616 \LWR@htmltag{\LWR@tagtitle}%
6617 \thetitle%
6618 \LWR@htmltag{\LWR@tagtitleend}%
6619 \LWR@startpars%
6620 }

```

`\printauthor` HTML version.

```
6621 \newcommand*{\printauthor}{
```

The entire author block is contained in a <div> named author:

```
6622 \begin{BlockClass}{author}
```

\and finishes one author and starts the next:

```

6623 \renewcommand{\and}{%
6624 \end{BlockClass}
6625 \begin{BlockClass}{oneauthor}
6626 }

```

Individual authors are contained in a <div> named oneauthor:

```

6627 \begin{BlockClass}{oneauthor}
6628 \@author
6629 \end{BlockClass}
6630 \end{BlockClass}
6631 }

```

`\printdate`

```

6632 \newcommand*{\printdate}{%
6633 \begin{BlockClass}{titledate}
6634 \@date
6635 \end{BlockClass}
6636 }

```

```
6637 \end{warpHTML}
```

## 67.6 Printing the title, etc. in print form

The following are for printing the title, etc. in a titlepage or a titlingpage in print form:

**for PRINT output:** 6638 \begin{warpprint}

\printtitle

```
6639 \newcommand*{\printtitle}{{\Huge\@title}}
```

\printauthor Print mode.

```
6640 \newcommand*{\printauthor}
```

```
6641 {{\large\begin{tabular}[t]{c}\@author\end{tabular}}}
```

\printdate

```
6642 \newcommand*{\printdate}{{\small\textit{\@date}}}
```

```
6643 \end{warpprint}
```

## 67.7 \maketitle for HTML output

An HTML <div> of class titlepage is used.

\thanks are a form of footnotes used in the title page. See section 60 for other kinds of footnotes.

See \thanksmarkseries{series}, below, to set the style of the footnote marks.

**for HTML output:** 6644 \begin{warpHTML}

```
6645 \@ifclassloaded{memoir}
```

```
6646 {
```

```
6647 \newcommand{\LWR@setfootnoteseries}{%
```

```
6648 \renewcommand\thefootnote{\@arabic\c@footnote}%
```

```
6649 }
```

```
6650 }{% not memoir
```

```
6651 \if@titlepage
```

```
6652 \newcommand{\LWR@setfootnoteseries}{%
```

```
6653 \renewcommand\thefootnote{\@arabic\c@footnote}%
```

```
6654 }
```

```
6655 \else
```

```
6656 \newcommand{\LWR@setfootnoteseries}{%
```

```
6657 \renewcommand\thefootnote{\@fnsymbol\c@footnote}%
```



```
6658 }
6659 \fi
6660]% not memoir
```

`\LWR@maketitlesetup` Patches `\thanks` macros.

```
6661 \newcommand*{\LWR@maketitlesetup}{%
```

Redefine the footnote mark:

```
6662 \LWR@setfootnoteseries%
6663 \def\@makefnmark{\thefootnote}
```

```
\thefootnote ⇒ \nameuse{arabic}{footnote}, or
\thefootnote ⇒ \nameuse{fnsymbol}{footnote}
```

Redefine the footnote text:

```
6664 \long\def\@makefntext##1{%
```

Make the footnote mark and some extra horizontal space for the tags:

```
6665 \@thefnmark~%
```

```
\makethanksmark ⇒ \thanksfootmark ⇒ \tamark ⇒
\@thefnmark ⇒ \itshape a (or similar)
```

Print the text:

```
6666 ##1%
6667 }%
6668 }
```

`\@fnsymbol` {*counter*}

Re-defined to use an HTML entity for the double vertical bar symbol. The original definition used `\|` which was not being seen by *pdftotext*.

```
6669 \def\@fnsymbol#1{\ifcase#1\or * \or \HTMLentity{dagger}\or \HTMLentity{Dagger}\or
6670 \HTMLentity{sect}\or \HTMLentity{para}\or \text{\HTMLUnicode{2016}}\or
6671 ** \or \HTMLentity{dagger}\HTMLentity{dagger} \or
6672 \HTMLentity{Dagger}\HTMLentity{Dagger} \else\@ctrerr\fi}
```

`\maketitle` HTML mode. Creates an HTML titlepage div and typesets the title, etc.

Code from the titling package is adapted, simplified, and modified for HTML output.

```
6673 \renewcommand*{\maketitle}{%
```

An HTML titlepage <div> is used for all classes.

```
6674 \begin{titlepage}
```

Set up special patches:

```
6675 \LWR@maketitlesetup
```

Typeset the title, etc:

```
6676 \@maketitle
```

Immediately generate any \thanks footnotes:

```
6677 \@thanks
```

Close the HTML titlepage div and cleanup:

```
6678 \end{titlepage}
6679 \setcounter{footnote}{0}%
6680 \global\let\thanks\relax
6681 \global\let\maketitle\relax
6682 \global\let\@maketitle\relax
6683 \global\let\@thanks\@empty
6684 \global\let\@author\@empty
6685 \global\let\@date\@empty
6686 \global\let\@title\@empty
6687 \global\let\title\relax
6688 \global\let\author\relax
6689 \global\let\date\relax
6690 \global\let\and\relax
6691 }
```

`\@maketitle` HTML mode. Typesets the title, etc.:

```
6692 \DeclareDocumentCommand{\@maketitle}{}{%
6693 \LWR@stoppars\LWR@htmltag{\LWR@tagtitle}%
6694 \@title%
6695 \LWR@htmltag{\LWR@tagtitleend}\LWR@startpars%
6696 \begin{BlockClass}{author}%
```

For IEEEtran class:

```
6697 \renewcommand*{\cr}{}%
6698 \renewcommand*{\rcrcr}{}%
6699 \renewcommand*{\noalign}{}%

6700 \renewcommand{\and}{%
6701 \end{BlockClass}%
6702 \begin{BlockClass}{oneauthor}%
6703 }%
6704 \begin{BlockClass}{oneauthor}%
6705 \@author%
```

```

6706 \end{BlockClass}%
6707 \end{BlockClass}%
6708 \begin{BlockClass}{titledate}%
6709 \@date%
6710 \end{BlockClass}%
6711 }

```

`\LWR@titlingmaketitle` `\maketitle` for use inside an HTML titlingpage environment.

```
6712 \newcommand*\LWR@titlingmaketitle{%
```

Keep pending footnotes out of the title block:

```
6713 \@thanks
```

Set up special patches:

```
6714 \LWR@maketitlesetup
```

Typeset the title, etc:

```
6715 \@maketitle
```

Immediately generate any `\thanks` footnotes:

```
6716 \@thanks
6717 }
```


```
6718 \end{warpHTML}
```

## 67.8 `\published` and `\subtitle`

`\subtitle` and `\published` To add `\subtitle` and `\published` to the titlepage, load the titling package and use `\AddSubtitlePublished` in the preamble.

The default `lwarp.css` has definitions for the `published` and `subtitle` classes.

If `titling` is loaded, `\AddSubtitlePublished` creates a number of additional macros, and also assigns some of the titling hooks. If `titling` is not loaded, `\AddSubtitlePublished` creates null macros.

 **titling hooks** Do not use `\AddSubtitlePublished` if the user has patched the titling hooks for some other reason. Portions are marked `\warpprintonly` to reduce extra tags in HTML. Similarly, `BlockClass` has no effect in print mode. Thus, the following may be marked `warpall`.

**for HTML & PRINT:** `6719 \begin{warpall}`

`\AddSubtitlePublished` Adds `\published` and `\subtitle`, and related.

```

6720 \newcommand*{\AddSubtitlePublished}{%
6721 \@ifpackageloaded{titling}{% yes titling package
6722 \newcommand{\@published}{}%
6723 \newcommand{\published}[1]{\gdef\@published{##1}}%
6724 \renewcommand*{\maketitlehooka}{\printpublished}%
6725 \newcommand*{\printpublished}{%
6726 \warpprintonly{\begin{center}\unskip}%
6727 \begin{BlockClass}{published}%
6728 \warpprintonly{\Large\itshape}%
6729 \@published%
6730 \end{BlockClass}%
6731 \warpprintonly{\end{center}}%
6732 }%
6733 \newcommand{\@subtitle}{}%
6734 \newcommand{\subtitle}[1]{\gdef\@subtitle{##1}}%
6735 \renewcommand*{\maketitlehookb}{\printsubtitle}%
6736 \newcommand*{\printsubtitle}{%
6737 \warpprintonly{\begin{center}\unskip}%
6738 \begin{BlockClass}{subtitle}%
6739 \warpprintonly{\Large\itshape}%
6740 \@subtitle%
6741 \end{BlockClass}%
6742 \warpprintonly{\end{center}}%
6743 }%
6744 }% yes titling package
6745 {% no titling package
6746 \newcommand{\published}[1]{}%
6747 \newcommand*{\printpublished}{}%
6748 \newcommand{\subtitle}{}%
6749 \newcommand*{\printsubtitle}%
6750 }% no titling package
6751 }% \AddSubtitlePublished

6752 \end{warpall}

```

## 68 Abstract

The following code replaces the L<sup>A</sup>T<sub>E</sub>X default, and will itself be replaced later if the abstract package is loaded.

**for HTML output:** 6753 \begin{warpHTML}

\abstractname User-redefinable title for the abstract.

Also over-written by the babel package.

```
6754 \providecommand*{\abstractname}{Abstract}
```

Some classes allow an optional name, so it is allowed here.

Env abstract

```

6755 \DeclareDocumentEnvironment{abstract}{0}{\abstractname}}
6756 {
6757 \LWR@forcenewpage
6758 \BlockClass{abstract}
6759 \BlockClassSingle{abstracttitle}{#1}
6760 }
6761 {
6762 \endBlockClass
6763 }

6764 \end{warpHTML}

```

## 69 Quote and verse

### 69.1 Attributions

`\attribution`  $\{ \langle name \rangle \}$

For use with quote, quotation, verse:

Ex: "A quotation." `\attribution{\textsc{Author Name}}\textsl{Book Title}`

**for HTML output:**

```

6765 \begin{warpHTML}
6766 \newcommand{\attribution}[1]{%
6767 \begin{BlockClass}{attribution}
6768 #1
6769 \end{BlockClass}
6770 }
6771 \end{warpHTML}

```

**for PRINT output:**

```

6772 \begin{warpprint}
6773 \newcommand{\attribution}[1]{
6774 \begin{flushright}
6775 \unskip
6776 #1
6777 \end{flushright}%
6778 }
6779 \end{warpprint}

```

### 69.2 Quotes, quotations

**for HTML output:** 6780 `\begin{warpHTML}`

Env quote

```

6781 \renewenvironment*{quote}

```

```

6782 {
6783 \LWR@forcenewpage
6784 \LWR@htmlblocktag{blockquote}
6785 }
6786 {\LWR@htmlblocktag{/blockquote}}
6787
6788 \renewenvironment*{quotation}
6789 {
6790 \LWR@forcenewpage
6791 \LWR@htmlblocktag{blockquotation}
6792 }
6793 {\LWR@htmlblocktag{/blockquotation}}

6794 \end{warpHTML}

```

### 69.3 Verse

When using `verse` or `memoir`, always place a `\\` after each line.

`\attrib` The documentation for the `verse` and `memoir` packages suggest defining an `\attrib` command, which may already exist in current documents, but it will only work for print output. `lwarp` provides `\attribution`, which works for both print and HTML output. To combine the two so that `\attrib` is used for print and `\attribution` is used for HTML:

```

\begin{warpHTML}
\let\attrib\attribution
\end{warpHTML}


```

Len `\vleftskip` These lengths are used by `verse` and `memoir` to control the left margin, and they may already be set by the user for print output. New lengths `\HTML\vleftskip` and `\HTMLleftmargini` are provided to control the margins in HTML output. These new lengths may be set by the user before any `verse` environment, and persist until they are manually changed again. One reason to change `\HTMLleftmargini` is if there is a wide `\flagverse` in use, such as the word “Chorus”, in which case the value of `\HTMLleftmargini` should be set to a wide enough length to contain “Chorus”. The default is wide enough for a stanza number.

Len `\leftmargini`

Len `\HTML\vleftskip`

Len `\HTMLleftmargini`

 **spacing** Horizontal spacing relies on *pdftotext*'s ability to discern the layout (`-layout` option) of the text in the HTML-tagged PDF output. For some settings of `\HTMLleftmargini` or `\HTMLleftskip` the horizontal alignment may not work out exactly, in which case a label may be shifted by one space.

#### 69.3.1 L<sup>A</sup>T<sub>E</sub>X core verse environment

for HTML output: 6795 `\begin{warpHTML}`

Env `verse`

```
6796 \renewenvironment{verse}
```

```

6797 {\let\\newline% lwarp
6798 \list}{\itemsep \z@
6799 \itemindent -1.5em%
6800 \listparindent\itemindent
6801 \rightmargin \leftmargin
6802 \advance\leftmargin 1.5em}%
6803 \item\relax}
6804 {\endlist}

6805 \end{warpHTML}

```

**for HTML & PRINT:** 6806 \begin{warpall}

### 69.3.2 verse and memoir

The following lengths are used by `verse` and `memoir`. They may be set in either print or HTML output, but are only used in HTML. This allows the user to set `\leftskip` and `\leftmargini` for print output, and optionally select different values for HTML.

Len `\HTMLvleftskip` Sets `\vleftskip` inside a verse environment in HTML.

```

6807 \newlength{\HTMLvleftskip}
6808 \setlength{\HTMLvleftskip}{1em}

```

Len `\HTMLleftmargini` Sets `\leftmargini` inside a verse environment in HTML.

```

6809 \newlength{\HTMLleftmargini}
6810 \setlength{\HTMLleftmargini}{4.5em}

```

```

6811 \end{warpall}

```

## 70 Verbatim and tabbing

**for HTML & PRINT:** 6812 \begin{warpall}

Len `\VerbatimHTMLWidth` Width to use in HTML Verbatim environment.

This width is used when placing line numbers to the right. Ignored during print output.

```

6813 \newlength{\VerbatimHTMLWidth}
6814 \setlength{\VerbatimHTMLWidth}{4in}
6815 \end{warpall}

```

**for HTML output:** 6816 \begin{warpHTML}

Bool `LWR@verbtags` Used to temporarily turn off verbatim tags while doing `\verbatiminput` in the HTML head.

```

6817 \newbool{LWR@verbtags}
6818 \booltrue{LWR@verbtags}

```

```
\LWR@atbeginverbatim [1: style] {2: negative \baselineskip \vspace} {3: class}
```

Encloses a verbatim environment with the given css class.

The use of `\textquotedbl` instead of `"` improves compatibility with `xeCJK`.

```
6819 \newcommand*\LWR@atbeginverbatim}[3]{}
6820 {%
```

Avoid excessive space between lines:

```
6821 \setlength{\parskip}{0ex}%
```

Stop generating HTML paragraph tags:

```
6822 \LWR@stoppars%
```

Create a new pre of the given class. The tags may temporarily be turned off for internal use, such as loading the MATHJAX script.

```
6823 \ifbool{\LWR@verbtags}{%
6824 \LWR@htmltag{pre class=\textquotedbl#3\textquotedbl%
6825 \ifthenelse{\equal{#1}{}}{\}{ style=\textquotedbl#1\textquotedbl}%
6826 }%
6827 \LWR@orignewline% pre
6828 \leavevmode\unskip\LWR@print@vspace*{-#2\baselineskip}%
6829 }{)%
```

Use a mono-spaced font to preserve horizontal positioning. If horizontal alignment is important for the user, use a mono-spaced font in the css for the verse class.

```
6830 \begingroup%
```

```
6831 % \LWR@print@normalsize%
6832 \LWR@origttfamily%
6833 \LWR@print@small%
```

Since inside a `<pre>`, restore the original list processing:

```
6834 \LWR@restoreoriglists%
```

Turn off `babel-french` extra space before punctuation:

```
6835 \LWR@FBcancel%
```

Do not produce HTML tags for `\hspace` inside a verse par. Restore plain `LATEX` `\hspace` functionality:

```
6836 \LWR@select@print@hspace%
6837 }
```

```
\LWR@afterendverbatim {(negative \baselineskip \vspace)}
```



Finishes enclosing a verbatim environment.

```
6838 \newcommand*\LWR@afterendverbatim}[1]{%
6839 \endgroup%
6840 \par%
```

At the end of the environment, close the pre:

```
6841 \ifbool{LWR@verbtags}{%
6842 \LWR@print@vspace*{-#1\baselineskip}%
6843 \noindent\LWR@htmltag{/pre}\LWR@orignewline% pre
6844 }{}}%
```

Resume regular paragraph handling:

```
6845 \LWR@startpars%
6846 }
```

`\verbatiminput`  $\{ \langle filename \rangle \}$

Patch `\verbatiminput` to add HTML tags:

```
6847 \let\LWRV@origverbatim@input\verbatim@input
6848
6849 \renewcommand{\verbatim@input}[2]{%
6850 \ifbool{LWR@verbtags}{\LWR@forcenewpage}{}%
6851 \LWR@atbeginverbatim{2.5}{Verbatim}%
6852 \LWRV@origverbatim@input{#1}{#2}%
6853 \LWR@afterendverbatim{1.5}%
6854 }
```

Env `verbatim`

```
6855 \AfterEndPreamble{
6856 \LWR@traceinfo{Patching verbatim.}
6857 \AtBeginEnvironment{verbatim}{%
6858 \LWR@forcenewpage%
6859 \LWR@atbeginverbatim{2.5}{verbatim}%
6860 }
6861 \AfterEndEnvironment{verbatim}{%
6862 \LWR@afterendverbatim{1}%
6863 }
6864 }
```

Env `tabbing` The `tabbing` environment works, except that `svg math` and `lateximages` do not yet work inside the environment.

 **math in tabbing** If `math` is used inside `tabbing`, place `tabbing` inside a `lateximage` environment, which will render the entire environment as a single `svg` image.

```
6865 \newcommand*\LWR@HTML@tabbing}{%
6866 \LWR@forcenewpage%
```

```

6867 \LWR@atbeginverbatim{3}{tabbing}%
6868 \LWR@print@tabbing%
6869 }
6870
6871 \newcommand*\LWR@HTML@endtabbing}{%
6872 \LWR@print@endtabbing%
6873 \LWR@afterendverbatim{1}%
6874 }
6875
6876 \LWR@formatted{tabbing}
6877 \LWR@formatted@endtabbing}

6878 \end{warpHTML}

```

## 71 Theorems

`\newtheorem`  $\{\langle text \rangle\} [\langle counter \rangle] \text{-or-} [\langle oldname \rangle] \{\langle text \rangle\}$

A few minor changes are made to supply HTML tags.

- The entire theorem is placed into a `<div>` of class `theoremcontents`.
- The label for each theorem is placed inside a `<span>` of class `theoremlabel`.
- The contents are placed inside a `<div>` of class `theoremcontents`.

**for HTML output:** `6879 \begin{warpHTML}`

`\@begintheorem`  $\{\langle name \rangle\} \{\langle number \rangle\}$

```

6880 \renewcommand{\@begintheorem}[2]{%
6881 \LWR@forcenewpage
6882 \BlockClass{theoremcontents}
6883 \trivlist
6884 \item[\InlineClass{theoremlabel}{#1\ #2\ }]\itshape
6885 }

```

`\@opargbegintheorem`  $\{\langle name \rangle\} \{\langle number \rangle\} \{\langle oparg \rangle\}$

```

6886 \renewcommand{\@opargbegintheorem}[3]{%
6887 \LWR@forcenewpage
6888 \BlockClass{theoremcontents}
6889 \trivlist
6890 \item[\InlineClass{theoremlabel}{#1\ #2\ (#3)\ }]\itshape
6891 }

```

`\@endtheorem`

```

6892 \renewcommand*\@endtheorem}{%

```

```

6893 \endtrivlist
6894 \endBlockClass% theoremcontents
6895 }

6896 \end{warpHTML}

```

## 72 Lists

The environments `itemize`, `enumerate`, and `description` are patched when `lwarp` is started. These patches support the standard  $\LaTeX$  environments, as well as those of `enumerate`, `enumitem`, and `paralist`, and at least the French version of `babel`. Additional patches are done on a package-specific basis.

The  $\LaTeX$  source for `itemize` and `enumerate` are found in `source2e`, but the source for `description` is found in `article.cls`, etc.

**empty item** To have an empty item, use `\mbox{}` or a trailing backslash. This forces a new line in print output, matching the new line which will appear in HTML output. Ex:

---


```

begin{itemize}
item \mbox{}
 \begin{itemize}
...
 \end{itemize}
item \
 \begin{itemize}
...
 \end{itemize}

```

---

`\makelabel` While inside a list environment, `lwarp` nullifies a number of  $\TeX$  horizontal skip and fill commands, allowing the user to define `\makelabel` for print mode while HTML mode ignores those commands.

 **label font** When defining `\makelabel` in a list environment, use `\textbf` etc. instead of `\bfseries`.

### 72.1 List environment

**for HTML output:** `6897 \begin{warpHTML}`

`\LWR@printcloselist` May be locally redefined by `enumerate` or `description`.

```
6898 \newcommand*{\LWR@printcloselist}{\LWR@printcloseitemize}
```

`\LWR@printopenlist` May be locally redefined by `enumerate` or `description`.

```
6899 \newcommand*\LWR@printopenlist{\ul style="\LWR@print@mbbox{list-style-type:none}"}
```

`\@mklab` Removes PDF spacing.

```
6900 \AtBeginDocument{
6901 \def\@mklab#1{%
6902 % \hfil %
6903 #1}
6904 \let\makeLabel\@mklab
6905 }
```

`\@donoparitem` Modified for HTML output by replacing T<sub>E</sub>X boxes with plain text. Also removes PDF spacing.

```
6906 \def\@donoparitem{%
6907 \@noparitemfalse
6908 % \global\setbox\@labels\hbox{\hskip -\leftmargin
6909 % \unhbox\@labels
6910 % \hskip \leftmargin}%
6911 % \if@minipage\else
6912 % \@tempskipa\lastskip
6913 % \vskip -\lastskip
6914 % \advance\@tempskipa\@outerparskip
6915 % \advance\@tempskipa -\parskip
6916 % \vskip\@tempskipa
6917 % \fi
6918 }
```

`\@item` Modified for HTML output by replacing T<sub>E</sub>X boxes with plain text. Also removes PDF spacing.

```
6919 \def\LWR@HTML@item[#1]{%
6920 \LWR@traceinfo{@item}
6921 \if@noparitem
6922 \@donoparitem
6923 \else
6924 % \if@inlabel
6925 % \indent
6926 % \par
6927 % \fi
6928 \ifhmode
6929 % \unskip\unskip
6930 % \par
6931 \fi
6932 \if@newlist
6933 \if@nobreak
6934 \@nbitem
6935 \else
6936 % \addpenalty\@beginparpenalty
6937 % \addvspace\@topsep
6938 % \addvspace{-\parskip}%
6939 \fi
6940 \else
```

```

6941 % \addpenalty\@itempenalty
6942 % \addvspace\itemsep
6943 % \fi
6944 % \global\@inlabeltrue
6945 % \fi
6946 % \everypar{%
6947 % \@minipagefalse
6948 % \global\@newlistfalse

6949 % \if@inlabel
6950 % \global\@inlabelfalse

6951 % {\setbox\z@\lastbox
6952 % \ifvoid\z@
6953 % \kern-\itemindent
6954 % \fi}%

6955 % \box\@labels
6956 % \penalty\z@
6957 % \fi

6958 % \if@nobreak
6959 % \@nobreakfalse
6960 % \clubpenalty \@M
6961 % \else
6962 % \clubpenalty \@clubpenalty
6963 % \everypar{}%
6964 % \fi}%

6965 % \if@noitemarg
6966 % \@noitemargfalse
6967 % \if@nibrlist

6968 % \refstepcounter\@listctr
6969 % \fi
6970 % \fi

6971 % \makeLabel{#1} % extra space
6972 % \sbox\@tempboxa{\makeLabel{#1}}%
6973 % \global\setbox\@labels\hbox{%
6974 % \unhbox\@labels
6975 % \hskip \itemindent
6976 % \hskip -\labelwidth
6977 % \hskip -\labelsep
6978 % \ifdim \wd\@tempboxa >\labelwidth
6979 % \box\@tempboxa

6980 % \else
6981 % \hbox to\labelwidth {\unhbox\@tempboxa}%
6982 % \fi
6983 % \hskip \labelsep}%
6984 % \ignorespaces%
6985 % }

```

`\@nbitem`

```
6986 \def\@nbitem{%
6987 % \@tempkipa\@outerparskip
6988 % \advance\@tempkipa -\parskip
6989 % \addvspace\@tempkipa
6990 }
```

`\LWR@listitem` [*label*]

Handles `\item` inside a list, `itemize`, or `enumerate`.

See `\LWR@openparagraph` where extra `\hspace` is used to leave room for the label while inside a list during paragraph construction.

```
6991 \newcommand*\LWR@listitem{%
6992 \LWR@stoppars%
6993 \LWR@startnewdepth{\LWR@depthlistitem}{\LWR@printcloselistitem}%
6994 \LWR@htmltag{li}%
6995 \LWR@startpars%
6996 \LWR@origitem%
6997 }
```

`\LWR@nulllistfills` Nullifies various T<sub>E</sub>X fill commands, in case they are used inside `\makeLabel`. Problems are caused when these are nullified all the time.

```
6998 \newcommand*\LWR@nulllistfills{%
6999 \renewcommand*\hss{}%
7000 \renewcommand*\llap[1]{##1}%
7001 \renewcommand*\rlap[1]{##1}%
7002 \renewcommand*\hfil{}%
7003 \renewcommand*\hfilneg{}%
7004 \renewcommand*\hfill{}%
7005 }
```

Env `list` {*label*} {*commands*}

```
7006 \newcommand*\LWR@liststart{%
7007 \LWR@traceinfo{\LWR@liststart}%
7008 \LWR@stoppars%
7009 \LWR@pushoneclose{\LWR@depthlist}{\LWR@printcloselist}%
7010 \LWR@htmltag{\LWR@printopenlist}\LWR@originewline%
7011 \LWR@startpars%
7012 \setlength{\topsep}{0pt}%
7013 \setlength{\partopsep}{0pt}%
7014 \setlength{\itemsep}{0pt}%
7015 \setlength{\parsep}{0pt}%
7016 \setlength{\leftmargin}{0pt}%
7017 \setlength{\rightmargin}{0pt}%
7018 \setlength{\listparindent}{0pt}%
7019 \setlength{\itemindent}{0pt}%
7020 \setlength{\labelsep}{1em}%
7021 \LWR@nulllistfills%
7022 }
```

```

7023 \newcommand*{\LWR@listend}{%
7024 \LWR@traceinfo{\LWR@listend}%
7025 \LWR@stoppars%
7026 \LWR@closeprevious{\LWR@depthlist}%
7027 \LWR@startpars%
7028 }

```

## 72.2 Itemize

`\LWR@itemizeitem` [*<label>*]

Handles `\item` inside an itemize or enumerate.

See `\LWR@openparagraph` where extra `\hspace` is used to leave room for the label while inside a list during paragraph construction.

```

7029 \newcommand*{\LWR@itemizeitem}{%
7030 \LWR@stoppars%
7031 \LWR@startnewdepth{\LWR@depthlistitem}{\LWR@printcloseitem}%
7032 \LWR@htmltag{li}%
7033 \LWR@startpars%
7034 \LWR@origitem%
7035 }

```

Env `itemize` [*<options>*]

```

7036 \newcommand*{\LWR@itemizestart}{%
7037 \renewcommand*{\LWR@printcloseitem}{\LWR@printcloseitemize}
7038 \renewcommand*{\LWR@printopenlist}{ul style="\LWR@print@embox{list-style-type:none}}
7039 \let\item\LWR@itemizeitem%
7040 \LWR@nulllistfills%
7041 }

```

## 72.3 Enumerate

An HTML unordered list is used with customized L<sup>A</sup>T<sub>E</sub>X-generated labels.

Env `enumerate` [*<options>*]

```

7042 \newcommand*{\LWR@enumeratestart}{%
7043 \renewcommand*{\LWR@printcloseitem}{\LWR@printcloseitemize}
7044 \renewcommand*{\LWR@printopenlist}{ul style="\LWR@print@embox{list-style-type:none}}
7045 \let\item\LWR@itemizeitem%
7046 \LWR@nulllistfills%
7047 }

```

## 72.4 Description

`\LWR@descitem` [*<label>*] Handles an `\item` inside a description.

```
7048 \newcommand*{\LWR@descitem}[1][]%
7049 {%
7050 \LWR@stoppars%
7051 \LWR@setlatestname{#1}%
7052 \LWR@startnewdepth{\LWR@depthlistitem}{\LWR@printclosedescitem}%
```

Temporarily disable `\hspace`, which `article.cls`, etc. use per `\item` for descriptions only. This causes `lwarp` to mistakenly place an empty span between HTML list tags.

```
7053 \LWR@select@html@nohspace%
```

Process the original `\item` code:

```
7054 \LWR@origitem[]%
```

Restore `\hspace` for use in the item text:

```
7055 \LWR@select@html@hspace%

7056 \LWR@htmltag{dt}#1\LWR@htmltag{/dt}%
7057 \LWR@orignewline%
7058 \LWR@htmltag{dd}%
7059 \LWR@startpars%
7060 }
```

Env `description` [*<options>*]

```
7061 \newcommand*{\LWR@descriptionstart}{%
7062 \renewcommand*{\LWR@printcloselist}{\LWR@printclosedescription}
7063 \renewcommand*{\LWR@printopenlist}{dl}
7064 \let\item\LWR@descitem%
7065 \LWR@nulllistfills%
7066 }
```

## 72.5 Patching the lists

`\LWR@patchlists` Patches list environments.

`\LWR@patchlists` remembers `\item` as defined by whatever packages have been loaded, then patches the `itemize`, `enumerate`, and `description` environments and `\item`. This works with the native L<sup>A</sup>T<sub>E</sub>X environments, as well as those provided by `enumitem`, `enumerate`, and `paralist`.

```
7067 \newcommand*{\LWR@patchlists}{%
7068 \LetLtxMacro\item\LWR@listitem%
```



```

7069 \LetLtxMacro\@item\LWR@HTML@item%
7070 \renewcommand*\@trivlist}{%
7071 \LWR@traceinfo{@trivlist start}%
7072 \LWR@liststart%
7073 \LWR@orig@trivlist%
7074 \LWR@traceinfo{@trivlist done}%
7075 }%
7076 \renewcommand*\@trivlist}{%
7077 \LWR@traceinfo{trivlist}%
7078 \LWR@origtrivlist%
7079 }%
7080 \renewcommand*\endtrivlist}{%
7081 \LWR@traceinfo{endtrivlist start}%
7082 \LWR@origendtrivlist\LWR@listend%
7083 \LWR@traceinfo{endtrivlist done}%
7084 }%
7085 \renewcommand*\itemize}{%
7086 \LWR@itemizestart\LWR@origitemize%
7087 }%
7088 \renewcommand*\enumerate}{%
7089 \LWR@enumeratestart\LWR@origenumerate%
7090 }%
7091 \renewcommand*\description}{%
7092 \LWR@descriptionstart\LWR@origdescription%
7093 }%
7094 }

```

`\LWR@restoreoriglists` Restores the original trivlist environment.

```

7095 \newcommand*\LWR@restoreoriglists}{%
7096 \LWR@traceinfo{LWR@restoreoriglists}%
7097 \LetLtxMacro\item\LWR@origitem%
7098 \LetLtxMacro\@item\LWR@orig@item%
7099 \let\@trivlist\LWR@orig@trivlist%
7100 \let\trivlist\LWR@origtrivlist%
7101 \let\endtrivlist\LWR@origendtrivlist%
7102 \LetLtxMacro\itemize\LWR@origitemize%
7103 \LetLtxMacro\enditemize\LWR@endorigitemize%
7104 \LetLtxMacro\enumerate\LWR@origenumerate%
7105 \LetLtxMacro\endenumerate\LWR@endorigenumerate%
7106 \LetLtxMacro\description\LWR@origdescription%
7107 \LetLtxMacro\enddescription\LWR@endorigdescription%
7108 \let\@mkLab\LWR@orig@mklab%
7109 \let\makeLabel\LWR@origmakeLabel%
7110 \let\@donoparitem\LWR@orig@donoparitem%
7111 \let\@nbitem\LWR@orig@nbitem%
7112 }

7113 \end{warpHTML}

```

## 73 Tabular

This is arguably the most complicated part of the entire package. Numerous tricks are employed to handle the syntax of the L<sup>A</sup>T<sub>E</sub>X core and the various tabular-related packages.

### 73.1 Limitations

Tabular mostly works as expected, but pay special attention to the following, especially if working with environments, macros inside tabulars, multirows, \* column specifiers, siunitx S columns, or the packages multirow, longtable, supertabular, or xtab.

#### Defining macros and environments:

⚠ Misplaced alignment  
tab character &

- When defining environments or macros which include tabular and instances of the & character, it may be necessary to make & active before the environment or macro is defined, then restore & to its default catcode after, using the following commands. These are ignored in print mode.

```
\StartDefiningTabulars
<define macros or environments using tabular and & here>
\StopDefiningTabulars
```

⚠ floatrow

This includes before and after defining any macro which used \ttabbox from floatrow.

⚠ tabular inside another  
environment

- When creating a new environment which contains a tabular environment, lwarp's emulation of the tabular does not automatically resume when the containing environment ends, resulting in corrupted HTML rows. To fix this, use \ResumeTabular as follows. This is ignored in print mode.

```
\StartDefiningTabulars % because & is used in a
definition
\newenvironment{outerenvironment}
{
\tabular{cc}
left & right \\
}
{
\TabularMacro\ResumeTabular
left & right \\
\endtabular
}
\StopDefiningTabulars
```

#### Cell contents:

⚠ macro in a table

- Using a custom macro inside a tabular data cell may result in an extra HTML data cell tag, corrupting the HTML table. To avoid this, use \TabularMacro just before the macro. This is ignored in print mode.

```
\TabularMacro\somemacro & more row contents \\
```

#### Column specifiers:

- ⚠ **\* column specification**
  - \* in a column specification is not used (so far). Repeat the column type the correct number of times.
- @ and !
  - Only one each of @ and ! is used at each column, and they are used in that order.
- \multirow
  - In \multirow cells, the print version may have extra instances of <, >, @, and ! cells on the second and later rows in the \multirow which do not appear in the HTML version.
- ⚠ \newcolumntype
  - \newcolumntype is ignored; unknown column types are set to l.

**Rules:**

- vertical rules
  - Doubled \hlines, \midrules, and vertical rules are supported.
- width and trim
  - Vertical rules next to either side of an @ or ! column are displayed on both sides of the column.
- full-width rules
  - Width options are honored. Trim options are converted to rounded top corners. Trim corners are not rounded with @ or ! columns, and full-width rules ignore trim.
- combined rules
  - \toprule, \midrule, \bottomrule, and \hline ignore trim. When given an optional width, each cell is styled to create the custom border. Without an optional width, the entire row is given a class to assign the standard border.
  - If you wish to use \cmidrule followed by \bottomrule, it may be necessary to use:
 

```
\cmidrule{2-3} \l[-2ex]
\bottomrule
```

 The optional -2ex is ignored in HTML, but improves the visual formatting in the print output.
- ⚠ \warpprintonly
  - For \toprule and \bottomrule, when combined with a warpprint or warpHTML environment, if a “Misplaced \noalign” error occurs, change
 

```
This & That \endhead
```

 to
 

```
\warpprintonly{This & That \endhead}
```

 and likewise with the other \end headings. Keep the \endfirsthead row unchanged, as it is still relevant to HTML output.

**Other:**

- longtable headings
  - tabularx ignores the width, but X columns do produce paragraph columns or multicolumns.
  - For longtable, place headings and footings which do not apply to HTML inside \warpprintonly{ }.
- ⚠ S columns
  - For S columns (from the siunitx package), while producing print output, anything non-numeric must be placed inside { } braces, including commands such as \multirow. While producing HTML output, though, anything placed inside braces is not seen by lwarp’s tabular handling algorithm. To resolve this problem, make a copy of the row, with one version for print output, containing the extra braces, and another version for HTML output, without the extra braces, such as:
 

```
\warpprintonly{1 & 2 & {\multirow{2}{2cm}{Text}} & 3 \\\}
\warpHTMLonly{1 & 2 & \multirow{2}{2cm}{Text} & 3 \\\}
```

for HTML output: 7114 \begin{warpHTML}

## 73.2 Temporary package-related macros

These macros are temporary placeholders for macros defined by various packages. If the relevant package is not loaded, these placeholders are used instead.

### 73.2.1 arydashln

Emulated by the original L<sup>A</sup>T<sub>E</sub>X non-dashed versions.

```
7115 \LetLtxMacro\hdashline\hline
7116 \LetLtxMacro\cdashline\cline
7117 \LetLtxMacro\firsthdashline\hline
7118 \LetLtxMacro\lasthdashline\hline
```

## 73.3 Token lookahead

Used by `\LWR@futurenonSPACElet` to look at the next token.

`\LWR@mynexttoken`

```
7119 \newcommand\LWR@mynexttoken\relax
```

`\futurelet` copies the next token then executes a function to analyze

`\LWR@futurenonSPACElet` does the same, but ignores intervening white space

Based on the `booktabs` style:

`\LWR@futurenonSPACElet`

```
7120 \def\LWR@futurenonSPACElet#1{\def\LWR@cs{#1}%
7121 \afterassignment\LWR@fnslone\let\nexttoken= }
7122 \def\LWR@fnslone{\expandafter\futurelet\LWR@cs\LWR@fnsltwo}%
7123 \def\LWR@fnsltwo{%
7124 \expandafter\ifx\LWR@cs\@sptoken\let\next=\LWR@fnslthree%
7125 \else\let\next=\nexttoken\fi\next}
7126 \def\LWR@fnslthree{\afterassignment\LWR@fnslone\let\next= }
```

`\LWR@getmynexttoken` Looks ahead and copies the next token into `\LWR@mynexttoken`.

```
7127 \newcommand*\LWR@getmynexttoken}{%
7128 \LWR@traceinfo{LWR@getmynexttoken}%
7129 % nothing must follow this next line
7130 \LWR@futurenonSPACElet\LWR@mynexttoken\LWR@tabledatacolumnntag
7131 }
```

### 73.4 Tabular variables

Bool LWR@startedrow True if should print a row tag before this column.

```
7132 \newbool{LWR@startedrow}
7133 \boolfalse{LWR@startedrow}
```

Bool LWR@tabularcelladded True if have added a data cell for this position.

```
7134 \newbool{LWR@tabularcelladded}
7135 \boolfalse{LWR@tabularcelladded}
```

Ctr LWR@hlines Number of \hlines or \midrules above the next row.

```
7136 \newcounter{LWR@hlines}
```

Ctr LWR@hdashedlines Number of \arydshln dashed lines above the next row.

```
7137 \newcounter{LWR@hdashedlines}
```

Bool LWR@doingtbrule True if the next row will have a top/bottom rule above it.

```
7138 \newbool{LWR@doingtbrule}
7139 \boolfalse{LWR@doingtbrule}
```

Bool LWR@doingcmidrule True if the next row will have a cmidrule above it.

This is used by \LWR@tabularfinishrow to force a final empty row to create the border for the \cmidrule.

```
7140 \newbool{LWR@doingcmidrule}
7141 \boolfalse{LWR@doingcmidrule}
```

Bool LWR@tableparcell True if are handling a paragraph inside a table cell, so must close the paragraph tag before moving on.

```
7142 \newbool{LWR@tableparcell}
```

Bool LWR@skippingmrowcell True if are doing an empty \multirow cell, and thus there is no data tag to close.

```
7143 \newbool{LWR@skippingmrowcell}
```

Bool LWR@skippingmcolrowcell True if are doing an empty \multicolumnrow cell, and thus there is no data tag to close, and do not print @ and ! columns.

```
7144 \newbool{LWR@skippingmcolrowcell}
```

Bool LWR@usedmultirow Used to error if used \multirow or \multicolumnrow without using \mrowcell or \mcolrowcell.

```
7145 \newbool{LWR@usedmultirow}
```

Bool LWR@foundmrowcell Used to error if used `\multirow` or `\multicolumnrow` without using `\mrowcell` or `\mcolrowcell`.

7146 `\newbool{LWR@foundmrowcell}`

Bool LWR@skipatbang True if just finished a `\multicolumn` so should not create the trailing `@` or `!` columns table data cells.

7147 `\newbool{LWR@skipatbang}`

Bool LWR@emptyatbang True if finishing a row and should print empty `@` or `!` column table data cells.

7148 `\newbool{LWR@emptyatbang}`

Bool LWR@intabularmetadata True if are in a tabular but not in a data cell. Used to prevent extra HTML breaks if not inside table data.

7149 `\newbool{LWR@intabularmetadata}`

7150 `\boolfalse{LWR@intabularmetadata}`

Ctr LWR@tabularDepth Tracks whether `&` is being used inside a tabular.

7151 `\newcounter{LWR@tabulardepth}`

7152 `\setcounter{LWR@tabulardepth}{0}`

Ctr LWR@tabularpardepth Tracks whether should look ahead at the next token when encountering a `\par` while processing tabular contents.

When `LWR@tabularpardepth` is deeper than `LWR@tabulardepth` then `lwarp` has started looking at the contents of the tabular, and thus any `\pars` encountered must be followed by another token lookahead.

7153 `\newcounter{LWR@tabularpardepth}`

7154 `\setcounter{LWR@tabularpardepth}{0}`

7155 `\newcommand*{\LWR@colsresult}{}` %temp storage for column format results

7156 `\newcommand*{\LWR@pposition}{}`

7157 `\newcommand*{\LWR@pleft}{}`

7158 `\newcommand*{\LWR@pright}{}`

LWR@tablecolspec Holds the parsed column specification, of total width `LWR@tabletotalLaTeXcols`, not counting `@` and `!` columns.

Will contain a string such as `lrrccpc`, exactly one letter per `LATEX` table column, without `@`, `!`, `>`, `<`, or the vertical bar.

`\LWR@strresult` Holds the result of `Str` functions.

7159 `\providecommand*{\LWR@strresult}{}`

7160 `\providecommand*{\LWR@strresulttwo}{}`

`\LWR@origcolspec` Holds the original column specs given to `tabular`.

7161 `\newcommand*\LWR@origcolspec{}`

Ctrl `LWR@tablecolspecwidth` Holds the number of tokens in the table columns specification.

This includes one for each `@`, `!`, `<`, `>` column, and also one for each of the parameters of `p`, `@`, `!`, `<`, `>` columns, and three for each `D` column.

(This is not the total # of  $\LaTeX$  columns in the table.)

7162 `\newcounter{LWR@tablecolspecwidth}`

Ctrl `LWR@tablecolspecindex` While parsing the  $\LaTeX$  table column specification, starts at 1 and is incremented per token of the specification.

7163 `\newcounter{LWR@tablecolspecindex}`

Ctrl `LWR@tableLaTeXcolindex` While producing the table, resets to 1 at the start of the table and also at each end of line, and is incremented by 1 by each ampersand.

7164 `\newcounter{LWR@tableLaTeXcolindex}`

Ctrl `LWR@tabletotalLaTeXcols` While parsing a table column specification, begins at 0 and increments by 1 per  $\LaTeX$  table column. Eventually holds the final number of  $\LaTeX$  table columns in each row, not counting `@` and `!` columns. (In `HTML`, `@` and `!` cells become their own columns, but are not included in `LWR@tabletotalLaTeXcols`.)

7165 `\newcounter{LWR@tabletotalLaTeXcols}`

Ctrl `LWR@tabletotalLaTeXcolsnext` Holds the next  $\LaTeX$  table column index while parsing, equal to one more than `LWR@tabletotalLaTeXcols`.

7166 `\newcounter{LWR@tabletotalLaTeXcolsnext}`

`LWR@colatspec` A data array of specifications for `@` columns. The leftmost's index is `leftedge`, the others are counter values. See section 43.

`LWR@colbangspec` A data array of specifications for `!` columns. The leftmost's index is `leftedge`, the others are counter values. See section 43.

`LWR@colbeforespec` A data array of specifications for `>` columns.

`LWR@colafterspec` A data array of specifications for `<` columns.

`LWR@colbarspec` A data array of specifications for vertical rules.

### 73.5 Handling `&`, `@`, `!`, and `bar`

For technical discussion regarding problems redefining `\&`, See:

<http://tex.stackexchange.com/questions/11638/>

[where-do-i-find-futurelets-nasty-behaviour-documented/11860#11860](http://tex.stackexchange.com/questions/11638/where-do-i-find-futurelets-nasty-behaviour-documented/11860#11860)

`\LWR@instertatbangcols`

```

7167 \newcommand*{\LWR@insertatbangcols}{%
7168 \ifbool{\LWR@skipatbang}%
7169 {}%
7170 {%
7171 \LWR@printatbang{at}{\arabic{\LWR@tableLaTeXcolindex}}%
7172 \LWR@printatbang{bang}{\arabic{\LWR@tableLaTeXcolindex}}%
7173 }%
7174 }

```

`\LWR@closetabledatacell` If `\LWR@skippingmrowcell` or `\LWR@skippingmcolrowcell` then there is no data tag to close. Otherwise, close any paragraphs, then close the data tag.

```

7175 \newcommand*{\LWR@closetabledatacell}{%
7176 \LWR@stoppars%
7177 \global\booltrue{\LWR@intabularmetadata}%
7178 \ifbool{\LWR@exitingtabular}{}%
7179 {% not exiting tabular
7180 \ifboolexpr{bool{\LWR@skippingmrowcell} or bool{\LWR@skippingmcolrowcell}}%
7181 {%

```

If not skipping a `\multicolumnrow` cell, insert the @ and ! columns after this non-existent column.

```

7182 \ifbool{\LWR@skippingmcolrowcell}%
7183 {}%
7184 {\LWR@insertatbangcols}%
7185 }%
7186 {% not skippingmrowcell

```

Insert any < then any @ and ! column contents, unless muted for the `\bottomrule` or a `\multicolumn`:

```

7187 \unskip%
7188 \ifboolexpr{%
7189 bool{\LWR@tabularmutemods} or
7190 bool{\LWR@skipatbang} or
7191 bool{\LWR@emptyatbang}
7192 }%
7193 {}%
7194 {\LWR@getexparray{\LWR@colafterspec}{\arabic{\LWR@tableLaTeXcolindex}}}%

```

Close paragraphs:

```

7195 \ifbool{\LWR@tableparcell}{\LWR@stoppars}{}%
7196 \global\boolfalse{\LWR@tableparcell}%

```

Close the table data cell.

Close any color <div>s.

```

7197 \whileboolexpr{test {\ifnumcomp{\value{\LWR@cellcolordepth}}{>}{0}}}{%

```



```

7198 \LWR@htmltag{/div}\LWR@orignewline%
7199 \addtocounter{LWR@cellcolordepth}{-1}%
7200]%

```

Skip the @ and ! cells if are closing a multicolumn cell.

```

7201 \leavevmode\unskip\LWR@htmltag{/td}\LWR@orignewline%
7202 \global\booltrue{LWR@tabularcelladded}%
7203 \LWR@insertatbangcols%
7204]% not skipping mrowcell
7205]% not exiting tabular
7206 \global\boolfalse{LWR@skippingmrowcell}%
7207 \global\boolfalse{LWR@skippingmcolrowcell}%
7208 \global\boolfalse{LWR@skipatbang}%

```

Color control. Column is set by >{} for each cell, so it must be cleared here.

```

7209 \gdef\LWR@cellHTMLcolor{}
7210 \gdef\LWR@columnHTMLcolor{}
7211 \setcounter{LWR@cellcolordepth}{0}
7212 }

```

When not used inside a tabular, & performs its original function as recorded here ( with catcode 4 ).

```

7213 \let\LWR@origampmacro&
7214 \end{warpHTML}

```

### 73.5.1 Handling &

**for HTML output:** 7215 \begin{warpHTML}

& Will behave depending on whether it is being used inside tabular.

& is redefined to test whether it is inside a tabular environment, in which case it performs special processing for HTML conversion. If not, it behaves normally.

```

7216 \newcommand*\LWR@tabularampersand}{%
7217 \LWR@traceinfo{LWR@tabularampersand}%
7218 \ifnumcomp{\value{LWR@tabulardepth}}{>}{0}}%
7219 {%

```

If not skipping a multirow cell, close the current data cell.

```

7220 \unskip%
7221 \LWR@closetabledatacell%

```

Move to the next column.

```

7222 \addtocounter{LWR@tableLaTeXcolindex}{1}%

```

Have not yet added data in this column:

```
7223 \global\boolfalse{LWR@tabularcelladded}%
```

Look at the next token to decide multi or single column data tag.

```
7224 \LWR@getmynexttoken%
7225 }%
```

If not inside a tabular, performs the original action:

```
7226 {\LWR@origampmacro}%
7227 }
```

& is left with its original catcode for now.

tikz package seems to require & be left alone until after tikz has been loaded. Also, cleveref uses the ampersand in one of its options.

& is made active inside a tabular.

& is left alone when in math alignments.

### 73.5.2 Filling an unfinished row

`\LWR@tabularfinishrow` Adds empty table cells if necessary to finish the row.

At the end of the table, if any bottom rules are requested then an empty row must be generated to form the borders which show the rules.

```
7228 \newcommand*{\LWR@tabularfinishrow}{%
```

If not exiting the tabular, or doing a rule, or have already started a row, finish this row:

```
7229 \ifboolexpr{%
7230 not bool {LWR@exitingtabular} or%
7231 bool{LWR@doingtbrule} or%
7232 bool{LWR@doingcmidrule} or%
7233 test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
7234 test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}} or%
7235 bool{LWR@startedrow}%
7236 }{%
```

To temporarily turn off `LWR@exitingtabular` so that table data tags will still be generated:

If generating a final row for the `\bottomrule` borders, turn off the @, !, <, and > column output:

```
7237 \ifbool{LWR@exitingtabular}{%
7238 \global\booltrue{LWR@tabularmutemods}%
7239 }{%
```

```
7240 \global\boolfalse{LWR@tabularmutemods}%
7241 }%
```

Locally reenable the table data tags until finished with the final row:

```
7242 \global\boolfalse{LWR@exitingtabular}%
```

Generate table data tags and ampersands until the right edge:

```
7243 \whileboolexpr{%
7244 test {
7245 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}{\value{LWR@tabletotalLaTeXcols}}
7246 } or %
7247 (%
7248 bool{LWR@intabularmetadata} and%
7249 not bool{LWR@tabularcelladded} and%
7250 test {
7251 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}{\value{LWR@tabletotalLaTeXcols}}
7252 }%
7253)%
7254 }%
7255 {%
7256 \LWR@tabledatasinglecolumnntag%
```

The following is essentially `\LWR@tabularampersand` with `LWR@emptyatbang` added to empty the following cells:

```
7257 \LWR@closetabledatacell%
7258 \addtocounter{LWR@tableLaTeXcolindex}{1}%
7259 \global\boolfalse{LWR@tabularcelladded}%
7260 \global\booltrue{LWR@emptyatbang}%
```

Starts the next cell:

```
7261 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}{\value{LWR@tabletotalLaTeXcols}}%
7262 {\LWR@getmynexttoken}%
7263 }%
7264 }%
```

Reenable the original `LWR@exitingtabular` to close the entire table:

```
7265 \ifbool{LWR@tabularmutemods}{%
7266 \global\booltrue{LWR@exitingtabular}%
7267 }{%
7268 \global\boolfalse{LWR@exitingtabular}%
7269 }%
7270 \global\boolfalse{LWR@tabularmutemods}%

7271 \global\boolfalse{LWR@emptyatbang}%
7272 }{}% ifboolexpr
7273 }
```

### 73.6 Handling \\

Inside tabular, \\ is redefined to \LWR@tabularendofline

Throws away options \\[dim] or \\\*

\LWR@tabularendofline

```
7274 \NewDocumentCommand{\LWR@tabularendofline}{s o}{%
```

Finish the row:

```
7275 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}{\value{LWR@tabletotalLaTeXcols}}{%
7276 {\LWR@tabularfinishrow}%
7277 {\LWR@closetabledatacell}%
7278 \LWR@htmltag{/tr}\LWR@originewline%
```

xcolor row color support:

```
7279 \@rowc@lors%
```

No longer inside a data cell:

```
7280 \global\booltrue{LWR@intabularmetadata}%
```

Not yet started a table row:

```
7281 \global\boolfalse{LWR@startedrow}%
```

Additional setup:

```
7282 \setcounter{LWR@hlines}{0}%
7283 \setcounter{LWR@hdashedlines}{0}%
7284 \global\boolfalse{LWR@doingtbrule}%
7285 \global\boolfalse{LWR@doingcmidrule}%
7286 \LWR@clearmidrules%
7287 \gdef\LWR@rowHTMLcolor{}
```

Start at first column:

```
7288 \setcounter{LWR@tableLaTeXcolindex}{1}%
```

Have not yet added data in this column:

```
7289 \global\boolfalse{LWR@tabularcelladded}%
```

Allow T<sub>E</sub>X to flush the pending paragraph. Not doing so causes a slowdown for very large tables.

```
7290 \LWR@stoppars
```

```
7291 \LWR@origpar
```

Look at the next token to decide between single column data tag or a special case:

```
7292 \LWR@getmynexttoken%
7293 }
```

### 73.7 Looking ahead in the column specifications

`\LWR@columnspeclookahead`  $\langle offset \rangle$

Looks offset tokens ahead in the column specification, setting `\LWR@strresulttwo`.

The `w` column alignment will be seen as a single unit such as `{c}`.

```
7294 \newcommand*\LWR@columnspeclookahead}[1]{%
7295 \setcounter{LWR@tempcountone}{\value{LWR@tablecolspecindex}}%
7296 \addtocounter{LWR@tempcountone}{#1}%
7297 \fullexpandarg%
7298 \StrChar{\LWR@origcolspec}{\arabic{LWR@tempcountone}}[\LWR@strresulttwo]%
```

Get the contents of the first group in `\LWR@strresulttwo`:

```
7299 \exploregroups%
7300 \StrChar{\LWR@strresulttwo}{1}[\LWR@strresulttwo]%
7301 \noexploregroups%
7302 }
```

### 73.8 Parsing @, >, <, !, bar columns

Holds the parsed argument for @, >, <, or ! columns:

```
7303 \newcommand*\LWR@colparameter{}
```

`\LWR@parseatcolumn` Handles `@{text}` columns.

```
7304 \newcommand*\LWR@parseatcolumn}{%
```

Move to the next token after the '@':

```
7305 \LWR@traceinfo{at column}%
7306 \addtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token into `\LWR@colparameter`, expanding once:

```
7307 \LWR@traceinfo{about to read the next token:}%
7308 \expandarg%
7309 \StrChar{\LWR@origcolspec}%
7310 {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]
7311 \fullexpandarg%
```

Store the result into a data array, expanding once out of \LWR@colparameter:

```

7312 \LWR@traceinfo{have now read the next token}%
7313 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
7314 {% left edge of the table:
7315 \LWR@traceinfo{at the left edge}%
7316 \LWR@setexparray{LWR@colatspec}{leftedge}{\LWR@colparameter}%
7317 \LWR@traceinfo{at the left edge: %
7318 \LWR@getexparray{LWR@colatspec}{leftedge}}%
7319 }%
7320 {% not at the left edge:
7321 \LWR@traceinfo{not at the left edge}%
7322 \LWR@setexparray{LWR@colatspec}%
7323 {\arabic{LWR@tabletotalLaTeXcols}}{\LWR@colparameter}%
7324 \LWR@traceinfo{at \arabic{LWR@tabletotalLaTeXcols}: %
7325 \LWR@getexparray{LWR@colatspec}{\arabic{LWR@tabletotalLaTeXcols}}}%
7326 }%
7327 \let\LWR@colparameter\relax%
7328 \global\booltrue{LWR@validtablecol}%
7329 }

```

\LWR@parsebangcolumn Handles !{text} columns.

```
7330 \newcommand*{\LWR@parsebangcolumn}{%
```

Move to the next token after the '!':

```

7331 \LWR@traceinfo{bang column}%
7332 \addtocounter{LWR@tablecolspecindex}{1}%

```

Read the next token into \LWR@colparameter, expanding once:

```

7333 \LWR@traceinfo{about to read the next token:}%
7334 \expandarg%
7335 \StrChar{\LWR@origcolspec}%
7336 {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]
7337 \fullexpandarg%

```

Store the result into a data array, expanding once out of \LWR@colparameter:

```

7338 \LWR@traceinfo{have now read the next token}%
7339 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
7340 {% left edge of the table:
7341 \LWR@traceinfo{at the left edge}%
7342 \LWR@setexparray{LWR@colbangspec}{leftedge}{\LWR@colparameter}%
7343 }%
7344 {% not at the left edge:
7345 \LWR@traceinfo{not at the left edge}%
7346 \LWR@setexparray{LWR@colbangspec}%
7347 {\arabic{LWR@tabletotalLaTeXcols}}{\LWR@colparameter}%
7348 \LWR@traceinfo{bang \arabic{LWR@tabletotalLaTeXcols}: \LWR@colparameter!}%
7349 }%
7350 \let\LWR@colparameter\relax%
7351 \global\booltrue{LWR@validtablecol}%

```

7352 }

`\LWR@parsebeforecolumn` Handles `>{text}` columns.

7353 `\newcommand*{\LWR@parsebeforecolumn}{%`

Move to the next token after the '>':

7354 `\addtocounter{\LWR@tablecolspecindex}{1}%`

Read the next token, expanding once into `\LWR@colparameter`:

7355 `\expandarg%`

7356 `\StrChar{\LWR@origcolspec}%`

7357 `{\arabic{\LWR@tablecolspecindex}}[\LWR@colparameter]%`

7358 `\fullexpandarg%`

Store the result into a data array, expanding once out of `\LWR@colparameter`:

7359 `\LWR@setexparray{\LWR@colbeforespec}%`

7360 `{\arabic{\LWR@tabletotalLaTeXcolsnext}}{\LWR@colparameter}%`

7361 `\let\LWR@colparameter\relax%`

7362 `\global\booltrue{\LWR@validtablecol}%`

7363 }

`\LWR@parseaftercolumn` Handles `<{text}` columns.

7364 `\newcommand*{\LWR@parseaftercolumn}{%`

Move to the next token after the '<':

7365 `\addtocounter{\LWR@tablecolspecindex}{1}%`

Read the next token, expanding once into `\LWR@colparameter`:

7366 `\expandarg%`

7367 `\StrChar{\LWR@origcolspec}%`

7368 `{\arabic{\LWR@tablecolspecindex}}[\LWR@colparameter]%`

7369 `\fullexpandarg%`

Store the result into a data array, expanding once out of `\LWR@colparameter`:

7370 `\LWR@setexparray{\LWR@colafterspec}%`

7371 `{\arabic{\LWR@tabletotalLaTeXcols}}{\LWR@colparameter}%`

7372 `\let\LWR@colparameter\relax%`

7373 `\global\booltrue{\LWR@validtablecol}%`

7374 }

`\LWR@parsebarcolumn` Handles vertical rules.

7375 `\newcommand*{\LWR@parsebarcolumn}{%`

7376 `\LWR@traceinfo{\LWR@parsebarcolumn}%`

Remember the bar at this position:

```

7377 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
7378 {% left edge of the table:
7379 \edef\LWR@tempone{\LWR@getexparray{LWR@colbarspec}{leftedge}}%
7380 \ifdefstring{\LWR@tempone}{tvertbarl}%
7381 {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbarldouble}}%
7382 {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbarl}}%
7383 }%
7384 {% not at the left edge:
7385 \edef\LWR@tempone{%
7386 \LWR@getexparray{LWR@colbarspec}{\arabic{LWR@tabletotalLaTeXcols}}%
7387 }%
7388 \ifdefstring{\LWR@tempone}{tvertbarr}%
7389 {%
7390 \LWR@setexparray{LWR@colbarspec}%
7391 {\arabic{LWR@tabletotalLaTeXcols}}{tvertbarrdouble}%
7392 }%
7393 {%
7394 \LWR@setexparray{LWR@colbarspec}%
7395 {\arabic{LWR@tabletotalLaTeXcols}}{tvertbarr}%
7396 }%
7397 }%
7398 \global\booltrue{LWR@validtablecol}%
7399 }

```

`\LWR@parsecoloncolumn` Handles vertical rules.

```

7400 \newcommand*{\LWR@parsecoloncolumn}{%
7401 \LWR@traceinfo{LWR@parsecoloncolumn}%

```

Remember the bar at this position:

```

7402 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
7403 {% left edge of the table:
7404 \edef\LWR@tempone{\LWR@getexparray{LWR@colbarspec}{leftedge}}%
7405 \ifdefstring{\LWR@tempone}{tvertbardash}%
7406 {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbardoubledash}}%
7407 {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbardash}}%
7408 }%
7409 {% not at the left edge:
7410 \edef\LWR@tempone{%
7411 \LWR@getexparray{LWR@colbarspec}{\arabic{LWR@tabletotalLaTeXcols}}%
7412 }%
7413 \ifdefstring{\LWR@tempone}{tvertbarrdash}%
7414 {\LWR@setexparray{LWR@colbarspec}%
7415 {\arabic{LWR@tabletotalLaTeXcols}}{tvertbarrdoubledash}}%
7416 {\LWR@setexparray{LWR@colbarspec}%
7417 {\arabic{LWR@tabletotalLaTeXcols}}{tvertbarrdash}}%
7418 }%
7419 \global\booltrue{LWR@validtablecol}%
7420 }

```



`\LWR@parsesemicoloncolumn`      Handles vertical rules.

```
7421 \newcommand*{\LWR@parsesemicoloncolumn}{%
```

Treat ; as a : column:

```
7422 \LWR@parsecoloncolumn%
```

Skip the following width token:

```
7423 \addtocounter{LWR@tablecolspecindex}{1}%
7424 }
```

### 73.9 Parsing ‘l’, ‘c’, or ‘r’ columns

`\LWR@parsenormalcolumn`     $\langle thiscolumn \rangle$

Add to the accumulated column specs, advance counters, and pre-clear another column of at, before, and after specs.

```
7425 \newcommand*{\LWR@parsenormalcolumn}[1]{%
7426 \addtocounter{LWR@tabletotalLaTeXcols}{1}%
7427 \addtocounter{LWR@tabletotalLaTeXcolsnext}{1}%

7428 \LWR@setexparray{LWR@tablecolspec}{\arabic{LWR@tabletotalLaTeXcols}}{#1}%

7429 \LWR@traceinfo{normal column \arabic{LWR@tabletotalLaTeXcols}: #1}%
7430 \LWR@setexparray{LWR@colatspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
7431 \LWR@setexparray{LWR@colbangspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
7432 \LWR@setexparray{LWR@colbeforespec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
7433 \LWR@setexparray{LWR@colafterspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
7434 \LWR@setexparray{LWR@colbarspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
7435 \global\booltrue{LWR@validtablecol}%
7436 }
```

### 73.10 Parsing ‘p’, ‘m’, or ‘b’ columns

`\LWR@parsepcolumn`     $\langle thiscolumn \rangle$  The width will be ignored.

```
7437 \newcommand*{\LWR@parsepcolumn}[1]{%
```

Converts to the given column type:

```
7438 \LWR@parsenormalcolumn{#1}%
```

Skips the following width token:

```
7439 \addtocounter{LWR@tablecolspecindex}{1}%
7440 }
```

### 73.11 Parsing ‘w’ columns

`\LWR@parsewcolumn` The width will be ignored.

```
7441 \newcommand*\LWR@parsewcolumn}{%
7442 \LWR@columnspeclookahead{1}%
7443 \expandafter\LWR@parsenormalcolumn\expandafter{\LWR@strresulttwo}%
```

Skips the following width and alignment tokens:

```
7444 \addtocounter{LWR@tablecolspecindex}{2}%
7445 }
```

### 73.12 Parsing ‘\*’ columns

`\LWR@parsestarcolumn`

```
7446 \newcommand*\LWR@parsestarcolumn}{%
7447 \PackageError{lwarp}%
7448 {%
7449 The tabular star column specifier\MessageBreak
7450 *{xx}{yy}\MessageBreak
7451 is not yet supported by lwarp%
7452 }%
7453 {Convert *{xx}{yy} to xx copies of yy.}%
7454 \addtocounter{LWR@tablecolspecindex}{2}%
7455 }
```

### 73.13 Parsing ‘D’ columns

From the `dcolumn` package.

`\LWR@parseDcolumn` `{\langle thiscolumn \rangle}` The three parameters will be ignored.

```
7456 \newcommand*\LWR@parseDcolumn}[1]{%
```

Converts to the given column type.

```
7457 \LWR@parsenormalcolumn{#1}%
```

Skips the following three parameters.

```
7458 \addtocounter{LWR@tablecolspecindex}{3}%
7459 }
```

Table 10: Tabular baseline

|   |     |     |     |   |
|---|-----|-----|-----|---|
| l | p   | m   | b   | r |
|   |     |     | bot |   |
|   |     | mid | bot |   |
| l | par | mid | bot | r |
|   | par | mid |     |   |
|   | par |     |     |   |

### 73.14 Parsing the column specifications


 **tabular baselines** HTML CSS cannot exactly match the  $\LaTeX$  concept of a baseline for a table row. Table 10 shows the  $\LaTeX$  results for various vertical-alignment choices, with the baseline of the first column drawn across all the columns for comparison. See the `p` column specification in table 11 for details.

Table 11 describes how each kind of column is converted to HTML.

Bool `LWR@validtablecol` True if found a valid table column type.

```
7460 \newbool{LWR@validtablecol}
```

Bool `LWR@opttablecol` True if found a table column optional argument.

```
7461 \newbool{LWR@opttablecol}
```

`\LWR@parsetablecols`  $\langle colspecs \rangle$

Scans the column specification left to right.

Builds `\LWR@tablecolspec` with the final specification, one  $\LaTeX$  column per entry. The final number of  $\LaTeX$  columns in each row is stored in `LWR@tabletotalLaTeXcols`, which is the number of `&` and `\` in each line, but which does not include `@`, `!`, `<`, `>` specifications in the count.

```
7462 \newcommand*{\LWR@parsetablecols}[1]{%
```

```
7463 \LWR@traceinfo{LWR@parsetablecols}%
```

Remember the original supplied column spec:

```
7464 \renewcommand*{\LWR@origcolspec}{#1}%
```

Remove spaces:

```
7465 \expandarg%
```

```
7466 \StrSubstitute{\LWR@origcolspec}{ }{ }[\LWR@origcolspec]%
```

The parsed column spec data array, `LWR@tablecolspec`, will be overwritten with new values.

Table 11: Tabular HTML column conversions

---

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>l, r, c:</b>          | Converted to table cells without paragraph tags.<br>Uses css <code>vertical-align:middle</code> so that top or bottom-aligned cells may go above or below this cell.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>p:</b>                | Converted to table cells with paragraph tags. Ref: Table 10, $\LaTeX$ places the top line of a parbox aligned with the rest of the text line, so css <code>vertical-align:bottom</code> is used to have the HTML result appear with the paragraph extending below the L, R, C cells at the middle, if possible. This may be confusing as a P cell may not top-align with an L,R,C cell in the HTML conversion, especially in the presence of a B cell, and two P cells side-by-side will be aligned at the bottom instead of the top. Some adjustment of the css may be desired, changing <code>td.tdp</code> , <code>td.tdP</code> , <code>td.tdprule</code> , and <code>td.tdPrule</code> to <code>vertical-align: middle</code> . Another possibility is to change L,R,C, and P to <code>vertical-align: top</code> and not worry about the alignment of B and M cells or trying to approximate $\LaTeX$ baselines. |
| <b>m:</b>                | With paragraph tags, css <code>vertical-align:middle</code> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>b:</b>                | With paragraph tags, css <code>vertical-align:top</code> so that the bottom of the text is closest to the middle of the text line.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>P, M, B:</b>          | Horizontally-centered versions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>S:</b>                | Converted to 'r'. Ignores optional argument. From the <code>siunitx</code> package.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>D:</b>                | Converted to 'c'. From the <code>dcolumn</code> package.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>@, !, &gt;, &lt;:</b> | One each, in that order.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b> :</b>                | Vertical rule.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Unknown:</b>          | Converted to 'l'.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>\newcolumn:</b>       | Currently treated as unknown.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

---

Total number of columns found so far. Also pre-initialize the first several columns of specs:

```

7467 \setcounter{LWR@tabletotalLaTeXcols}{0}%
7468 \setcounter{LWR@tabletotalLaTeXcolsnext}{1}%
7469 \LWR@setexparray{LWR@colatspec}{leftedge}{}%
7470 \LWR@setexparray{LWR@colatspec}{1}{}%
7471 \LWR@setexparray{LWR@colatspec}{2}{}%
7472 \LWR@setexparray{LWR@colatspec}{3}{}%
7473 \LWR@setexparray{LWR@colbangspec}{leftedge}{}%
7474 \LWR@setexparray{LWR@colbangspec}{1}{}%
7475 \LWR@setexparray{LWR@colbangspec}{2}{}%
7476 \LWR@setexparray{LWR@colbangspec}{3}{}%
7477 \LWR@setexparray{LWR@colbeforespec}{1}{}%
7478 \LWR@setexparray{LWR@colbeforespec}{2}{}%
7479 \LWR@setexparray{LWR@colbeforespec}{3}{}%
7480 \LWR@setexparray{LWR@colafterspec}{1}{}%
7481 \LWR@setexparray{LWR@colafterspec}{2}{}%
7482 \LWR@setexparray{LWR@colafterspec}{3}{}%
7483 \LWR@setexparray{LWR@colbarspec}{leftedge}{}%
7484 \LWR@setexparray{LWR@colbarspec}{1}{}%
7485 \LWR@setexparray{LWR@colbarspec}{2}{}%
7486 \LWR@setexparray{LWR@colbarspec}{3}{}%

```

Starting at the first column specification:

```

7487 \setcounter{LWR@tablecolspecindex}{1}%

```

Place the colspecs string length into `\LWR@strresult`, and remember the number of characters in the column specification:

```

7488 \expandarg%
7489 \StrLen{\LWR@origcolspec}[\LWR@strresult]%
7490 \fullexpandarg%
7491 \LWR@traceinfo{original column spec length: \LWR@strresult}%
7492 \setcounter{LWR@tablecolspecwidth}{\LWR@strresult}%

```

Haven't seen any optional arguments so far

```

7493 \global\boolfalse{LWR@opttablecol}%

```

Scan through the column specifications:

```

7494 \whileboolexpr{%
7495 not test{%
7496 \ifnumcomp{\value{LWR@tablecolspecindex}}{>}%
7497 {\value{LWR@tablecolspecwidth}}%
7498 }%
7499 }%
7500 {%

```

Place the next single-character column type into `\LWR@strresult`:

```

7501 \expandarg%

```

```
7502 \StrChar{\LWR@origcolspec}{\arabic{LWR@tablecolspecindex}}[\LWR@strresult]%
7503 \LWR@traceinfo{position \arabic{LWR@tablecolspecindex}: \LWR@strresult}%
7504 \fullexpandarg%
```

Not yet found a valid column type:

```
7505 \global\boolfalse{LWR@validtablecol}%
```

Skip over any optional arguments, such as siunitx S column:

```
7506 \IfStrEq{\LWR@strresult}{[]}{\global\booltrue{LWR@opttablecol}}{ }%
```

Throw away anything found inside the optional argument:

```
7507 \ifbool{LWR@opttablecol}%
7508 {}% inside an optional argument
7509 {}% not an optional tabular argument
```

Not inside an optional argument, so consider the column type:

```
7510 \IfStrEq{\LWR@strresult}{l}{\LWR@parsenormalcolumn{l}}{ }%
7511 \IfStrEq{\LWR@strresult}{c}{\LWR@parsenormalcolumn{c}}{ }%
7512 \IfStrEq{\LWR@strresult}{r}{\LWR@parsenormalcolumn{r}}{ }%
7513 \IfStrEq{\LWR@strresult}{L}{\LWR@parsenormalcolumn{L}}{ }%
7514 \IfStrEq{\LWR@strresult}{C}{\LWR@parsenormalcolumn{C}}{ }%
7515 \IfStrEq{\LWR@strresult}{R}{\LWR@parsenormalcolumn{R}}{ }%
7516 \IfStrEq{\LWR@strresult}{J}{\LWR@parsenormalcolumn{J}}{ }%

7517 \IfStrEq{\LWR@strresult}{S}{\LWR@parsenormalcolumn{S}}{ }%
7518 \IfStrEq{\LWR@strresult}{s}{\LWR@parsenormalcolumn{s}}{ }%

7519 \IfStrEq{\LWR@strresult}{\detokenize{@}}{\LWR@parseatcolumn}{ }%
7520 \IfStrEq{\LWR@strresult}{!}{\LWR@parsebangcolumn}{ }%
7521 \IfStrEq{\LWR@strresult}{>}{\LWR@parsebeforecolumn}{ }%
7522 \IfStrEq{\LWR@strresult}{<}{\LWR@parseaftercolumn}{ }%
7523 \IfStrEq{\LWR@strresult}{|}{\LWR@parsebarcolumn}{ }%
7524 \IfStrEq{\LWR@strresult}{:}{\LWR@parsecoloncolumn}{ }%
7525 \IfStrEq{\LWR@strresult}{;}{\LWR@parsesemicoloncolumn}{ }%

7526 \IfStrEq{\LWR@strresult}{p}{\LWR@parsepcolumn{p}}{ }%
7527 \IfStrEq{\LWR@strresult}{m}{\LWR@parsepcolumn{m}}{ }%
7528 \IfStrEq{\LWR@strresult}{b}{\LWR@parsepcolumn{b}}{ }%

7529 \IfStrEq{\LWR@strresult}{w}{\LWR@parsewcolumn}{ }%
7530 \IfStrEq{\LWR@strresult}{W}{\LWR@parsewcolumn}{ }%
```

Error if found a star column:

```
7531 \IfStrEq{\LWR@strresult}{*}{\LWR@parsestarcolumn}{ }%
```

From the dcolumn package:

```
7532 \IfStrEq{\LWR@strresult}{D}{\LWR@parseDcolumn{c}}{ }%
```

From the `tabularx` package. X column has no parameter, but will be given paragraph tags.

```
7533 \IfStrEq{\LWR@strresult}{X}{\LWR@parsecolumn{X}}{}}%
```

---

Many people define centered versions “P”, “M”, and “B”:

```
\newcolumntype{P}[1]{>\centering\arraybackslash}p{#1}}
```

---

```
7534 \IfStrEq{\LWR@strresult}{P}{\LWR@parsecolumn{P}}{}}%
```

```
7535 \IfStrEq{\LWR@strresult}{M}{\LWR@parsecolumn{M}}{}}%
```

```
7536 \IfStrEq{\LWR@strresult}{B}{\LWR@parsecolumn{B}}{}}%
```

If this column was an invalid column type, convert it to an l column:

```
7537 \ifbool{\LWR@validtablecol}{}}{%
```

```
7538 \LWR@traceinfo{invalid column type: \LWR@strresult}%
```

```
7539 \LWR@parsecolumn{l}}%
```

```
7540 }%
```

```
7541 }% not an optional column argument
```

If read the closing bracket, no longer inside the optional argument:

```
7542 \IfStrEq{\LWR@strresult}{] }{\global\boolfalse{\LWR@opttablecol}}{}}%
```

Move to the next character:

```
7543 \addtocounter{\LWR@tablecolspecindex}{1}%
```

```
7544 }% whiledo
```

```
7545 }%
```

### 73.15 `colortbl` and `xparse` tabular color support

These macros provide a minimal emulation of some `colortbl` macros which might appear between table cells. If `colortbl` is loaded, these macros will be replaced with functional versions.

For each of the HTML colors below, the text for the HTML color is set if requested, but the macro is empty if none has been set.

`\rownum` Reserve a counter register.

```
7546 \@ifundefined{\rownum}{\newcount\rownum}{}
```

`\@rowcolors` Emulated in case `xcolor` is not used.

```
7547 \newcommand*{\@rowcolors}{}
```

`\@rowcol@lors` Emulated in case `xcolor` is not used.

7548 `\newcommand*{\@rowcol@lors}{}`

`\LWR@xcolorrowHTMLcolor` Emulated `xcolor` row color.

7549 `\newcommand*{\LWR@xcolorrowHTMLcolor}{}`

`\LWR@columnHTMLcolor` HTMLstyle code for the column color.

7550 `\def\LWR@columnHTMLcolor{}`

`\LWR@rowHTMLcolor` HTMLstyle code for the row color.

7551 `\def\LWR@rowHTMLcolor{}`

`\LWR@cellHTMLcolor` HTMLstyle code for the cell color.

7552 `\def\LWR@cellHTMLcolor{}`

`\LWR@ruleHTMLcolor` HTMLstyle code for the cell color.

7553 `\newcommand*{\LWR@ruleHTMLcolor}{}`

`\rowcolor` [*model*] {*color*} [*left overhang*] [*right overhang*] Print version. The HTML version is in `lwarp-colortbl`. Used before starting a tabular data cell, thus `\LWR@getmynexttoken`.

7554 `\newcommand*{\rowcolor}{\LWR@getmynexttoken}%`

`\arrayrulecolor` [*model*] {*color*}

`\arrayrulecolornexttoken` [*model*] {*color*}

Print versions for use outside and inside a tabular:

7555 `\newcommand{\arrayrulecolor}[2][named]{}`

7556 `\newcommand{\arrayrulecolornexttoken}[2][named]{\LWR@getmynexttoken}`

`\doublerulesepcolor` [*model*] {*color*}

`\doublerulesepcolornexttoken` [*model*] {*color*}

Print versions for use inside and outside a tabular:

7557 `\newcommand{\doublerulesepcolor}[2][named]{}`

7558 `\newcommand{\doublerulesepcolornexttoken}[2][named]{\LWR@getmynexttoken}`



### 73.16 Starting a new row

`\LWR@maybenewtablerow` If have not yet started a new table row, begin one now. Creates a new row tag, adding a class for `hline` or `tbrule` if necessary.

```
7559 \newcommand*{\LWR@maybenewtablerow}
7560 {%
7561 \ifbool{\LWR@startedrow}%
7562 {}% started the row
7563 {}% not started the row
```

Remember that now have started the row:

```
7564 \global\booltrue{\LWR@startedrow}%
```

Create the row tag, with a class if necessary.

```
7565 \global\booltrue{\LWR@intabularmetadata}%
7566 \ifboolexpr{%
7567 test{\ifnumcomp{\value{\LWR@hlines}}{>}{0}} or%
7568 test{\ifnumcomp{\value{\LWR@hdashedlines}}{>}{0}}}%
7569 }%
7570 {%
7571 \LWR@htmltag{tr class="hline" }%
7572 \LWR@orignewline%
7573 }%
7574 {% not doing hline
7575 \ifbool{\LWR@doingtbrule}%
7576 {%
7577 \ifdefvoid{\LWR@ruleHTMLcolor}{%
7578 \LWR@htmltag{tr class="tbrule"}%
7579 }{%
7580 \LWR@htmltag{%
7581 tr class="tbrule" % space
7582 style="border-top: 1px solid % space
7583 \LWR@origpound\LWR@ruleHTMLcolor "%
7584 }%
7585 }%
7586 \LWR@orignewline%
7587 }%
7588 {\LWR@htmltag{tr}\LWR@orignewline}%
7589 }% end of not doing hline
7590 }% end of not started the row
7591 }
```

### 73.17 Printing vertical bar tags

`\LWR@printbartag` `{\langle index \rangle}`

Adds to a tabular data cell an HTML class name for a left/right vertical bar.

```

7592 \newcommand*{\LWR@printbartag}[1]{%
7593 \LWR@traceinfo{\LWR@printbartag !#1!}%
7594 \ifboolexpr{bool{\LWR@tabularmutemods} or bool{\LWR@emptyatbang}}%
7595 {}% muting or empty
7596 {}% not muting
7597 \edef\LWR@tempone{\LWR@getexparray{\LWR@colbarspec}{#1}}%
7598 \ifdefempty{\LWR@tempone}{{} \LWR@tempone}%
7599 }% not muting
7600 \LWR@traceinfo{\LWR@printbartag done}%
7601 }

```

### 73.18 Printing at or bang tags

`\LWR@printatbang` {*<at -or- bang>*} {*<index>*}

```
7602 \newcommand*{\LWR@printatbang}[2]{%
```

Fetch the column at or bang spec:

```

7603 \xdef\LWR@atbangspec{\LWR@getexparray{\LWR@col#1spec}{#2}}%
7604 \LWR@traceinfo{atbang: #2 !\LWR@atbangspec!}%

```

Only generate if is not empty;

```

7605 \ifdefempty{\LWR@atbangspec}%
7606 {}%
7607 {}% not empty
7608 \LWR@htmltag{%
7609 td class="td#1%
7610 \LWR@subaddcmidruletrim{}{}%
7611 \LWR@printbartag{#2}%
7612 "%
7613 \LWR@tdstartstyles%
7614 \LWR@addcmidrulewidth%
7615 \LWR@addcdashline%
7616 \LWR@addtabularrulecolors%
7617 \LWR@tdendstyles%
7618 }%

```

Create an empty cell if muting for the `\bottomrule`:

```

7619 \ifboolexpr{bool{\LWR@tabularmutemods} or bool{\LWR@emptyatbang}}%
7620 {}%
7621 {\LWR@atbangspec}%
7622 %
7623 \LWR@htmltag{/td}\LWR@orignewline%
7624 \global\booltrue{\LWR@tabularcelladded}%
7625 }% not empty
7626 }%

```

`\LWR@addleftmostbartag`

```
7627 \newcommand*{\LWR@addleftmostbartag}{%
7628 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=} {1}{%
7629 \LWR@printbartag{leftedge}%
7630 }{}}%
7631 }
```

`\LWR@tabularleftedge`

```
7632 \newcommand*{\LWR@tabularleftedge}{%
7633 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=} {1}{%
7634 {%
7635 \LWR@printatbang{at}{leftedge}%
7636 \LWR@printatbang{bang}{leftedge}%
7637 }% left edge
7638 }% not left edge
7639 }
```

### 73.19 Data opening tag

`\LWR@thiscolspec` Temporary storage.

```
7640 \newcommand*{\LWR@thiscolspec}{}
```

`\LWR@tabledatasinglecolumn` Print a table data opening tag with style for alignment and color.

```
7641 \newcommand*{\LWR@tabledatasinglecolumn}{%
7642 {%
7643 \LWR@traceinfo{\LWR@tabledatasinglecolumn}%
7644 \LWR@maybenewtablerow%
```

Don't start a new paragraph tag if have already started one:

```
7645 \ifbool{LWR@intabularmetadata}%
7646 {%
```

If have found the end of tabular command, do not create the next data cell:

```
7647 \ifbool{LWR@exitingtabular}{}%
7648 {% not exiting tabular
```

Print the @ and ! contents before first column:

```
7649 \LWR@tabularleftedge%
```

Fetch the current column's alignment character into `\LWR@strresult`:

```
7650 \xdef\LWR@strresult{%
7651 \LWR@getexparray{LWR@tablecolspec}{\arabic{LWR@tableLaTeXcolindex}}%
7652 }%
```

print the start of a new table data cell:

```
7653 \LWR@traceinfo{\LWR@tabledatasinglecolumntag: about to print td tag}%
7654 \LWR@htmltag{td class="td%
```

append this column's spec:

```
7655 \LWR@strresult%
```

If this column has a `cmidrule`, add “rule” to the end of the HTML class tag. Also add vertical bar tags.

```
7656 \LWR@addcmidruletrim%
7657 \LWR@addleftmostbartag%
7658 \LWR@printbartag{\arabic{\LWR@tableLaTeXcolindex}}%
7659 "%
```

Add styles for rules, alignment:

```
7660 \LWR@tdstartstyles%
7661 \LWR@addcmidrulewidth%
7662 \LWR@addcdashline%

7663 \xdef\LWR@thiscolspec{%
7664 \LWR@getexpparray{\LWR@tablecolspec}{\arabic{\LWR@tableLaTeXcolindex}}%
7665 }%
7666 \LWR@addformatwpalignment{\LWR@thiscolspec}%
```

Add styles for cell and rule colors:

```
7667 \LWR@addtabulararrowcolor%
7668 \LWR@addtabularrulecolors%

7669 \LWR@tdendstyles%
7670 }% HTML td
7671 \LWR@traceinfo{\LWR@tabledatasinglecolumntag: done printing td tag}%
```

If this is a p, m, b, or X column, allow paragraphs:

```
7672 \ifboolexpr{%
7673 test{ \ifdefstring{\LWR@strresult}{p} } or
7674 test{ \ifdefstring{\LWR@strresult}{m} } or
7675 test{ \ifdefstring{\LWR@strresult}{b} } or
7676 test{ \ifdefstring{\LWR@strresult}{P} } or
7677 test{ \ifdefstring{\LWR@strresult}{M} } or
7678 test{ \ifdefstring{\LWR@strresult}{B} } or
7679 test{ \ifdefstring{\LWR@strresult}{X} }
7680 }%
7681 {% allow pars
7682 \LWR@traceinfo{\LWR@tabledatasinglecolumntag: about to LWR@startpars}%
7683 \global\booltrue{\LWR@tableparcell}%
7684 \LWR@startpars%
7685 \LWR@traceinfo{\LWR@tabledatasinglecolumntag: done with LWR@startpars}%
```

```
7686 }% allow pars
7687 {}% no pars
```

Print the > contents unless muted for the \bottomrule:

```
7688 \ifboolexpr{bool{LWR@tabularmutemods} or bool{LWR@emptyatbang}}%
7689 {}%
7690 {%
7691 \LWR@getexparray{LWR@colbeforespec}{\arabic{LWR@tableLaTeXcolindex}}%
7692 }%
7693 \global\boolfalse{LWR@intabularmetadata}%
7694 }% not exiting tabular
7695 }{}% in tabular metadata
7696 \LWR@traceinfo{LWR@tabledatasinglecolumntag: done}%
7697 }%
```

## 73.20 Midrules

**LWR@midrules** LWR@midrules is a data array (section 43) of columns each containing a non-zero width if a midrule should be created for this column.

**LWR@trimlrules** LWR@trimlrules is a data array (section 43) of columns containing l if a midrule should be left trimmed for each column.

**LWR@trimrrules** LWR@trimrrules is a data array (section 43) of columns containing r if a midrule should be right trimmed for each column.

**LWR@cdashlines** LWR@cdashlines is a data array (section 43) of columns each containing a Y if an arydshln package "cdashed line" should be created for this column.

**Ctr** LWR@midrulecounter Indexes across the LWR@midrules and LWR@trim<l/r>rules data arrays.

```
7698 \newcounter{LWR@midrulecounter}
```

**Len** \LWR@heavyrulewidth The default width of the rule.

```
7699 \newlength{\LWR@heavyrulewidth}
7700 \setlength{\LWR@heavyrulewidth}{.08em}
```

**Len** \LWR@lightrulewidth The default width of the rule.

```
7701 \newlength{\LWR@lightrulewidth}
7702 \setlength{\LWR@lightrulewidth}{.05em}
```

**Len** \LWR@cmidrulewidth The default width of the rule.

```
7703 \newlength{\LWR@cmidrulewidth}
7704 \setlength{\LWR@cmidrulewidth}{.03em}
```

**Len** \LWR@thiscmidrulewidth The width of the next rule, defaulting to \LWR@cmidrulewidth.

If not \LWR@cmidrulewidth, a style will be used to generate the custom width.

Assigned from the LWR@midrules array.

```
7705 \newlength{\LWR@thiscmidrulewidth}
7706 \setlength{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}
```

`\LWR@clearmidrules` Start new midrules. Called at beginning of tabular and also at `\`.

Clears all LWR@midrules and LWR@trimrules markers for this line.

```
7707 \newcommand*{\LWR@clearmidrules}
7708 {%
7709 \setcounter{LWR@midrulecounter}{1}%
7710 \whileboolexpr{%
7711 not test{%
7712 \ifnumcomp{\value{LWR@midrulecounter}}{>}%
7713 {\value{LWR@tabletotalLaTeXcols}}%
7714 }%
7715 }%
7716 {%
7717 \LWR@setexparray{LWR@midrules}{\arabic{LWR@midrulecounter}}{0pt}%
7718 \setlength{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}%
7719 \LWR@setexparray{LWR@trimlrules}{\arabic{LWR@midrulecounter}}{}%
7720 \LWR@setexparray{LWR@trimrrules}{\arabic{LWR@midrulecounter}}{}%
7721 \LWR@setexparray{LWR@cdashlines}{\arabic{LWR@midrulecounter}}{N}%
7722 \addtocounter{LWR@midrulecounter}{1}%
7723 }%
7724 }
```

`\LWR@subcmidrule`  $\langle width \rangle$   $\langle trim \rangle$   $\langle leftcolumn \rangle$   $\langle rightcolumn \rangle$

Marks LWR@midrules data array elements to be non-zero widths from left to right columns. Also marks trimming for the L and/or R columns.

LWR@doingcmidrule is set to force an empty row at the end of the tabular to create the rule.

```
7725 \newcommand*{\LWR@subcmidrule}[4]{%
7726 \setcounter{LWR@midrulecounter}{#3}%
7727 \whileboolexpr{%
7728 not test {%
7729 \ifnumcomp{\value{LWR@midrulecounter}}{>}{#4}%
7730 }%
7731 }%
7732 {%
7733 \LWR@setexparray{LWR@midrules}{\arabic{LWR@midrulecounter}}{#1}%
7734 \addtocounter{LWR@midrulecounter}{1}%
7735 }% whiledo
7736 \IfSubStr{#2}{l}{\LWR@setexparray{LWR@trimlrules}{#3}{l}}{}%
7737 \IfSubStr{#2}{r}{\LWR@setexparray{LWR@trimrrules}{#4}{r}}{}%
7738 \global\booltrue{LWR@doingcmidrule}%
7739 }
```

`\LWR@docmidrule`  $[\langle width \rangle]$   $(\langle trim \rangle)$   $\langle leftcolumn-rightcolumn \rangle$

Marks LWR@midrules array elements to be a non-zero width from left to right columns. Also marks trimming for the L and/or R columns.

```
7740 \NewDocumentCommand{\LWR@docmidrule}
7741 {0{\LWR@cmidrulewidth} D(){} >{\SplitArgument{1}{-}}m}
7742 {\LWR@subcmidrule{#1}{#2}#3}
```

`\LWR@subcdashline`  $\{ \langle leftcolumn \rangle \} \{ \langle rightcolumn \rangle \}$

Marks LWR@cdashlines data array elements to be Y from left to right columns.

LWR@doingcmidrule is set to force an empty row at the end of the tabular to create the rule.

```
7743 \newcommand*{\LWR@subcdashline}[2]{%
7744 \setcounter{\LWR@midrulecounter}{#1}%
7745 \whileboolexpr{%
7746 not test {%
7747 \ifnumcomp{\value{\LWR@midrulecounter}}{>}{#2}%
7748 }%
7749 }%
7750 {%
7751 \LWR@setexpparray{\LWR@cdashlines}{\arabic{\LWR@midrulecounter}}{Y}%
7752 \addtocounter{\LWR@midrulecounter}{1}%
7753 }% whiledo
7754 \global\booltrue{\LWR@doingcmidrule}%
7755 }
```

`\LWR@docdashline`  $\{ \langle leftcolumn-rightcolumn \rangle \}$

Marks LWR@cdashlines data array elements to be Y from left to right columns.

```
7756 \NewDocumentCommand{\LWR@docdashline}
7757 {>{\SplitArgument{1}{-}}m}%
7758 {%
7759 \LWR@subcdashline#1%
7760 }
```

Used to compute margins, tabular trims, column offsets:

```
7761 \newlength{\LWR@templengthone}
7762 \newlength{\LWR@templengthtwo}
7763 \newlength{\LWR@templengththree}
7764 \newcounter{\LWR@tempcountone}
```

Used to add a style to a table data cell:

```
7765 \newbool{\LWR@tdhavecellstyle}
```

`\LWR@tdstartstyles` Begins possibly adding a table data cell style.

```
7766 \newcommand*{\LWR@tdstartstyles}{\global\boolfalse{\LWR@tdhavecellstyle}}
```

`\LWR@tdaddstyle` Starts adding a table data cell style.

```
7767 \newcommand*{\LWR@tdaddstyle}{%
7768 \ifbool{\LWR@tdhavecellstyle}%
7769 {; }%
7770 { style="}%
7771 \booltrue{\LWR@tdhavecellstyle}%
7772 }
```

`\LWR@tdendstyles` Finishes possibly adding a table data cell style. Prints the closing quote.

```
7773 \newcommand*{\LWR@tdendstyles}{%
7774 \ifbool{\LWR@tdhavecellstyle}{%
7775 "%
7776 \global\boolfalse{\LWR@tdhavecellstyle}%
7777 }{ }%
7778 }
```

`\LWR@subaddcmidruletrim` `{\lefttrim}` `{\righttrim}` Adds a `\cmidrule` with optional trim.

```
7779 \newcommand*{\LWR@subaddcmidruletrim}[2]{%
7780 \setlength{\LWR@templengthone}{%
7781 \LWR@getexparray{\LWR@midrules}{\arabic{\LWR@tableLaTeXcolindex}}}%
7782 }%
7783 \ifdimcomp{\LWR@templengthone}{>}{0pt}%
7784 {%
```

Print the class with left and right trim letters appended:

```
7785 \LWR@origtilde tdrule#1#2%
```

Remember the width of the rule:

```
7786 \setlength{\LWR@thiscmidrulewidth}{\LWR@templengthone}%
7787 }%
7788 {%
7789 \setlength{\LWR@thiscmidrulewidth}{0pt}%
7790 }%
7791 }
```

`\LWR@addcmidruletrim` Adds left or right trim to a `\cmidrule`.

```
7792 \newcommand*{\LWR@addcmidruletrim}{%
7793 \LWR@subaddcmidruletrim%
7794 {\LWR@getexparray{\LWR@trimlrules}{\arabic{\LWR@tableLaTeXcolindex}}}%
7795 {\LWR@getexparray{\LWR@trimrrules}{\arabic{\LWR@tableLaTeXcolindex}}}%
7796 }
```

`\LWR@addrulewidth` `{\thiswidth}` `{\defaultwidth}`

If not default width, add a custom style with width and color depending on `thiswidth`.



Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```
7797 \newcommand{\LWR@addrulewidth}[2]{%
```

Only add a custom width if thiswidth is different than the defaultwidth, or if a color is being used:

```
7798 \ifboolexpr{%
7799 test{\ifdimcomp{#1}{=}{0pt}} or
7800 (
7801 (test{\ifdimcomp{#1}{=}{#2}} and not bool{FormatWP})
7802 and (test {\ifdefvoid{\LWR@ruleHTMLcolor}})
7803)
7804 }%
7805 {}% default width and color
7806 {}% custom width and/or color
```

Ensure that the width is wide enough to display in the browser:

```
7807 \LWR@forceminwidth{#1}%
```

Begin adding another style:

```
7808 \LWR@tdaddstyle%
```

The style itself:

```
7809 border-top:\LWR@printlength{\LWR@atleastonept} solid %
```

If default gray, the darkness of the color depends on the thickness of the rule:

```
7810 \ifdefvoid{\LWR@ruleHTMLcolor}{%
7811 \ifdimcomp{#1}{<}{\LWR@lightrulewidth}%
7812 {\LWR@origpound{A0A0A0}}%
7813 {% lightrule or heaver
7814 \ifdimcomp{#1}{<}{\LWR@heavyrulewidth}%
7815 {\LWR@origpound{808080}}%
7816 {black}}%
7817 }% lightrule or heavier
7818 }{%
7819 \LWR@origpound\LWR@ruleHTMLcolor%
7820 }
7821 }% custom width and/or color
7822 }
```

`\LWR@addcmidrulewidth` Adds a style for the rule width.

Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```
7823 \newcommand{\LWR@addcmidrulewidth}{%
7824 \LWR@addrulewidth{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}%
7825 }
```

`\LWR@addcdashline` Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

7826 \newcommand{\LWR@addcdashline}{%
7827 \edef\LWR@tempone{%
7828 \LWR@getexpparray{\LWR@cdashlines}{\arabic{\LWR@tableLaTeXcolindex}}%
7829 }%
7830 \ifdefstring{\LWR@tempone}{Y}{%
7831 \LWR@tdaddstyle%
7832 border-top: 1pt dashed %
7833 \ifdefvoid{\LWR@ruleHTMLcolor}%
7834 {black}%
7835 {\LWR@origpound\LWR@ruleHTMLcolor}%
7836 }{}%
7837 }
```

`\LWR@WPcell` `{\langle text-align \rangle}{\langle vertical-align \rangle}`

```

7838 \newcommand*{\LWR@WPcell}[2]{%
7839 \LWR@tdaddstyle%
7840 \LWR@print@mbbox{text-align:#1}; \LWR@print@mbbox{vertical-align:#2}%
7841 }
```

`\LWR@addformatwpalignment` If `FormatWP`, adds a style for the alignment.

Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

7842 \newcommand*{\LWR@addformatwpalignment}[1]{%
7843 \ifbool{FormatWP}{%
7844 \IfSubStr{#1}{l}{\LWR@WPcell{left}{middle}}{}%
7845 \IfSubStr{#1}{c}{\LWR@WPcell{center}{middle}}{}%
7846 \IfSubStr{#1}{r}{\LWR@WPcell{right}{middle}}{}%
7847 \IfSubStr{#1}{p}{\LWR@WPcell{left}{bottom}}{}%
7848 \IfSubStr{#1}{m}{\LWR@WPcell{left}{middle}}{}%
7849 \IfSubStr{#1}{b}{\LWR@WPcell{left}{top}}{}%
7850 \IfSubStr{#1}{P}{\LWR@WPcell{center}{bottom}}{}%
7851 \IfSubStr{#1}{M}{\LWR@WPcell{center}{middle}}{}%
7852 \IfSubStr{#1}{B}{\LWR@WPcell{center}{top}}{}%
7853 }{}%
7854 }
```

## 73.21 Cell colors

`\LWR@addtabulararrowcolor` Adds a cell's row color style, if needed.

No color is added for the final row of empty cells which finishes each tabular.

```

7855 \newcommand*{\LWR@addtabulararrowcolor}{%
7856 \ifbool{\LWR@tabularmutemods}{%
7857 \ifdefvoid{\LWR@rowHTMLcolor}{%
7858 \ifdefvoid{\LWR@xcolorrowHTMLcolor}{%
7859 {% xcolor row color
```

```

7860 \LWR@tdaddstyle%
7861 background:\LWR@origpound\LWR@xcolorrowHTMLcolor%
7862 }%
7863 }%
7864 {% explicit row color
7865 \LWR@tdaddstyle%
7866 background:\LWR@origpound\LWR@rowHTMLcolor%
7867 }%
7868 }%
7869 }

```

`\LWR@addtabularhrulecolor` Adds a cell's horizontal rule color style, if needed.

```
7870 \newcommand*{\LWR@addtabularhrulecolor}{%
```

If either form of horizontal rule is requested:

```

7871 \ifboolexpr{%
7872 test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
7873 test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}} or%
7874 bool{LWR@doingtbrule}%
7875 }{%

```

If there is a no custom color:

```

7876 \ifdefvoid{\LWR@ruleHTMLcolor}%
7877 {%
7878 \ifnumcomp{\value{LWR@hlines}}{>}{1}%
7879 {%
7880 \LWR@tdaddstyle%
7881 border-top: 4px double%
7882 }{% else
7883 \ifnumcomp{\value{LWR@hdashedlines}}{>}{1}%
7884 {%
7885 \LWR@tdaddstyle%
7886 border-top: 2px dashed%
7887 }{% else
7888 \ifnumcomp{\value{LWR@hdashedlines}}{=}{1}%
7889 {%
7890 \LWR@tdaddstyle%
7891 border-top: 1px dashed%
7892 }{}}}%

```

If no color and not doubled or dashed, then add nothing, since a simpler rule is the default.

```
7893 }%
```

If there is a custom color:

```

7894 {%
7895 \ifnumcomp{\value{LWR@hlines}}{>}{1}%
7896 {%
7897 \LWR@tdaddstyle%

```

```

7898 border-top: 4px double \LWR@origpound\LWR@ruleHTMLcolor%
7899 }{% else
7900 \ifnumcomp{\value{\LWR@hdashedlines}}{>}{1}%
7901 {%
7902 \LWR@tdaddstyle%
7903 border-top: 2px dashed \LWR@origpound\LWR@ruleHTMLcolor%
7904 }{% else
7905 \ifnumcomp{\value{\LWR@hdashedlines}}{=}{1}%
7906 {%
7907 \LWR@tdaddstyle%
7908 border-top: 1px dashed \LWR@origpound\LWR@ruleHTMLcolor%
7909 }{% else
7910 \LWR@tdaddstyle%
7911 border-top: 1px solid \LWR@origpound\LWR@ruleHTMLcolor%
7912 }}}}
7913 }%
7914 }{%}%
7915 }

```

`\LWR@addtabularrulecolors` Adds a cell's rule color styles, if needed.

No color is added for the final row of empty cells which finishes each tabular.

```
7916 \newcommand*{\LWR@addtabularrulecolors}{%
```

Custom horizontal rule color:

```
7917 \LWR@addtabularhrulecolor%
```

No vertical rules if finishing the tabular with a row of empty cells:

```
7918 \ifbool{\LWR@tabularmutemods}{}%
```

If at the leftmost cell, possibly add a leftmost vertical rule:

```
7919 \ifnumequal{\value{\LWR@tableLaTeXcolindex}}{1}{%}
```

Fetch the left edge's vertical bar specification:

```
7920 \edef\LWR@tempone{\LWR@getexparray{\LWR@colbarspec}{leftedge}}%
```

Add a custom style if a vertical bar was requested:

```

7921 \ifdefstring{\LWR@tempone}{tvertbarl}{%
7922 \LWR@tdaddstyle%
7923 border-left: 1px solid % space
7924 \LWR@vertruleHTMLcolor%
7925 }{%}%
7926 \ifdefstring{\LWR@tempone}{tvertbarldouble}{%
7927 \LWR@tdaddstyle%
7928 border-left: 4px double % space
7929 \LWR@vertruleHTMLcolor%
7930 }{%}%

```

```

7931 \ifdefstring{\LWR@tempone}{tvertbarldash}{%
7932 \LWR@tdaddstyle%
7933 border-left: 1px dashed % space
7934 \LWR@vertruleHTMLcolor%
7935 }{}%
7936 \ifdefstring{\LWR@tempone}{tvertbarldoubledash}{%
7937 \LWR@tdaddstyle%
7938 border-left: 2px dashed % space
7939 \LWR@vertruleHTMLcolor%
7940 }{}%
7941 }{}%

```

Possibly add a right vertical rule for this cell:

```

7942 \edef\LWR@tempone{%
7943 \LWR@getexparray{\LWR@colbarspec}{\arabic{\LWR@tableLaTeXcolindex}}%
7944 }%
7945 \ifdefstring{\LWR@tempone}{tvertbarr}{%

```

Add a custom style if a vertical bar was requested:

```

7946 \LWR@tdaddstyle%
7947 border-right: 1px solid \LWR@vertruleHTMLcolor%
7948 }{}%
7949 \ifdefstring{\LWR@tempone}{tvertbarrdouble}{%
7950 \LWR@tdaddstyle%
7951 border-right: 4px double \LWR@vertruleHTMLcolor%
7952 }{}%
7953 \ifdefstring{\LWR@tempone}{tvertbarrdash}{%
7954 \LWR@tdaddstyle%
7955 border-right: 1px dashed \LWR@vertruleHTMLcolor%
7956 }{}%
7957 \ifdefstring{\LWR@tempone}{tvertbarrdoubledash}{%
7958 \LWR@tdaddstyle%
7959 border-right: 2px dashed \LWR@vertruleHTMLcolor%
7960 }{}%
7961 }%
7962 }

```

Ctrl `LWR@cellcolordepth` Counts how many cell color `<div>`s were added to the current tabular data cell.

```

7963 \newcounter{\LWR@cellcolordepth}

```

`\LWR@subadddtabularcellcolor` {*<HTML color>*}

```

7964 \newcommand*{\LWR@subadddtabularcellcolor}[1]{%
7965 \LWR@htmltag{div class="cellcolor" style="%
7966 background:\LWR@origpound{ }{ }#1 %
7967 " }%
7968 \addtocounter{\LWR@cellcolordepth}{1}%
7969 }

```

`\LWR@addtabularcellcolor` Adds a cell color style, if needed.

```

7970 \newcommand*{\LWR@addtabularcellcolor}{%
7971 \ifdefvoid{\LWR@cellHTMLcolor}%
7972 {%
7973 \ifdefvoid{\LWR@rowHTMLcolor}%
7974 {%
7975 \ifdefvoid{\LWR@xcolorrowHTMLcolor}%
7976 {%
7977 \ifdefvoid{\LWR@columnHTMLcolor}%
7978 {}%
7979 {\LWR@subaddtabularcellcolor{\LWR@columnHTMLcolor}}%
7980 }%
7981 {\LWR@subaddtabularcellcolor{\LWR@xcolorrowHTMLcolor}}%
7982 }%
7983 {\LWR@subaddtabularcellcolor{\LWR@rowHTMLcolor}}%
7984 }%
7985 {\LWR@subaddtabularcellcolor{\LWR@cellHTMLcolor}}%
7986 }

```

## 73.22 Multicolumns

### 73.22.1 Parsing multicolumns

```
7987 \newcounter{LWR@tablemulticolwidth}
```

Indexes into the multicolumn specification:

```
7988 \newcounter{LWR@tablemulticolspos}
```

Remembers multicolumn vertical rules if found in the column spec.

```

7989 \newcounter{LWR@mcolvertbarsl}
7990 \newcounter{LWR@mcolvertbarsr}
7991 \newcounter{LWR@mcolvertbarsldash}
7992 \newcounter{LWR@mcolvertbarsrdash}
7993 \newbool{LWR@mcolvertbaronleft}%

```

`\LWR@printmcoltype`  $\langle colspec \rangle$  Print any valid column type found. Does not print @, !, >, or < columns or their associated tokens.

This is printed as part of the table data tag's class.

```

7994 \newcommand*{\LWR@printmcoltype}[1]{%
7995 \LWR@traceinfo{LWR@printmcoltype -#1-}%

```

Get one token of the column spec:

```
7996 \StrChar{#1}{\arabic{LWR@tablemulticolspos}}[\LWR@strresult]%
```

Add to the HTML tag depending on which column type is found:

```

7997 \IfStrEq{\LWR@strresult}{l}{l}{}%
7998 \IfStrEq{\LWR@strresult}{c}{c}{}%
7999 \IfStrEq{\LWR@strresult}{r}{r}{}%
8000 \IfStrEq{\LWR@strresult}{p}{p}{}%
8001 \IfStrEq{\LWR@strresult}{m}{m}{}%
8002 \IfStrEq{\LWR@strresult}{b}{b}{}%
8003 \IfStrEq{\LWR@strresult}{P}{P}{}%
8004 \IfStrEq{\LWR@strresult}{M}{M}{}%
8005 \IfStrEq{\LWR@strresult}{B}{B}{}%

8006 \IfStrEq{\LWR@strresult}{w}{w}{}%
8007 \IfStrEq{\LWR@strresult}{W}{W}{}%

8008 \IfStrEq{\LWR@strresult}{S}{c}{}%
8009 \IfStrEq{\LWR@strresult}{s}{c}{}%

8010 \IfStrEq{\LWR@strresult}{X}{p}{}%

8011 \IfStrEq{\LWR@strresult}{|}{|}%
8012 {%
8013 \ifbool{LWR@mcolvertbaronleft}%
8014 {\addtocounter{LWR@mcolvertbarsl}{1}}% left edge
8015 {\addtocounter{LWR@mcolvertbarsr}{1}}% not left edge
8016 }%
8017 {%
8018 \IfStrEq{\LWR@strresult}{:}{:}%
8019 {%
8020 \ifbool{LWR@mcolvertbaronleft}%
8021 {\addtocounter{LWR@mcolvertbarsldash}{1}}% left edge
8022 {\addtocounter{LWR@mcolvertbarsrdash}{1}}% not left edge
8023 }%
8024 {%
8025 \IfStrEq{\LWR@strresult}{;}{;}%
8026 {%
8027 \ifbool{LWR@mcolvertbaronleft}%
8028 {\addtocounter{LWR@mcolvertbarsldash}{1}}% left edge
8029 {\addtocounter{LWR@mcolvertbarsrdash}{1}}% not left edge
8030 }%
8031 {\boolfalse{LWR@mcolvertbaronleft}}%
8032 }%
8033 }%
8034 \LWR@traceinfo{lwr@printmccoltype done}%
8035 }

```

`\LWR@multicolpartext`  $\langle num\ parameters \rangle$  Print the data with paragraph tags, advance to bypass the given number of parameters.

```

8036 \newcommand*{\LWR@multicolpartext}[1]{%
8037 \LWR@startpars%
8038 \LWR@multicoltext%
8039 \addtocounter{LWR@tablemulticolspos}{#1}%
8040 \LWR@stoppars%
8041 }

```

`\LWR@multicolother`  $\langle colspec \rangle$  For @, !, >, <, print the next token without paragraph tags:

```
8042 \newcommand*\LWR@multicolother}[1]{%
8043 \addtocounter{LWR@tablemulticolspos}{1}%
8044 \StrChar{#1}\arabic{LWR@tablemulticolspos}\LWR@strresult}%
8045 \LWR@strresult%
```

A valid column data type was found:

```
8046 \global\booltrue{LWR@validtablecol}%
8047 }
```

`\LWR@multicolskip` Nothing to print for this column type.

```
8048 \newcommand*\LWR@multicolskip}{%
```

A valid column data type was found:

```
8049 \global\booltrue{LWR@validtablecol}%
8050 }
```

`\LWR@printmccoldata`  $\langle colspec \rangle$  Print the data for any valid column type found.

```
8051 \newcommand*\LWR@printmccoldata}[1]{%
8052 \LWR@traceinfo{LWR@printmccoldata -#1}%
```

Not yet found a valid column type:

```
8053 \global\boolfalse{LWR@validtablecol}%
```

Get one token of the column spec:

```
8054 \StrChar{#1}\arabic{LWR@tablemulticolspos}\LWR@strresult}%
```

Print the text depending on which column type is found. Also handles @, >, < as it comes to them.

```
8055 \IfStrEq{\LWR@strresult}{l}\LWR@multicoltext}{}%
8056 \IfStrEq{\LWR@strresult}{c}\LWR@multicoltext}{}%
8057 \IfStrEq{\LWR@strresult}{r}\LWR@multicoltext}{}%
8058 \IfStrEq{\LWR@strresult}{D}{}%
8059 \addtocounter{LWR@tablemulticolspos}{3}% skip parameters
8060 \LWR@multicoltext%
8061 }{}%
```

```
8062 \IfStrEq{\LWR@strresult}{p}\LWR@multicolpartext{0}}{}%
8063 \IfStrEq{\LWR@strresult}{m}\LWR@multicolpartext{0}}{}%
8064 \IfStrEq{\LWR@strresult}{b}\LWR@multicolpartext{0}}{}%
8065 \IfStrEq{\LWR@strresult}{P}\LWR@multicolpartext{0}}{}%
8066 \IfStrEq{\LWR@strresult}{M}\LWR@multicolpartext{0}}{}%
8067 \IfStrEq{\LWR@strresult}{B}\LWR@multicolpartext{0}}{}%
```



```

8068 \IfStrEq{\LWR@strresult}{w}{\LWR@multicolpartext{3}}{}%
8069 \IfStrEq{\LWR@strresult}{W}{\LWR@multicolpartext{3}}{}%

8070 \IfStrEq{\LWR@strresult}{S}{\LWR@multicoltext}{}%
8071 \IfStrEq{\LWR@strresult}{s}{\LWR@multicoltext}{}%

8072 \IfStrEq{\LWR@strresult}{X}{\LWR@multicolpartext{0}}{}%
8073 \IfStrEq{\LWR@strresult}{|}{\LWR@multicolskip}{}%
8074 \IfStrEq{\LWR@strresult}{:}{\LWR@multicolskip}{}%
8075 \IfStrEq{\LWR@strresult}{;}{;}%
8076 \LWR@multicolskip%
8077 \addtocounter{LWR@tablemulticolspos}{1}% skip parameter
8078 }{}%
8079 \IfStrEq{\LWR@strresult}{\detokenize@}{\LWR@multicolother{#1}}{}%
8080 \IfStrEq{\LWR@strresult}{\detokenize!}{\LWR@multicolother{#1}}{}%
8081 \IfStrEq{\LWR@strresult}{\detokenize>}{\LWR@multicolother{#1}}{}%
8082 \IfStrEq{\LWR@strresult}{\detokenize<}{\LWR@multicolother{#1}}{}%

```

If an invalid column type:

```
8083 \ifbool{LWR@validtablecol}{}{\LWR@multicoltext}%
```

Tracing:

```
8084 \LWR@traceinfo{LWR@printmccoldata done}%
8085 }
```

`\parsemulticolumnalignment` {<1: colspec>} {<2: printresults>}

Scan the multicolumn specification and execute the printfunction for each entry.

Note that the spec for a p{spec} column, or @, >, <, is a token list which will NOT match l, c, r, or p.

```

8086 \newcommand*{\LWR@parsemulticolumnalignment}[2]{}%
8087 \setcounter{LWR@tablemulticolspos}{1}%
8088 \StrLen{#1}[LWR@strresult]%
8089 \setcounter{LWR@tablemulticolwidth}{\LWR@strresult}%

```

Scan across the tokens in the column spec:

```

8090 \whileboolexpr{%
8091 not test {%
8092 \ifnumcomp{\value{LWR@tablemulticolspos}}{>}%
8093 {\value{LWR@tablemulticolwidth}}%
8094 }%
8095 }%
8096 {%

```

Execute the assigned print function for each token in the column spec:

```
8097 #2{#1}%
```

Move to the next token in the column spec:

```
8098 \addtocounter{LWR@tablemulticolspos}{1}%
8099 }%
8100 }
```

### 73.22.2 Multicolumn factored code

\LWR@addmulticolvertrulecolor

```
8101 \newcommand*{\LWR@addmulticolvertrulecolor}{%
```

No vertical rules if finishing the tabular with a row of empty cells:

```
8102 \ifbool{LWR@tabularmutemods}{}{%
```

Left side:

```
8103 \ifnumcomp{\value{LWR@mcolvertbarsl}}{=}{1}{}%
8104 \LWR@tdaddstyle%
8105 border-left: 1px solid \LWR@vertruleHTMLcolor%
8106 }{}%
8107 \ifnumcomp{\value{LWR@mcolvertbarsl}}{>}{1}{}%
8108 \LWR@tdaddstyle%
8109 border-left: 4px double \LWR@vertruleHTMLcolor%
8110 }{}%
8111 \ifnumcomp{\value{LWR@mcolvertbarsldash}}{=}{1}{}%
8112 \LWR@tdaddstyle%
8113 border-left: 1px dashed \LWR@vertruleHTMLcolor%
8114 }{}%
8115 \ifnumcomp{\value{LWR@mcolvertbarsldash}}{>}{1}{}%
8116 \LWR@tdaddstyle%
8117 border-left: 2px dashed \LWR@vertruleHTMLcolor%
8118 }{}%
```

Right side:

```
8119 \ifnumcomp{\value{LWR@mcolvertbarsr}}{=}{1}{}%
8120 \LWR@tdaddstyle%
8121 border-right: 1px solid \LWR@vertruleHTMLcolor%
8122 }{}%
8123 \ifnumcomp{\value{LWR@mcolvertbarsr}}{>}{1}{}%
8124 \LWR@tdaddstyle%
8125 border-right: 4px double \LWR@vertruleHTMLcolor%
8126 }{}%
8127 \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{=}{1}{}%
8128 \LWR@tdaddstyle%
8129 border-right: 1px dashed \LWR@vertruleHTMLcolor%
8130 }{}%
8131 \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{>}{1}{}%
8132 \LWR@tdaddstyle%
8133 border-right: 2px dashed \LWR@vertruleHTMLcolor%
8134 }{}%
```

```
8135 }%
8136 }
```

```
8137 \newcommand{\LWR@multicoltext}{}%
```

To find multicolumn right trim:

```
8138 \newcounter{LWR@lastmulticolumn}
```

```
\LWR@domulticolumn [1: vpos] [2: #rows] {3: numLaTeXcols} {4: numHTMLcols} {5: colspec}
{6: text}
```

```
8139 \NewDocumentCommand{\LWR@domulticolumn}{o o m m m +m}{%
8140 \LWR@traceinfo{LWR@domulticolumn -#1- -#2- -#4- -#5-}%
```

Remember the text to be inserted, and remember that a valid column type was found:

```
8141 \renewcommand{\LWR@multicoltext}{%
8142 #6%
8143 \global\booltrue{LWR@validtablecol}%
8144 }%
```

Compute the rightmost column to be included. This is used to create the right trim.

```
8145 \setcounter{LWR@lastmulticolumn}{\value{LWR@tableLaTeXcolindex}}%
8146 \addtocounter{LWR@lastmulticolumn}{#3}%
8147 \addtocounter{LWR@lastmulticolumn}{-1}%
```

Row processing:

```
8148 \LWR@maybe newtable row%
```

Begin the opening table data tag:

```
8149 \LWR@htmltag{td colspan="#4" %
```

```
8150 \IfValueT{#2}{ % rows?
8151 rowspan="#2" %
```

```
8152 \IfValueT{#1}{% vpos?
8153 \ifstrequal{#1}{b}{\style="\LWR@print@embox{vertical-align:bottom}" }{}%
8154 \ifstrequal{#1}{t}{\style="\LWR@print@embox{vertical-align:top}" }{}%
8155 }% vpos?
8156 }% rows?
```

```
8157 class="td%
```

Print the column type and vertical bars:

```
8158 \setcounter{LWR@mc colvertbarsl}{0}%
8159 \setcounter{LWR@mc colvertbarsr}{0}%
```

```

8160 \setcounter{LWR@mcolvertbarsldash}{0}%
8161 \setcounter{LWR@mcolvertbarsrdash}{0}%
8162 \booltrue{LWR@mcolvertbaronleft}%
8163 \LWR@parsemulticolumnalignment{#5}{\LWR@printmccoltype}%

```

If this column has a `cmidrule`, add “rule” to the end of the HTML class tag.

If this position had a “Y” then add “rule” for a horizontal rule:

```

8164 \LWR@subaddcmidruletrim%
8165 {\LWR@getexpparray{LWR@trimlrules}{\arabic{LWR@tableLaTeXcolindex}}}%
8166 {\LWR@getexpparray{LWR@trimrrules}{\arabic{LWR@lastmulticolumn}}}%

```

Also add vertical bar class.

```

8167 \ifnumcomp{\value{LWR@mcolvertbarsl}}{=}{1}{ tvertbarl}{}%
8168 \ifnumcomp{\value{LWR@mcolvertbarsl}}{>}{1}{ tvertbarldouble}{}%
8169 \ifnumcomp{\value{LWR@mcolvertbarsr}}{=}{1}{ tvertbarr}{}%
8170 \ifnumcomp{\value{LWR@mcolvertbarsr}}{>}{1}{ tvertbarrdouble}{}%
8171 \ifnumcomp{\value{LWR@mcolvertbarsldash}}{=}{1}{ tvertbarldash}{}%
8172 \ifnumcomp{\value{LWR@mcolvertbarsldash}}{>}{1}{ tvertbarldoubledash}{}%
8173 \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{=}{1}{ tvertbarrdash}{}%
8174 \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{>}{1}{ tvertbarrdoubledash}{}%

```

Close the class tag’s opening quote: " NOT A TYPO

```

8175 %

8176 \LWR@tdstartstyles%

8177 \LWR@addtabulararrowcolor%

8178 \LWR@addcmidrulewidth%
8179 \LWR@addcdashline%
8180 \LWR@addtabularhrulecolor%
8181 \LWR@addmulticolvertulecolor%
8182 \LWR@addformatwpaignment{#5}%
8183 \LWR@tdendstyles%
8184 }% end of the opening table data tag
8185 \global\boolfalse{LWR@intabularmetadata}%
8186 \LWR@parsemulticolumnalignment{#5}{\LWR@printmccoldata}%
8187 }

```

### 73.22.3 Multicolumn

```
\LWR@htmlmulticolumn {<numcols>} {<alignment>} {<text>}
```

```

8188 \NewDocumentCommand{\LWR@htmlmulticolumn}{m m +m}%
8189 {}%

```

Figure out how many extra HTML columns to add for @ and ! columns:

```
8190 \LWR@tabularhtmlcolumns{\arabic{LWR@tableLaTeXcolindex}}{#1}
```

Create the multicolumn tag:

```
8191 \LWR@domulticolumn{#1}{\arabic{LWR@tabhtmlcoltotal}}{#2}{#3}%
```

Move to the next L<sup>A</sup>T<sub>E</sub>X column:

```
8192 \addtocounter{LWR@tableLaTeXcolindex}{#1}%
8193 \addtocounter{LWR@tableLaTeXcolindex}{-1}%
```

Skip any trailing @ or ! columns for this cell:

```
8194 \global\booltrue{LWR@skipatbang}%
8195 }
```

#### 73.22.4 Longtable captions

longtable captions use \multicolumn.

Bool LWR@starredlongtable Per the caption package, step the counter if longtable\*.

```
8196 \newbool{LWR@starredlongtable}
8197 \boolfalse{LWR@starredlongtable}
```

Per the caption package. User-redefinable float type.

```
8198 \providecommand*\LTcapttype{table}
```

\LWR@longtabledatacaptiontag \* [*<toc entry>*] {*<caption>*}

```
8199 \NewDocumentCommand{\LWR@longtabledatacaptiontag}{s o +m}
8200 {%
```

Remember the latest name for \nameref:

```
8201 \IfValueTF{#2}{% optional given?
8202 \ifblank{#2}{% optional empty?
8203 {\LWR@setlatestname{#3}}}% empty
8204 {\LWR@setlatestname{#2}}}% given and non-empty
8205 }% optional given
8206 {\LWR@setlatestname{#3}}}% no optional
```

Create a multicolumn across all the columns:

Figure out how many extra HTML columns to add for @ and ! columns found between the first and the last column:

```
8207 \LWR@tabularhtmlcolumns{1}{\arabic{LWR@tabletotalLaTeXcols}}
```

Create the multicolumn tag:

```
8208 \LWR@domulticolumn{\arabic{LWR@tabletotalLaTeXcols}}%
8209 {\arabic{LWR@tabhtmlcoltotal}}%
8210 {P}%
8211 {% \LWR@domulticolumn
8212 \IfBooleanTF{#1}% star?
```

Star version, show a caption but do not make a LOT entry:

```
8213 {% yes star
8214 \LWR@figcaption%
8215 \LWR@isolate{#3}%
8216 \endLWR@figcaption%
8217 }%
8218 {% No star:
```

Not the star version:

Don't step the counter if \caption[] {A caption.}

```
8219 \ifbool{LWR@starredlongtable}%
8220 {%
8221 \ifblank{#2}% TOC entry
8222 {}%
8223 {%
8224 \refstepcounter{\LTcapttype}%
8225 \protected@edef\@currentLabel{%
8226 \@nameuse{p@\LTcapttype}\@nameuse{the\LTcapttype}%
8227 }%
8228 }%
8229 }{}%
```

Create an HTML caption. Afterwards, maybe make a LOT entry.

```
8230 \LWR@figcaption%
8231 \LWR@isolate{\@nameuse{fnum@\LTcapttype}}%
8232 \CaptionSeparator%
8233 \LWR@isolate{#3}%
8234 \endLWR@figcaption%
```

See if an optional caption was given:

```
8235 \ifblank{#2}% TOC entry empty
```

if the optional caption was given, but empty, do not form a TOC entry

```
8236 {}%
```

If the optional caption was given, but might only be []:

```
8237 {% TOC entry not empty
8238 \IfNoValueTF{#2}% No TOC entry?
```

The optional caption is []:

```

8239 {% No TOC entry
8240 \addcontentsline%
8241 {\@nameuse{ext@LTcapttype}}%
8242 {LTcapttype}%
8243 {%
8244 \protect\numberline%
8245 {\LWR@isolate{\@nameuse{p@LTcapttype}}\@nameuse{theLTcapttype}}%
8246 {\ignorespaces \LWR@isolate{#3}\protect\relax}%
8247 }%
8248 }% end of No TOC entry

```

The optional caption has text enclosed:

```

8249 {% yes TOC entry
8250 \addcontentsline%
8251 {\@nameuse{ext@LTcapttype}}%
8252 {LTcapttype}%
8253 {%
8254 \protect\numberline%
8255 {\LWR@isolate{\@nameuse{p@LTcapttype}}\@nameuse{theLTcapttype}}%
8256 {\ignorespaces \LWR@isolate{#2}\protect\relax}%
8257 }%
8258 }% end of yes TOC entry
8259 }% end of TOC entry not empty
8260 }% end of no star

```

Skip any trailing @ or ! columns for this cell:

```

8261 \global\booltrue{LWR@skipatbang}%
8262 }% end of \LWR@domulticolumn
8263
8264 \addtocounter{LWR@tableLaTeXcolindex}{\arabic{LWR@tabletotalLaTeXcols}}
8265 \addtocounter{LWR@tableLaTeXcolindex}{-1}
8266
8267 }

```

### 73.22.5 Counting HTML tabular columns

The L<sup>A</sup>T<sub>E</sub>X specification for a table includes a number of columns separated by the & character. These columns differ in content from line to line. Additional virtual columns may be specified by the special @ and ! columns. These columns are identical from line to line, but may be skipped during a multicolumn cell.

For HTML output, @ and ! columns are placed into their own tabular columns. Thus, a L<sup>A</sup>T<sub>E</sub>X `\multicolumn` command may span several additional @ and ! columns in HTML output. These additional columns must be added to the total number of columns spanned by an HTML multi-column data cell.

```

8268 \newcounter{LWR@tabhtmlcolindex}
8269 \newcounter{LWR@tabhtmlcolend}
8270 \newcounter{LWR@tabhtmlcoltotal}

```

`\LWR@subtabularhtmlcolumns`  $\langle index \rangle$

Factored from `\LWR@tabularhtmlcolumns`, which follows.

```
8271 \newcommand*\LWR@subtabularhtmlcolumns}[1]{%
```

Temporarily define a macro equal to the @ specification for this column:

```
8272 \edef\LWR@atbangspec{\LWR@getexparray{\LWR@colatspec}{#1}}%
```

If the @ specification is not empty, add to the count:

```
8273 \ifdefempty{\LWR@atbangspec}%
8274 {}%
8275 {\addtocounter{\LWR@tabhtmlcoltotal}{1}}%
```

Likewise for the ! columns:

```
8276 \edef\LWR@atbangspec{\LWR@getexparray{\LWR@colbangspec}{#1}}%
8277 \ifdefempty{\LWR@atbangspec}%
8278 {}%
8279 {\addtocounter{\LWR@tabhtmlcoltotal}{1}}%
8280 }
```

`\LWR@tabularhtmlcolumns`  $\langle starting \textit{LATEX} column \rangle$   $\langle number \textit{LATEX} columns \rangle$

Compute the total number of HTML columns being spanned, considering the starting *LATEX* table column and the number of *LATEX* tabular columns being spanned. Any @ and ! columns within this span are included in the total count. The resulting number of HTML columns is returned in the counter `LWR@tabhtmlcoltotal`.

```
8281 \newcommand*\LWR@tabularhtmlcolumns}[2]{%
```

Count the starting index, compute ending index, and begin with the count being the *LATEX* span, to which additional @ and ! columns may be added:

```
8282 \setcounter{\LWR@tabhtmlcolindex}{#1}%
8283 \setcounter{\LWR@tabhtmlcoltotal}{#2}%
8284 \setcounter{\LWR@tabhtmlcolend}{#1}%
8285 \addtocounter{\LWR@tabhtmlcolend}{#2}%
```

If at the left edge, add the at/bang columns for the left edge:

```
8286 \ifnumcomp{\value{\LWR@tabhtmlcolindex}}{=}{1}{}%
8287 \LWR@subtabularhtmlcolumns{leftedge}%
8288 }{ }%
```

Walk across the *LATEX* columns looking for @ and ! columns:

```
8289 \whileboolexpr{%
8290 test {%
8291 \ifnumcomp{\value{\LWR@tabhtmlcolindex}}{<}{\value{\LWR@tabhtmlcolend}}%
8292 }%
```



```

8293 }%
8294 {%
8295 \LWR@subtabularhtmlcolumns{\arabic{LWR@tabhtmlcolindex}}%
8296 \addtocounter{LWR@tabhtmlcolindex}{1}%
8297 }% whiledo
8298 }

8299 \end{warpHTML}

```

### 73.23 Multirow if not loaded

A default definition in case `multirow` is not loaded. This is used during table parsing.

```

8300 \begin{warpHTML}
8301 \newcommand{\multirow}[2][c]{
8302 \end{warpHTML}

```

### 73.24 Multicolumnrow

A print-mode version is defined here, and is also used during HTML output while inside a `lateximage`.

See section 332 for the HTML versions.

**for HTML & PRINT:** 8303 \begin{warpall}

```

\multicolumnrow {<1:cols>} {<2:halign>} [<3:vpos>] {<4:numrows>} [<5:bigstruts>] {<6:width>} [<7:fixup>]
{<8:text>}

```

For discussion of the use of `\DeclareExpandableDocumentCommand`, see:

<https://tex.stackexchange.com/questions/168434/problem-with-abbreviation-of-multirow-and-multicolumn-latex>

`\AtBeginDocument` to adjust after the user may have loaded `multirow`, which requires several tests to determine which version is loaded and thus which options are available.

```
8304 \AtBeginDocument{
```

`\@ifundefined{@xmultirow}` determines if `multirow` was never loaded.

Null action if not loaded:

```

8305 \@ifundefined{@xmultirow}
8306 {
8307 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
8308 {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
8309 {}%
8310 }% no version of multirow was loaded
8311 {% \@xmultirow defined, so some version of multirow was loaded

```

`\@ifpackageloaded{multirow}` determines if v2.0 or later of `multirow` was used, which included the `\ProvidesPackage` macro.

The print version:

```
8312 \@ifpackageloaded{multirow}{% v2.0 or newer
8313 \@ifpackagelater{multirow}{2016/09/01}% 2016/09/27 for v2.0
8314 {% v2.0+:
8315 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
8316 {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
8317 {\multicolumn{#1}{#2}{\@xmultirow[#3][#4][#5][#6][#7][#8]}}%
8318 }
8319 {% loaded but older, probably not executed:
8320 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
8321 {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
8322 {\multicolumn{#1}{#2}{\@xmultirow{#4}[#5][#6][#7][#8]}}%
8323 }
8324 }% packageloaded{multirow}
```

If not `\@ifpackageloaded{multirow}` but `\@xmultirow` is defined, then this must be v1.6 or earlier, which did not `\ProvidesPackage{multirow}`, and did not have the `vposn` option.

```
8325 {% v1.6 or older did not \ProvidePackage
8326 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
8327 {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
8328 {\multicolumn{#1}{#2}{\@xmultirow{#4}[#5][#6][#7][#8]}}%
8329 }
8330
8331 }% \@ifundefined{@xmultirow}
8332
8333 \providecommand*\multicolumnrow{\LWR@print@multicolumnrow}
8334
8335 }% AtBeginDocument

8336 \end{warpall}
```

## 73.25 Utility macros inside a table

**for HTML output:** 8337 `\begin{warpHTML}`

Used to prevent opening a tabular data cell if the following token is one which does not create tabular data:

```
8338 \newcommand*\LWR@doanything{}
```

In case `array` is not loaded:

```
8339 \let\firstline\relax
8340 \let\lastline\relax
8341 \newcommand*\firstline{}
8342 \newcommand*\lastline{}
```

In case bigdelim is not loaded:

```
8343 \newcommand*\ldelim{}
8344 \newcommand*\rdelim{}

8345 \end{warpHTML}
```


## 73.26 Special-case tabular markers

**for HTML & PRINT:** 8346 \begin{warpall}

`\TabularMacro` Place this just before inserting a custom macro in a table data cell. Doing so tells lwarp not to automatically start a new HTML table data cell yet. See section 9.10.1.

```
8347 \newcommand*\TabularMacro{}
8348 \end{warpall}
```

`\ResumeTabular` Used to resume tabular entries after resuming an environment.

 **tabular inside another environment** When creating a new environment which contains a tabular environment, lwarp's emulation of the tabular does not automatically resume when the containing environment ends, resulting in corrupted HTML rows. To fix this, use `\ResumeTabular` as follows. This is ignored in print mode.

```
\StartDefiningTabulars % because & is used in a definition
\newenvironment{outerenvironment}
{
\tabular{cc}
left & right \\
}
{
\TabularMacro\ResumeTabular
left & right \\
\endtabular
}
\StopDefiningTabulars
```

**for HTML output:** 8349 \begin{warpHTML}

```
8350 \newcommand*\ResumeTabular}{%
8351 \global\boolfalse{LWR@exitingtabular}%
8352 \global\boolfalse{LWR@tabularmutemods}%
8353 \LWR@getmynexttoken%
8354 }

8355 \end{warpHTML}
```

**for PRINT output:** 8356 \begin{warpprint}

```
8357 \newcommand*{\ResumeTabular}{}

```

```
8358 \end{warpprint}

```

## 73.27 Checking for a new table cell

**for HTML output:** 8359 \begin{warppHTML}

Bool LWR@exitingtabular When \end is found, turns off the next opening data tag.

```
8360 \newbool{LWR@exitingtabular}

```

Bool LWR@tabularmutemods Mutes HTML output for @, !, < and >.

This is used while printing the final row to generate \bottomrules.

```
8361 \newbool{LWR@tabularmutemods}

```

\LWR@tabledatacolumnstag Open a new HTML table cell unless the next token is for a macro which does not create data, such as \hline, \toprule, etc:

```
8362 \newcommand*{\LWR@tabledatacolumnstag}%

```

```
8363 {%

```

```
8364 \LWR@traceinfo{LWR@tabledatacolumnstag}%

```

\show\LWR@mynexttoken to see what tokens to look for

If not any of the below, start a new table cell:

```
8365 \global\let\LWR@mynextaction\LWR@tabledatasinglecolumnstag%

```

If exiting the tabular:

```
8366 \ifdefequal{\LWR@mynexttoken}{\end}%

```

```
8367 {\global\booltrue{LWR@exitingtabular}}}%

```

longtable can have a caption in a cell

```
8368 \ifdefequal{\LWR@mynexttoken}{\caption}%

```

```
8369 {\global\let\LWR@mynextaction\LWR@donothing}}}%

```

Look for other things which would not start a table cell:

```
8370 \ifdefequal{\LWR@mynexttoken}{\multicolumn}%

```

```
8371 {\global\let\LWR@mynextaction\LWR@donothing}}}%

```

```
8372 \ifdefequal{\LWR@mynexttoken}{\multirow}%

```

```
8373 {\global\let\LWR@mynextaction\LWR@donothing}}}%

```

```
8374 \ifdefequal{\LWR@mynexttoken}{\multicolumnrow}%

```

```
8375 {\global\let\LWR@mynextaction\LWR@donothing}}}%

```

```
8376 \ifdefequal{\LWR@mynexttoken}{\noalign}%
8377 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

If an `\mrowcell`, this is a cell to be skipped over:

```
8378 \ifdefequal{\LWR@mynexttoken}{\mrowcell}%
8379 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

If an `\mcolrowcell`, this is a cell to be skipped over:

```
8380 \ifdefequal{\LWR@mynexttoken}{\mcolrowcell}%
8381 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8382 \ifdefequal{\LWR@mynexttoken}{\TabularMacro}%
8383 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8384 \ifdefequal{\LWR@mynexttoken}{\hline}%
8385 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8386 \ifdefequal{\LWR@mynexttoken}{\firstline}%
8387 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8388 \ifdefequal{\LWR@mynexttoken}{\lastline}%
8389 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8390 \ifdefequal{\LWR@mynexttoken}{\toprule}%
8391 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8392 \ifdefequal{\LWR@mynexttoken}{\midrule}%
8393 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8394 \ifdefequal{\LWR@mynexttoken}{\cmidrule}%
8395 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8396 \ifdefequal{\LWR@mynexttoken}{\morecmidrules}%
8397 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8398 \ifdefequal{\LWR@mynexttoken}{\specialrule}%
8399 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8400 \ifdefequal{\LWR@mynexttoken}{\cline}%
8401 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8402 \ifdefequal{\LWR@mynexttoken}{\bottomrule}%
8403 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8404 \ifdefequal{\LWR@mynexttoken}{\rowcolor}%
8405 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8406 \ifdefequal{\LWR@mynexttoken}{\arrayrulecolor}%
8407 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8408 \ifdefequal{\LWR@mynexttoken}{\doublerulesepcolor}%
8409 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8410 \ifdefequal{\LWR@mynexttoken}{\warpprintonly}%
8411 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8412 \ifdefequal{\LWR@mynexttoken}{\warpHTMLonly}%
8413 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8414 \ifdefequal{\LWR@mynexttoken}{\ldelim}%
8415 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8416 \ifdefequal{\LWR@mynexttoken}{\rdelim}%
8417 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

For arydshln:

```
8418 \ifdefequal{\LWR@mynexttoken}{\hdashline}%
8419 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8420 \ifdefequal{\LWR@mynexttoken}{\cdashline}%
8421 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8422 \ifdefequal{\LWR@mynexttoken}{\firstdashline}%
8423 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8424 \ifdefequal{\LWR@mynexttoken}{\lastdashline}%
8425 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

Ignore an empty line between rows:

```
8426 \ifdefequal{\LWR@mynexttoken}{\par}%
8427 {\global\let\LWR@mynextaction\LWR@donothing}{}
```

No action for an \end token.

Add similar to the above for any other non-data tokens which might appear in the table.


Start the new table cell if was not any of the above:

```
8428 \LWR@traceinfo{\LWR@tabledatacolumnstag: about to do mynext}%
8429 \LWR@mynextaction%
8430 \LWR@traceinfo{\LWR@tabledatacolumnstag: done}%
8431 }
```

```
8432 \end{warpHTML}
```

## 73.28 \mrowcell

for HTML & PRINT: 8433 \begin{warpall}

 **\mrowcell** multirow cells The user must insert `\mrowcell` into any `\multirow` cells which must be skipped. This command has no action during print output.

```
8434 \newcommand*{\mrowcell}{}


```

```
8435 \end{warpall}

```

### 73.29 `\mcolrowcell`

**for HTML & PRINT:** 8436 `\begin{warpall}`

 **\mcolrowcell** multirow cells The user must insert `\mcolrowcell` into any `\multicolumnrow` cells which must be skipped. This command has no action during print output.

```
8437 \newcommand*{\mcolrowcell}{}

```

```
8438 \end{warpall}

```

### 73.30 HTML tabular environment

**for HTML output:** 8439 `\begin{warpHTML}`

These are default definitions in case `booktabs` is not loaded, and are not expected to be used, but must exist as placeholders. They are pre-deleted in case `memoir` has already loaded `booktabs`.

```
8440 \LetLtxMacro\toprule\relax
8441 \LetLtxMacro\midrule\relax
8442 \LetLtxMacro\cmidrule\cline
8443 \LetLtxMacro\bottomrule\relax
8444 \LetLtxMacro\addlinespace\relax
8445 \LetLtxMacro\morecmidrules\relax
8446 \LetLtxMacro\specialrule\relax
8447
8448 \newcommand*{\toprule}[1][\hline]
8449 \newcommand*{\midrule}[1][\hline]
8450 \LetLtxMacro\cmidrule\cline
8451 \newcommand*{\bottomrule}[1][\hline]
8452 \newcommand*{\addlinespace}[1]{}
8453 \newcommand*{\morecmidrules}{}
8454 \newcommand*{\specialrule}[3]{\hline}

```

`\noalign` `{\text}` Redefined for use inside `tabular`.

```
8455 \LetLtxMacro\LWR@orignoalign\noalign
8456
8457 \newcommand{\LWR@tabularnoalign}[1]{%

```

```

8458 \begingroup%
8459 \global\advance\rownum\m@ne%
8460 \renewcommand*{\LWR@xcolorrowHTMLcolor}{}%
8461 \multicolumn{\value{\LWR@tabletotalLaTeXcols}}{l}{#1} \\
8462 \endgroup%
8463 % \@rowc@lors%
8464 \LWR@getmynexttoken%
8465 }

```

`\LWR@HTMLhline` The definition of `\hline` depends on whether `tabls` has been loaded. If so, optional space below the line may be specified, but will be ignored.

```

8466 \AtBeginDocument{
8467 \ifpackageloaded{lwarp-tbls}
8468 {
8469 \newcommand*{\LWR@HTMLhline}[1][{}]{%
8470 \ifbool{FormatWP}%
8471 {\LWR@docmidrule{1-\arabic{\LWR@tabletotalLaTeXcols}}}%
8472 {\addtocounter{\LWR@hlines}{1}}%
8473 \LWR@getmynexttoken}%
8474 }
8475 {
8476 \newcommand*{\LWR@HTMLhline}{%
8477 \ifbool{FormatWP}%
8478 {\LWR@docmidrule{1-\arabic{\LWR@tabletotalLaTeXcols}}}%
8479 {\addtocounter{\LWR@hlines}{1}}%
8480 \LWR@getmynexttoken}%
8481 }
8482 }% AtBeginDocument

```

`\LWR@HTMLcline` `{\langle columns \rangle}`

```

8483 \NewDocumentCommand{\LWR@HTMLcline}{m}%
8484 {\LWR@docmidrule{#1}\LWR@getmynexttoken}%

```

`\LWR@tabular@warpprintonly` `{\langle contents \rangle}`

Only process the contents if producing printed output. Modified inside a `tabular` to grab the next token.

```

8485 \newcommand{\LWR@tabular@warpprintonly}[1]{%
8486 \ifbool{warpingprint}{#1}{}%
8487 \LWR@getmynexttoken%
8488 }

```

`\LWR@nullifyNoAutoSpacing` For `babel-french`, turn off auto spacing at the start of the `tabular`, then nullify the autospacing commands inside the `tabular`, since they were not compatible with the `tabular` column parsing code, which uses `xstring`.

```

8489 \AtBeginDocument{
8490 \ifundefined{frenchbsetup}%
8491 {% no babel-french

```



```

8492 \newcommand*\LWR@nullifyNoAutoSpacing{}
8493 }% no babel-french
8494 {% yes babel-french
8495 \newcommand*\LWR@nullifyNoAutoSpacing{%
8496 \NoAutoSpacing%
8497 \renewcommand*\NoAutoSpacing{}%
8498 \renewcommand*\LWR@FBcancel{}%
8499 }
8500 }% yes babel-french
8501 }% AtBeginDocument

```

Env tabular <direction> [*<verticalposition>*] {<colspecs>}

The <direction> is from `plext` for Japanese documents, and is ignored.

```

8502 \StartDefiningTabulars
8503
8504 \NewDocumentCommand{\LWR@HTML@tabular}{d<> o m}
8505 {%
8506 \LWR@traceinfo{\LWR@HTML@tabular started}%
8507 \addtocounter{\LWR@tabulardepth}{1}%

```

Not yet started a table row:

```
8508 \global\boolfalse{\LWR@startedrow}%
```

Not yet doing any rules:

```

8509 \setcounter{\LWR@hlines}{0}%
8510 \setcounter{\LWR@hdashedlines}{0}%
8511 \global\boolfalse{\LWR@doingtbrule}%
8512 \global\boolfalse{\LWR@doingcmidrule}%

```

For `babel-french`, turn off auto spacing one time, then nullify the autospacing commands since were not compatible with the tabular parsing code.

```
8513 \LWR@nullifyNoAutoSpacing%
```

Have not yet found the end of tabular command. Unmute the @ and ! columns.

```

8514 \global\boolfalse{\LWR@exitingtabular}%
8515 \global\boolfalse{\LWR@tabularmutemods}%

```

Error if failed to use `\mrowcell` or `\mcolrowcell` when needed.

```

8516 \boolfalse{\LWR@usedmultirow}
8517 \boolfalse{\LWR@foundmrowcell}

```

Create the table tag:

```

8518 \global\booltrue{\LWR@intabularmetadata}%
8519 \LWR@traceinfo{\LWR@tabular: About to LWR@forecnewpage.}%

```

```
8520 \LWR@forcenewpage
8521 \LWR@htmlblocktag{table}%
```

Parse the table columns:

```
8522 \LWR@parsetablecols{#3}%
```

Table col spec is: \LWR@tablecolspec which is a string of llccrr, etc.

Do not place the table inside a paragraph:

```
8523 \LWR@stoppars%
```

Track column #:

```
8524 \setcounter{LWR@tableLaTeXcolindex}{1}%
```

Have not yet added data in this column:

```
8525 \global\boolfalse{LWR@tabularcelladded}%
```

Start looking for midrules:

```
8526 \LWR@clearmidrules%
```

\\ becomes a macro to end the table row:

```
8527 \LetLtxMacro{\\}{\LWR@tabularendoffline}%
```

\warpprintonly inside a tabular must grab the next token.

```
8528 \LetLtxMacro\warpprintonly\LWR@tabular@warpprintonly%
```

The following adjust for colortbl.

```
8529 \LetLtxMacro\arrayrulecolor\arrayrulecolornexttoken%
8530 \LetLtxMacro\doublerulesepcolor\doublerulesepcolornexttoken%
8531 \gdef\LWR@columnHTMLcolor{}%
8532 \gdef\LWR@rowHTMLcolor{}%
8533 \gdef\LWR@cellHTMLcolor{}%
8534 \@rowcolors%
```

The vertical rules are set to the color active at the start of the tabular. \arrayrulecolor will then affect horizontal rules inside the tabular, but not the vertical rules.

```
8535 \ifdefvoid{\LWR@ruleHTMLcolor}%
8536 {\edef\LWR@vertruleHTMLcolor{black}}%
8537 {\edef\LWR@vertruleHTMLcolor{\LWR@origpound\LWR@ruleHTMLcolor}}%
```

Tracking the depth of cell color <div>s:

```
8538 \setcounter{LWR@cellcolordepth}{0}%
```

The following may appear before a data cell is created, so after doing their actions, we look ahead with `\LWR@getmynexttoken` to see if the next token might create a new data cell:

The optional parameter for `\hline` supports the `tbls` package.

```

8539 \LWR@traceinfo{\LWR@HTML@tabular: redefining macros}%
8540 \LetLtxMacro\noalign\LWR@tabularnoalign%
8541 \LetLtxMacro\hline\LWR@HTMLhline%
8542 \LetLtxMacro\cline\LWR@HTMLcline%

8543 \DeclareDocumentCommand{\hdashline}{o}{%
8544 \ifbool{FormatWP}%
8545 {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
8546 {\addtocounter{LWR@hdashedlines}{1}}%
8547 \LWR@getmynexttoken%
8548 }%

8549 \DeclareDocumentCommand{\cdashline}{m}{%
8550 \LWR@docdashline{##1}\LWR@getmynexttoken%
8551 }%

8552 \DeclareDocumentCommand{\firsthdashline}{o}{%
8553 \ifbool{FormatWP}%
8554 {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
8555 {\addtocounter{LWR@hdashedlines}{1}}%
8556 \LWR@getmynexttoken%
8557 }%

8558 \DeclareDocumentCommand{\lasthdashline}{o}{%
8559 \ifbool{FormatWP}%
8560 {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
8561 {\addtocounter{LWR@hdashedlines}{1}}%
8562 \LWR@getmynexttoken%
8563 }%

```

The following create data cells and will have no more data in this cell, so we do not want to look ahead for a possible data cell, so do not want to use `\LWR@getmynexttoken`.

```

8564 \renewcommand{\multicolumn}{\LWR@htmlmulticolumn}%
8565 \renewcommand*{\mrowcell}{%
8566 \LWR@maybenewtablerow%
8567 \LWR@tabularleftedge%
8568 \global\booltrue{LWR@skippingmrowcell}%
8569 \booltrue{LWR@foundmrowcell}%
8570 }%
8571 \renewcommand*{\mcolrowcell}{%
8572 \LWR@maybenewtablerow%
8573 \global\booltrue{LWR@skippingmcolrowcell}%
8574 \booltrue{LWR@foundmrowcell}%
8575 }%
8576 \LetLtxMacro\caption\LWR@longtabledatacaptiontag%

```

Reset for new processing:

```
8577 \global\boolfalse{LWR@tableparcell}%
8578 \global\boolfalse{LWR@skippingmrowcell}%
8579 \global\boolfalse{LWR@skippingmcolrowcell}%
8580 \global\boolfalse{LWR@skipatbang}%
8581 \global\boolfalse{LWR@emptyatbang}%
```

Set & for its special meaning inside the tabular:

```
8582 \StartDefiningTabulars%
8583 \protected\gdef&{\LWR@tabularampersand}%
```

Locally force any minipages to be fullwidth, until the end of the tabular:

```
8584 \booltrue{LWR@forceminipagefullwidth}
```

Nest one level deeper of tabular paragraph handling:

```
8585 \addtocounter{LWR@tabularpardepth}{1}%
```

Look ahead for a possible table data cell:

```
8586 \LWR@traceinfo{LWR@HTML@tabular: about to LWR@getmynexttoken}%
8587 \LWR@getmynexttoken%
8588 }%
```

Ending the environment:

```
8589 \newcommand*{\LWR@HTML@endtabular}
8590 {%
8591 \LWR@traceinfo{LWR@HTML@endtabular}%
```

Unnest one level of tabular paragraph handling:

```
8592 \addtocounter{LWR@tabularpardepth}{-1}%
8593 \ifboolexpr{%
8594 test {%
8595 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}{\value{LWR@tabletotalLaTeXcols}}
8596 } or %
8597 (%
8598 bool{LWR@intabularmetadata} and%
8599 not bool{LWR@tabularcelladded} and%
8600 test {%
8601 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}{\value{LWR@tabletotalLaTeXcols}}%
8602 }%
8603)%
8604 }%
8605 {%
8606 \LWR@tabularfinishrow%
8607 }%
8608 {%
8609 \LWR@closetabledatacell%
8610 }%
```

8611 \LWR@htmlblocktag{/tr}%

**xcolor row color support:**

8612 \@rowcolor%

8613 \LWR@htmlblocktag{/table}%

8614 \global\boolfalse{LWR@intabularmetadata}%

**Unnest one level of tabular:**

8615 \addtocounter{LWR@tabulardepth}{-1}%

**Restore & to its usual meaning:**

8616 \protected\gdef&{\LWR@origampmacro}%

8617 \StopDefiningTabulars%

**Error if used \multirow or \multicolumnrow without using \mrowcell or \mcolrowcell.**

8618 \ifbool{LWR@usedmultirow}{%

8619     \ifbool{LWR@foundmrowcell}{%

8620         {}}%

8621         {%

8622             \PackageError{lwarp}%

8623             {%

8624             When using \protect\multirow, \protect\multicolumnrow, \MessageBreak  
8625             or the bigdelim package, \MessageBreak

8626             place \protect\mrowcell\space or \protect\mcolrowcell\MessageBreak

8627             in empty cells which are to be skipped.\MessageBreak

8628             See the lwarp package documentation:\MessageBreak

8629             "Special cases and limitations" -> "Tabular"

8630             }%

8631             {%

8632             See the lwarp package documentation:\MessageBreak

8633             "Special cases and limitations" -> "Tabular".

8634             }%

8635         }%

8636 }{}}%

8637 \LWR@traceinfo{LWR@HTML@endtabular finished}%

8638 }

8639

8640 \csletcs{LWR@HTML@endtabular\*}{LWR@HTML@endtabular}

8641

8642 \StopDefiningTabulars

**siunitx may redefine tabular, so set the following later:**

8643 \AtBeginDocument{

8644     \LetLtxMacro\LWR@origendtabular\endtabular

8645     \csletcs{LWR@origendtabular\*}{endtabular\*}

```

8646 \LWR@formatted{@tabular}
8647 \LWR@formatted{endtabular}
8648 \LWR@formatted{endtabular*}
8649 }

8650 \end{warpHTML}

```

## 74 Cross-references

Sectioning commands have been emulated from scratch, so the cross-referencing commands are custom-written for them. Emulating both avoids several layers of patches.

File `*_html.aux` A new entry in `*_html.aux` is used to remember section name, file, and lateximage depth and number for each label:

```

\newlabel{<labelname>@lwarp}{{<section name>}{<filename>}
{<limagedepth>}{<limagenumber>}}

```

Table 12 shows the data structures related to cross-referencing.

**for HTML output:** 8651 `\begin{warpHTML}`

### 74.1 Setup

`\@currentlabelname` To remember the most recently defined section name, description, or caption, for `\nameref`.

```
8652 \providecommand*\@currentlabelname{}
```

`\LWR@stripperperiod` `{<text>} [(<.>)]`

Removes a trailing period.

```
8653 \def\LWR@stripperperiod#1.\ltx@empty#2\@nil{#1}%
```

`\LWR@setlatestname` `{<object name>}`

Removes `\label`, strips any final period, and remembers the result.

```
8654 \newcommand*\LWR@setlatestname[1]{%
```

Remove `\label` and other commands from the name, the strip any final period. See `getttitlestring`.

```
8655 \GetTitleStringExpand{#1}%
```

Table 12: Cross-referencing data structures

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| <b>Original L<sup>A</sup>T<sub>E</sub>X:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | (print and HTML)                             |
| <p><b>\refstepcounter:</b> Steps the counter and sets <code>\@currentlabel</code>.</p> <p><b>\@currentlabel:</b> <code>\p@&lt;ctr&gt;\the&lt;ctr&gt;</code> Updated by <code>\refstepcounter</code>.</p> <p><b>\Label:</b> Writes to the .aux file:<br/> <code>\newlabel{&lt;label&gt;}{\@currentlabel}{\thepage}}</code></p> <p><b>\newlabel:</b> When the .aux file is read, sets <code>\r@&lt;label&gt;</code>.</p> <p><b>\r@&lt;label&gt;:</b> Set to: <code>{\@currentlabel}{\thepage}}</code></p> <p><b>\ref:</b> Returns the first part of <code>\r@&lt;label&gt;</code>.</p> <p><b>\pageref:</b> Returns the second part of <code>\r@&lt;label&gt;</code>.</p>                                                                                                                                                                                                                                                                                                                        |                                              |
| <b>Added by lwarp:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | (HTML only)                                  |
| <p><b>\Label:</b> Adds HTML tags (section 74.3), and another .aux entry (section 74.2).</p> <p><b>\newlabel:</b> Unchanged. When the .aux file is read, sets <code>\r@&lt;label&gt;@lwarp</code>.</p> <p><b>\r@&lt;label&gt;@lwarp:</b> Set to <code>{{section_name}{file_name}{depth}{number}}</code>:</p> <p style="padding-left: 2em;"><b>\LWR@nameref:</b> The section name for this label.</p> <p style="padding-left: 2em;"><b>\LWR@htmlfileref:</b> The filename or name for this label.</p> <p style="padding-left: 2em;"><b>\LWR@lateximagedepthref:</b> The lateximagedepth for this label.</p> <p style="padding-left: 2em;"><b>\LWR@lateximagenumberref:</b> The lateximagenumber for this label.</p> <p><b>\nameref:</b> Emulated from hyperref for lwarp. See section 74.4.</p> <p><b>\ref and \nameref:</b> Adds HTML tags. See section 74.4.</p>                                                                                                                              |                                              |
| <b>Added by amsmath:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | (print and HTML)                             |
| <p><b>\Label:</b> Execution is delayed until the math environment is completed.</p> <p><b>\ltx@label:</b> L<sup>A</sup>T<sub>E</sub>X <code>\label</code>, (HTML: patched by lwarp,) later patched by cleveref.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                              |
| <b>Added by cleveref:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | (print and HTML)                             |
| <p><b>\refstepcounter:</b> Added: sets <code>\cref@currentlabel</code>.</p> <p><b>\cref@currentlabel:</b> (<code>&lt;type&gt;=&lt;ctr&gt;</code> unless an alias is used):<br/> <code>[&lt;type&gt;][\arabic{&lt;ctr&gt;}][&lt;parent ctrs&gt;]{\p@&lt;ctr&gt;\the&lt;ctr&gt;}</code> Also see section 60.4 for use with footnotes.</p> <p><b>\Label:</b> Writes to the .aux file:<br/> <code>\newlabel{&lt;label&gt;@cref}{\cref@currentlabel}{\thepage}}</code></p> <p><b>\newlabel:</b> Unchanged. When the .aux file is read, sets <code>\r@&lt;label&gt;@cref</code>.</p> <p><b>\r@&lt;label&gt;@cref:</b> Set to: <code>{\cref@currentlabel}{\thepage}}</code></p> <p><b>Utility functions:</b> See <code>\cref@getlabel</code>, <code>\cref@gettype</code>, <code>\cref@getcounter</code>, <code>\cref@getprefix</code>.</p> <p><b>Cross-referencing names:</b> <code>\crefname</code> and <code>\Crefname</code> assign human-readable names for references to this counter type.</p> |                                              |
| <b>Additionally patched by lwarp:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | (HTML only)                                  |
| <p><b>\cref, etc.:</b> Modified for lwarp. See section 88.</p> <p><b>\label inside math:</b> See section 80.7.1.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                              |
| <b>Footnotes:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | See <code>\noteentry</code> in section 60.4. |

```

8656 \edef\@currentlabelname{\detokenize\expandafter{\GetTitleStringResult}}%
8657 \edef\@currentlabelname{%
8658 \expandafter\LWR@stripperperiod\@currentlabelname%
8659 \ltx@empty.\ltx@empty\@nil%
8660 }%
8661 }

```

## 74.2 New lwarp labels.

File \*\_html.aux A new entry in \*\_html.aux is used to remember section name, file, and lateximage depth and number for each label:

```

\newlabel{<labelname>@lwarp}{<<section name>>{<filename>}
 {<limagedepth>}{<limagenumber>}}

```

See:

<http://tex.stackexchange.com/questions/57194/extract-section-number-from-equation-reference>

`\LWR@setref` {<args list>} {<selector>} {<label>}

`\@setref` without the `\null` (`\hbox`), and without the warning messages. Each caused problems with lwarp references. The regular reference will cause the warning.

```

8662 \def\LWR@setref#1#2#3{%
8663 \ifx#1\relax%
8664 ??%
8665 \else%
8666 \expandafter#2#1%
8667 \fi}

```

`\LWR@nameref` {<label>} Returns the section name for this label:

```

8668 \newcommand*\LWR@nameref}[1]{%
8669 \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@firstoffour{#1}%
8670 }

```

`\LWR@htmlfileref` {<label>} Returns the file number or name for this label:

```

8671 \newcommand*\LWR@htmlfileref}[1]{%
8672 \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@secondoffour{#1}%
8673 }

```

`\LWR@lateximagedepthref` {<label>} Returns the lateximagedepth for this label:

```

8674 \newcommand*\LWR@lateximagedepthref}[1]{%
8675 \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@thirdoffour{#1}%
8676 }

```



`\LWR@lateximagenumberref`  $\langle label \rangle$  Returns the lateximagenumber for this label:

```
8677 \newcommand*\LWR@lateximagenumberref}[1]{%
8678 \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@fourthoffour{#1}%
8679 }
```

`\LWR@lwarplabel`  $\langle label \rangle$  Sanitize the name and then creates the label:

```
8680 \newcommand*\LWR@lwarplabel}[1]{%
8681 \LWR@traceinfo{LWR@lwarplabel !#1!}%
8682 \LWR@setlatestname{\@currentlabelname}%
8683 \@bsphack%
8684 \protected@write\@auxout{%
8685 {\string\newlabel{#1@lwarp}{%
8686 {\@currentlabelname}%
8687 {\ifbool{FileSectionNames}{\LWR@thisfilename}{\arabic{LWR@htmlfilenumber}}}%
8688 {\arabic{LWR@lateximagedepth}}}%
8689 {\arabic{LWR@lateximagenumber}}}%
8690 }%
8691 \@esphack%
8692 }
```

### 74.3 Labels

`\LWR@sublabel`  $\langle label \rangle$  Creates an HTML id tag.

`\detokenize` is used to allow underscores in the labels.

```
8693 \newcommand*\LWR@sublabel}[1]{%
8694 \LWR@traceinfo{LWR@sublabel !#1!}%
```

Create an HTML id tag unless are inside a lateximage, since it would appear in the image:

```
8695 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
8696 {}%
8697 {% not lateximage
```

If not doing a lateximage, create an HTML ID tag: (To be factored...)

```
8698 \LWR@sanitize{#1}%
8699 \ifbool{LWR@doingstartpars}%
8700 {% pars allowed
8701 \ifbool{LWR@doingapar}%
8702 {% par started
8703 \LWR@htmltag{a \LWR@print@mbox{id="\LWR@sanitized"}}\LWR@htmltag{/a}%
8704 }% par started
8705 {% par not started
8706 \LWR@stoppars%
8707 }\LWR@htmltag{a \LWR@print@mbox{id="\LWR@sanitized"}}\LWR@htmltag{/a}%
8708 }\LWR@startpars%
```

```

8709 }% par not started
8710 }% pars allowed
8711 {% pars not allowed
8712 \LWR@htmltag{a \LWR@print@mbbox{id="\LWR@sanitized"}}\LWR@htmltag{/a}%
8713 }% pars not allowed
8714 }% not lateximage
8715 }

```

`\LWR@new@label` (*bookmark*) [*label*] [*type*]

`\label` during HTML output when not in SVG math mode, removing extra spaces around the label, as done by a regular L<sup>A</sup>T<sub>E</sub>X `\label`.

This is also used during a `lateximage`, including SVG math, since the special label handling is required, but `\LWR@sublabel` does not generate HTML tags inside a `lateximage`.

`cleveref` later encases this to add its own cross-referencing.

The optional *bookmark* is per the memoir class, and is ignored.

The optional *type* is per the ntheorem package, and is ignored.

```

8716 \NewDocumentCommand{\LWR@new@label}{d() m o}{%
8717 \LWR@traceinfo{\LWR@new@label: starting}%
8718 \LWR@traceinfo{\LWR@new@label: !#2!}%
8719 % \@bsphack%

```

Create a traditional L<sup>A</sup>T<sub>E</sub>X label, as modified by `cleveref`:

```
8720 \LWR@orig@label{#2}%
```

Create a special label which holds the section number, `LWR@htmlfilenumber`, `LWR@lateximagedepth`, and `LWR@lateximagenumber`:

```

8721 \LWR@traceinfo{\LWR@new@label: filesectionnames is \ifbool{FileSectionNames}{true}{false}}%
8722 \LWR@traceinfo{\LWR@new@label: LWR@thisfilename is !\LWR@thisfilename!}%
8723 \LWR@traceinfo{\LWR@new@label: LWR@htmlfilenumber is \arabic{LWR@htmlfilenumber}}%
8724 \LWR@lwarplabel{#2}%
8725 \LWR@sublabel{#2}%
8726 % \@esphack%
8727 \LWR@traceinfo{\LWR@new@label: done}%
8728 }

```

## 74.4 References

`\LWR@startref` [*label*] (Common code for `\ref` and `\nameref`.)

Open an HTML tag reference to a filename, # character, and a label.

```

8729 \newcommand*{\LWR@startref}[1]
8730 {%

```

```
8731 \LWR@sanitize{#1}%
8732 \LWR@traceinfo{LWR@startref A: !#1!}%
```

Create the filename part of the link:

```
8733 \LWR@htmltag{a href="%
8734 \LWR@traceinfo{LWR@startref B}%
8735 \LWR@print@mbox{\LWR@htmlrefsectionfilename{#1}}%
8736 \LWR@traceinfo{LWR@startref C}%
8737 \LWR@origpound%
```

Create the destination id:

See if `LWR@lateximagedepth` is unknown:

```
8738 \LWR@traceinfo{LWR@startref D: !#1!}%
8739 \ifcsundef{r@#1@lwarp}%
```

“??” if `LWR@lateximagedepth` is unknown, so create a link with an unknown destination:

```
8740 {%
8741 \LWR@traceinfo{LWR@startref D0: ??}%
8742 ??%
8743 }%
```

If `LWR@lateximagedepth` is known. Use a `lateximage` if the depth is greater than zero, or a regular link otherwise:

```
8744 {%
8745 \ifthenelse{\cnttest{\LWR@lateximagedepthref{#1}}{>}{0}}%
8746 {%
8747 \LWR@ImagesName\LWR@lateximagenumberref{#1}%
8748 }%
8749 {%
8750 \LWR@traceinfo{LWR@startref D3}%

```

`\detokenize` is used to allow underscores in the labels:

```
8751 \LWR@print@mbox{\LWR@sanitized}%
8752 }%
8753 }%
8754 \LWR@traceinfo{LWR@startref E}%
```

Closing quote:

```
8755 "%
8756 \LWR@traceinfo{LWR@startref F}%
8757 }
```

`\LWR@subnewref {<label>} {<label or sub@label>}`

Factored for the subfig package. Uses the original label for the hyper-reference, but prints its own text, such as “1(b)”.

```
8758 \NewDocumentCommand{\LWR@subnewref}{m m}{%
8759 \LWR@traceinfo{\LWR@subnewref #1 #2}%
8760 \LWR@startref{#1}%
8761 \LWR@print@ref{#2}%
8762 \LWR@htmltag{/a}%
8763 }
```

`\ref * {<label>}` `\ref` is redefined to `\LWR@HTML@ref`, except inside the text part of a `\hyperref`, where it is redefined to `\LWR@ref@ignorestar`.

`\LWR@HTML@ref * {<label>}` Create an internal document reference link, or without a link if starred per `hyperref`.

```
8764 \NewDocumentCommand{\LWR@HTML@ref}{s m}{%
8765 \LWR@traceinfo{\LWR@HTML@ref !#2!}%
8766 \IfBooleanTF{#1}%
8767 {\LWR@print@ref{#2}}%
8768 {\LWR@subnewref{#2}{#2}}%
8769 }
8770
8771 \LWR@formatted{ref}
```

`\LWR@ref@ignorestar * {<label>}` For use inside `\hyperref`. Ignores the star, then uses the original `\ref`.

```
8772 \NewDocumentCommand{\LWR@ref@ignorestar}{s m}{%
8773 \LWR@print@ref{#2}%
8774 }
```

`\pagerefPageFor` Text for page references.

```
8775 \newcommand*{\pagerefPageFor}{see }
```

`\pageref * {<label>}` Create an internal document reference, or just the unlinked number if starred, per `hyperref`.

```
8776 \NewDocumentCommand{\LWR@new@pageref}{s m}{%
8777 \IfBooleanTF{#1}%
8778 {\pagerefPageFor\LWR@print@ref{#2}}%
8779 {\cpageref{#2}}%
8780 }
```

`\nameref {<label>}`

```
8781 \newrobustcmd*{\nameref}[1]{%
8782 \LWR@traceinfo{nameref}%
8783 \LWR@startref{#1}%
```

```


8784 \LWR@traceinfo{nameref B}%
8785 \LWR@nameref{#1}%
8786 \LWR@traceinfo{nameref C}%
8787 \LWR@htmltag{/a}%
8788 \LWR@traceinfo{nameref: done}%
8789 }

```


`\Nameref {<label>}` In print, adds the page number. In HTML, does not.

```
8790 \LetLtxMacro\Nameref\nameref
```

## 74.5 Hyper-references

 Note that the code currently only sanitizes the underscore character. Additional characters should be rendered inert as well. See the `hyperref.sty` definition of `\gdef\hyper@normalise` for an example.

Pkg hyperref

 Do not tell other packages that `hyperref` is emulated. Some packages patch various commands if `hyperref` is present, which will probably break something, and the emulation already handles whatever may be emulated anyhow.

```

8791 % DO NOT TELL OTHER PACKAGES TO ASSUME HYPERREF, lest they attempt to patch it:
8792 % \EmulatesPackage{hyperref}[2015/08/01]% Disabled. Do not do this.

```

Emulates `hyperref`:

`\@currentHref` Added to support `backref`.

```

8793 \AtBeginDocument{
8794 \def\@currentHref{%
8795 autopage-\theLWR@currentautosec%
8796 }
8797 }

```

`\LWR@subhyperref {<URL>}`

Starts a link for `\LWR@hrefb`. A group must have been opened first, with nullified catcodes. The text name is printed afterwards, after the group is closed and catcodes restored.

```

8798 \NewDocumentCommand{\LWR@subhyperref}{m}{%
8799 \LWR@traceinfo{\LWR@subhyperref !#1!}%
8800 \LWR@sanitize{#1}%
8801 \LWR@htmltag{%
8802 a href="\LWR@sanitized" % space
8803 target="_{}blank" % space
8804 }%
8805 }

```

`\LWR@subhyperref`text {<text>}

Finishes the hyperref for `\LWR@hrefb`. Catcodes must have been restored already. To be used after `\LWR@subhyperref`, and after its group has been closed.

```
8806 \newcommand{\LWR@subhyperref}{1}{%
8807 #1%
8808 \LWR@htmltag{/a}%
8809 \LWR@ensuredoingapar%
8810 }
```

`\LWR@subhyperref`class {<URL>}{<text>}{<htmlclass>}

```
8811 \NewDocumentCommand{\LWR@subhyperrefclass}{m +m m}{%
8812 \LWR@htmltag{%
8813 a % space
8814 href="\begingroup\@sanitize#1\endgroup" % space
8815 class="#3" % space
8816 }\LWR@orignewline%
8817 #2\LWR@orignewline%
8818 \LWR@htmltag{/a}%
8819 \LWR@ensuredoingapar%
8820 }
```

`\href` [*<options>*]{<URL>}

Create a link with accompanying text:

```
8821 \DeclareDocumentCommand{\LWR@hrefb}{0{ } m}{%
8822 \LWR@ensuredoingapar%
8823 \LWR@subhyperref{#2}%
8824 \endgroup% restore catcodes
8825 \LWR@subhyperreftext%
8826 }
8827
8828 \newrobustcmd*{\href}{%
8829 \begingroup%
8830 \catcode'\#=12%
8831 \catcode'\%=12%
8832 \catcode'\&=12%
8833 \catcode'\~=12%
8834 \catcode'_ =12%
8835 \LWR@hrefb%
8836 }
```

`\nolinkurl` {<URL>}

Print the name of the link without creating the link:

```
8837 \newcommand*{\LWR@nolinkurlb}[1]{%
8838 \LWR@ensuredoingapar%
8839 \def\LWR@templink{#1}%
8840 \@onelevel@sanitize\LWR@templink%
```

```

8841 \LWR@templink%
8842 \endgroup%
8843 }
8844
8845 \newrobustcmd*{\nolinkurl}{%
8846 \begingroup%
8847 \catcode'\#=12%
8848 \catcode'\%=12%
8849 \catcode'\&=12%
8850 \catcode'\~=12%
8851 \catcode'_ =12%
8852 \LWR@nolinkurlb%
8853 }

```

`\url` {*<URL>*}

Create a link whose text name is the address of the link.

The `url` package may redefine `\url`, so it is `\let` to `\LWR@urlahere` and also redefined by `lwarp-url`.

```

8854 \DeclareDocumentCommand{\LWR@urlb}{m}{%
8855 \LWR@ensuredoingapar%
8856 \def\LWR@templink{#1}%
8857 \@onelevel@sanitize\LWR@templink%
8858 \href{\LWR@templink}{\LWR@templink}%
8859 \endgroup%
8860 }
8861
8862 \newrobustcmd*{\url}{%
8863 \begingroup%
8864 \catcode'\#=12%
8865 \catcode'\%=12%
8866 \catcode'\&=12%
8867 \catcode'\~=12%
8868 \catcode'_ =12%
8869 \LWR@urlb%
8870 }

```

`\LWR@subinlineimage` [*<alttag>*] {*<class>*} {*<filename>*} {*<extension>*} {*<style>*}

```

8871 \newcommand*{\LWR@subinlineimage}[5][{}]{%
8872 \ifblank{#1}%
8873 {%
8874 \LWR@htmltag{img \LWR@indentHTML
8875 src="#3.#4" \LWR@indentHTML
8876 alt="#3" \LWR@indentHTML
8877 style="#5" \LWR@indentHTML
8878 class="#2" \LWR@orignewline
8879 }%
8880 }%
8881 {%
8882 \LWR@htmltag{img \LWR@indentHTML
8883 src="#3.#4" \LWR@indentHTML

```

```
8884 alt="#1" \LWR@indentHTML
8885 style="#5" \LWR@indentHTML
8886 class="#2" \LWR@orignewline
8887]%
8888 }%
8889 }

8890 \end{warpHTML}
```



Table 13: Float data structures

---

For each <type> of float (figure, table, etc.) there exists the following:

**counter <type>:** A counter called <type>, such as figure, table.

**\<type>name:** Name. \figurename prints “Figure”, etc.

**\ext@<type>:** File extension. \ext@figure prints “lof”, etc.

**\fps@<type>:** Placement.

**\the<type>:** Number. \thetable prints the number of the table, etc.

**\p@<type>:** Parent’s number. Prints the number of the [within] figure, etc.

**\fnum@<type>:** Prints the figure number for the caption.  
     <type>name \the<type>, “Figure 123”.

**\<type>:** Starts the float environment. \figure or \begin{figure}

**\end<type>:** Ends the float environment. \endfigure or \end{figure}

**\tf@<ext>:** The L<sup>A</sup>T<sub>E</sub>X file identifier for the output file.

**LWR@have<type>:** A boolean remembering whether a \listof was requested for a float of this type.

**File with extension lo<f, t, a-z>:** An output file containing the commands to build the \listof<type> “table-of-contents” structure.

**Cross-referencing names:** For cleveref’s \cref and related, \crefname and \Crefname assign human-readable names for references to this float type.

---

## 75 Floats

Floats are supported, although partially through emulation.

Table 13 shows the data structure associated with each <type> of float.

\@makecaption is redefined to print the float number and caption text, separated by \CaptionSeparator, which works with the babel package to adjust the caption separator according to the language. French, for example, uses an en-dash instead of a colon: “Figure 123 – Caption text”.

### 75.1 Float environment

**for HTML output:** 8891 \begin{warphTML}

\LWR@floatbegin {<type>} [<placement>]      Begins a \newfloat environment.

```
8892 \NewDocumentCommand{\LWR@floatbegin}{m o}{%
8893 \ifbool{FormatWP}{\newline}{}%
8894 \LWR@stoppars
```

There is a new float, so increment the unique float counter:

```
8895 \addtocounter{LWR@thisautoid}{1}%
8896 \booltrue{LWR@freezethisautoid}%
```

```
8897 \begingroup%
```

Settings while inside the environment:

```
8898 \LWR@print@raggedright%
```

Open an HTML figure tag. The figure is assigned a class equal to its type, and another class according to the float package style, if used. Note that `\csuse` returns an empty string if `\LWR@floatstyle@<type>` is not defined.

```
8899 \LWR@htmltag{%
8900 figure id="\LWR@print@mbox{autoid-\arabic{LWR@thisautoid}}" % space
8901 class="#1 \@nameuse{LWR@floatstyle@#1}"%
8902 }%
8903 \ifbool{FormatWP}{%
8904 \LWR@orignewLine%
8905 \LWR@BlockClassWP{#1}{wp#1}%
8906 }{ }%
```

Update the caption type:

```
8907 \renewcommand*{\@capttype}{#1}%
8908 \caption@settype{#1}%
```

Mark the float for a word processor conversion:

```
8909 \LWR@startpars%
8910 \ifboolexpr{bool{FormatWP} and bool{WPMarkFloats}}{%
8911
8912 === begin #1 ===
8913
8914 }{ }%
```

Look for `\centering`, etc:

```
8915 \LWR@futurenonSPACElet\LWR@mynexttoken\LWR@floatalignment%
8916 }
```

For koma-script. The following does not work for tables.

```
8917 \AtBeginDocument{
8918 \@ifpackageloaded{tocbasic}{
8919 \appto\figure@atbegin{%
```

```

8920 \LWR@futurenonospacelet\LWR@mynexttoken\LWR@floatalignment%
8921 }
8922 }{}
8923 }

```

`\@float` Support packages which create floats directly.  
`\@dblfloat`

```

8924 \let\@float\LWR@floatbegin
8925 \let\@dblfloat\LWR@floatbegin

```

`\LWR@floatend` Ends a `\newfloat` environment.

```

8926 \newcommand*{\LWR@floatend}{%

```

If saw a `\centering`, finish the center environment:

```

8927 \LWR@endfloatalignment%

```

Mark the float end for a word processor conversion:

```

8928 \ifboolexpr{bool{FormatWP} and bool{WPMarkFloats}}{%
8929
8930 === end ===
8931
8932 }{}%
8933 \LWR@stoppars%

```

Close an HTML figure tag:

```

8934 \ifbool{FormatWP}{\endLWR@BlockClassWP}{}%
8935 \LWR@htmllementend{figure}%
8936 \endgroup%
8937 \boolfalse{LWR@freezethisautoid}%
8938 \LWR@startpars%
8939 \ifbool{FormatWP}{\newline}{}%
8940 }

```

`\end@float` Support packages which create floats directly.  
`\end@dblfloat`

```

8941 \let\end@float\LWR@floatend
8942 \let\end@dblfloat\LWR@floatend

```

## 75.2 Float tracking

`ctr LWR@thisautoid` A sequential counter for all floats and theorems. This is used to identify the float or theorem then reference it from the List of Figures and List of Tables.

```

8943 \newcounter{LWR@thisautoid}

```

**Ctrl** LWR@thisautoidWP A sequential counter for all word processor conversion <div>s. This is used to convince LIBREOFFICE to form a frame around this element.

```
8944 \newcounter{LWR@thisautoidWP}
```

**Bool** LWR@freezethisautoid Prevents multiple increments of \LWR@thisautoid inside a float.

```
8945 \newbool{LWR@freezethisautoid}
8946 \boolfalse{LWR@freezethisautoid}
```

**\LWR@newautoidanchor** Adds a new <autoid> anchor.

```
8947 \newcommand*{\LWR@newautoidanchor}{%
8948 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
8949 }%
8950 {%
8951 \ifbool{LWR@freezethisautoid}{}{%
8952 \addtocounter{LWR@thisautoid}{1}%
8953 \LWR@htmltag{a id="\LWR@print@mbx{autoid-\arabic{LWR@thisautoid}}"}%
8954 \LWR@htmltag{/a}%
8955 }%
8956 }%
8957 }
```

**\@capttype** Remembers which float type is in use.

```
8958 \newcommand*{\@capttype}{}
```

**\LWR@floatalignmentname** Set to center, flushleft, or flushright if saw \centering, \raggedright, or \raggedleft.

```
8959 \newcommand*{\LWR@floatalignmentname}{}
```

**\LWR@floatalignment** If sees a \centering, \raggedleft, or \raggedright, creates a center, flushright, or flushleft environment.

```
8960 \newcommand*{\LWR@floatalignment}{%
8961 \ifdefstrequal{\LWR@mynexttoken}{\centering}{%
8962 \center%
8963 \renewcommand*{\LWR@floatalignmentname}{center}%
8964 }{}%
8965 \ifdefstrequal{\LWR@mynexttoken}{\raggedright}{%
8966 \flushleft%
8967 \renewcommand*{\LWR@floatalignmentname}{flushleft}%
8968 }{}%
8969 \ifdefstrequal{\LWR@mynexttoken}{\raggedleft}{%
8970 \flushright%
8971 \renewcommand*{\LWR@floatalignmentname}{flushright}%
8972 }{}%
8973 }
```

**\LWR@endfloatalignment** Closes an environment from \LWR@floatalignment.

```

8974 \newcommand*\LWR@endfloatalignment}{%
8975 \ifdefvoid{\LWR@floatalignmentname}{\@nameuse{end\LWR@floatalignmentname}}%
8976 \renewcommand*\LWR@floatalignmentname}{}%
8977 }

```

### 75.3 Caption inside a float environment

`\CaptionSeparator` How to separate the float number and the caption text.

```
8978 \AtBeginDocument{\providecommand*\CaptionSeparator}{:~}}
```

`\@makecaption` `{<name and num>}{<text>}`

Prints the float type and number, the caption separator, and the caption text.

```

8979 \AtBeginDocument{\renewcommand*\@makecaption}[2]{%
8980 \LWR@traceinfo{@makecaption}%
8981 \LWR@isolate{#1}\CaptionSeparator\LWR@isolate{#2}%
8982 \LWR@traceinfo{@makecaption: done}%
8983 }%
8984 }

```

### 75.4 Caption and LOF linking and tracking

When a new HTML file is marked in the L<sup>A</sup>T<sub>E</sub>X PDF file, the L<sup>A</sup>T<sub>E</sub>X page number at that point is stored in `LWR@latestautopage`, (and the associated filename is remembered by the special L<sup>A</sup>T<sub>E</sub>X labels). This page number is used to generate an `autopage HTML <id>` in the HTML output at the start of the new HTML file. Meanwhile, there is a float counter used to generate an `HTML autoid <id>` at the start of the float itself in the HTML file. The `autopage` and `autoid` values to use for each float are written to the `.lof`, etc. files just before each float's entry. These values are used by `\l@figure`, etc. to create the HTML links in the List of Figures, etc.

Ctrl `LWR@nextautoid` Tracks `autoid` for floats. Tracks `autopage` for floats.

Ctrl `LWR@nextautopage` These are updated per float as the `.lof`, `.lot` file is read.

```

8985 \newcounter{LWR@nextautoid}
8986 \newcounter{LWR@nextautopage}

```

`\LWRsetnextfloat` `{<autopage>}{<float autoid>}`

File `*_html.lof` This is written to the `*_html.lof` or `*_html.lot` file just before each float's usual entry. The `autopage` and the float's `autoid` are remembered for `\l@figure` to use when creating the HTML links.

File `*_html.lot`

```
8987 \newcommand*\LWRsetnextfloat}[2]{%
```

```

8988 \setcounter{LWR@nextautopage}{#1}%
8989 \setcounter{LWR@nextautoid}{#2}%
8990 }

```

Ctrl LWR@latestautopage Updated each time a new HTML file is begun. `\LWRsetnextfloat` is written with this and the autoid by the modified `\addcontentsline` just before each float's entry.

```

8991 \newcounter{LWR@latestautopage}
8992 \setcounter{LWR@latestautopage}{1}

```

Env LWR@figcaption An HTML `<figcaption>` is not allowed in places where  $\LaTeX$  does allow a figure caption, such as inside a `longtable` where the `tabular` has already started, or inside a `center` environment. Therefore, a `<div>` of class `figurecaption` is used instead.

```

8993 \newenvironment*{LWR@figcaption}
8994 {
8995 \ifbool{FormatWP}{%
8996 \BlockClass[font-style:italic]{figurecaption}
8997 % \LWR@print@vspace*{\baselineskip}
8998 }{
8999 \BlockClass{figurecaption}
9000 }%
9001 }
9002 {\endBlockClass}

```

`\LWR@HTML@caption@begin` `{\langle type \rangle}`

Low-level code to create HTML tags for captions.

The print versions are from the `caption` package.

```

9003 \newcommand*{\LWR@HTML@caption@begin}[1]
9004 {%
9005 \LWR@traceinfo{\LWR@HTML@caption@begin}%

```

Keep `par` and `minipage` changes local:

```

9006 \begingroup%

```

The caption code was not allowing the closing `par` tag:

```

9007 \setpar{\LWR@closeparagraph\@par}%

```

No need for a `minipage` or `\parbox` inside the caption:

```

9008 \RenewDocumentEnvironment{minipage}{O{t} o O{t} m}{\}{\}%
9009 \RenewDocumentCommand{\parbox}{O{t} O{t} O{t} m +m}{##5}%

```

Enclose the original caption code inside an HTML tag:

```

9010 \LWR@figcaption%
9011 \LWR@traceinfo{\LWR@HTML@caption@begin: about to LWR@origcaption@begin}%

```

```

9012 \LWR@print@caption@begin{#1}%
9013 \LWR@traceinfo{LWR@HTML@caption@begin: done}%
9014 }

```

`\LWR@HTML@caption@end` Low-level patches to create HTML tags for captions.

```

9015 \newcommand*{\LWR@HTML@caption@end}
9016 {%
9017 \LWR@traceinfo{LWR@HTML@caption@end}%
9018 \LWR@print@caption@end%

```

Closing tag:

```

9019 \endLWR@figcaption%
9020 \endgroup%
9021 % \leavevmode% avoid bad space factor (0) error
9022 \LWR@traceinfo{LWR@HTML@caption@end: done}%
9023 }

```

`\caption@begin` Low-level patches to create HTML tags for captions. These are assigned `\AtBeginDocument`  
`\caption@end` so that other packages which modify captions will have already been loaded before saving the print-mode version.

```

9024 \AtBeginDocument{
9025 \LWR@formatted{caption@begin}
9026 \LWR@formatted{caption@end}
9027 }

```

`\captionlistentry` Tracks the float number for this caption used outside a float. Patched to create an HTML anchor.

```

9028 \let\LWR@origcaptionlistentry\captionlistentry
9029
9030 \renewcommand*{\captionlistentry}{%
9031 \LWR@ensuredoingapar%
9032 \LWR@origcaptionlistentry%
9033 }
9034
9035 \def\LWR@LTcaptionlistentry{%
9036 \LWR@ensuredoingapar%
9037 \LWR@htmltag{a id="\LWR@print@mbox{autoid-\arabic{LWR@thisautoid}}"}\LWR@htmltag{/a}%
9038 \bgroup
9039 \@ifstar{\egroup\LWR@LT@captionlistentry}% gobble *
9040 {\egroup\LWR@LT@captionlistentry}}%
9041 \def\LWR@LT@captionlistentry#1{%
9042 \caption@listentry@firstoftwo[LTcapye]{#1}}%

```

`\addcontentsline` Patched to write the autopage and autoid before each float's entry. No changes if writing .toc For a theorem, automatically defines `\ext@<type>` as needed, to mimic and reuse the float mechanism.

f

```

9043 \let\LWR@origaddcontentsline\addcontentsline
9044
9045 \renewcommand*{\addcontentsline}[3]{%
9046 \ifstrequal{#1}{toc}{}% not TOC

9047 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
9048 }%
9049 {\LWR@newautoidanchor}%

9050 \ifcsvoid{ext@#2}{\csdef{ext@#2}{#1}}{%

9051 \addtocontents{\@nameuse{ext@#2}}{%
9052 \protect\LWRsetnextfloat%
9053 {\arabic{LWR@latestautopage}}%
9054 {\arabic{LWR@thisautoid}}%
9055 }%
9056 }% not TOC
9057 \LWR@origaddcontentsline{#1}{#2}{#3}%
9058 }

```

Pkg `capt-of` Either package provides `\captionof`, which is later patched at the beginning of the document.

Pkg `caption` document.

`\captionof` Patched to handle paragraph tags.

```

9059 \AtBeginDocument{
9060 \let\LWR@origcaptionof\captionof
9061
9062 \renewcommand*{\captionof}{%
9063 \LWR@stoppars
9064 \LWR@origcaptionof%
9065 }
9066 }

9067 \end{warpHTML}

```

## 76 Table of Contents, LOF, LOT

This section controls the generation of the TOC, LOF, and LOT.

The `.toc`, `.lof`, and `.lot` files are named by the source code `\jobname`.

In HTML, the printed tables are placed inside a `<div>` of class `toc`, `lof`, or `lot`.

A “`sidetoc`” is provided which prints a subset of the TOC on the side of each page other than the homepage.

The regular L<sup>A</sup>T<sub>E</sub>X infrastructure is used for TOC, along with some patches to generate HTML output.



for HTML output: 9068 \begin{warpHTML}

## 76.1 Reading and printing the toc

\LWR@myshorttoc {<toc/lof/lot/sidetoc>}

Reads in and prints the TOC/LOF/LOT at the current position. While doing so, makes the @ character into a normal letter to allow formatting commands in the section names.

Unlike in regular L<sup>A</sup>T<sub>E</sub>X, the file is not reset after being read, since the sidetoc may be referred to again in each HTML page.

```
9069 \newcommand*\LWR@myshorttoc[1]{%
9070 \LWR@traceinfo{\LWR@myshorttoc: #1}%
9071 \LWR@ensuredoingapar%
```

Only if the file exists:

```
9072 \IfFileExists{\jobname.#1}{%
9073 \LWR@traceinfo{\LWR@myshorttoc: loading}%
```



Many of the commands in the file will have @ characters in them, so @ must be made a regular letter.

```
9074 \begingroup%
9075 \makeatletter%
```

Read in the toc file:

```
9076 \@input{\jobname.#1}%
9077 \endgroup%
9078 }%
9079 {%
9080 \LWR@traceinfo{\LWR@myshorttoc: done}%
9081 }
```

\LWR@subtableofcontents {<toc/lof/lot>} {<sectionstarname>}

Places a TOC/LOF/LOT at the current position.

```
9082 \NewDocumentCommand{\LWR@subtableofcontents}{m m}{%
```

Closes previous levels:

```
9083 \@ifundefined{chapter}
9084 {\LWR@closeprevious{\LWR@depthsection}}
9085 {\LWR@closeprevious{\LWR@depthchapter}}
```

Prints any pending footnotes so that they appear above the potentially large toc:

```
9086 \LWR@printpendingfootnotes
```

Place the list into its own chapter (if defined) or section:

```
9087 \@ifundefined{chapter}{\section*{#2}}{\chapter*{#2}}
```

Create a new HTML nav containing the TOC/LOF/LOT:

```
9088 \LWR@htmlElementclass{nav}{#1}
```

Create the actual list:

```
9089 \LWR@myshorttoc{#1}
```

Close the nav:

```
9090 \LWR@htmlElementclassend{nav}{#1}
9091 }
```

`\@starttoc` {*ext*}

Patch `\@starttoc` to encapsulate the TOC inside HTML tags:

```
9092 \let\LWR@orig@starttoc\@starttoc
9093
9094 \renewcommand{\@starttoc}[1]{
9095 \LWR@htmlElementclass{nav}{#1}
9096 \LWR@orig@starttoc{#1}
9097 \LWR@htmlElementclassend{nav}{#1}
9098 }
```

Bool `LWR@copiedsidetoc` Used to only copy the TOC file to the sidetoc a single time.

(listings and perhaps other packages would re-use `\tableofcontents` for their own purposes, causing the sidetoc to be copied more than once, and thus end up empty.)

```
9099 \newbool{LWR@copiedsidetoc}
9100 \boolfalse{LWR@copiedsidetoc}
```

`\tableofcontents` Patch `\tableofcontents`, etc. to print footnotes first. `newfloat` uses `\listoffigures` for all future float types.

```
9101 \AtBeginDocument{
9102 \let\LWR@origtableofcontents\tableofcontents
9103
9104 \renewcommand*\tableofcontents}{%
```

Do not print the table of contents if formatting for a word processor, which will presumably auto-generate its own updated table of contents:

```
9105 \ifboolexpr{bool{FormatWP} and bool{WPMarkTOC}}{
9106
9107 === table of contents ===
9108 }
```

```
9109 }
9110 {
```

Copy the .toc file to .sidetoc for printing the sideroc. The original .toc file is renewed when \tableofcontents is finished.

```
9111 \ifbool{LWR@copiedsidetoc}{%
9112 \LWR@copyfile{\jobname.toc}{\jobname.sidetoc}%
9113 \booltrue{LWR@copiedsidetoc}%
9114 }%
9115 \LWR@printpendingfootnotes
9116 \LWR@origtableofcontents
9117 }
9118 }% \tableofcontents
9119 }% AtBeginDocument
```

### \listoffigures

```
9120 \let\LWR@origlistoffigures\listoffigures
9121
9122 \renewcommand*{\listoffigures}{
9123 \ifboolexpr{bool{FormatWP} and bool{WPMarkLOFT}}{
9124
9125 === list of figures ===
9126
9127 }
9128 {
9129 \LWR@printpendingfootnotes
9130 \LWR@origlistoffigures
9131 }
9132 }
```

### \listoftables

```
9133 \let\LWR@origlistoftables\listoftables
9134
9135 \renewcommand*{\listoftables}{
9136 \ifboolexpr{bool{FormatWP} and bool{WPMarkLOFT}}{
9137
9138 === list of tables ===
9139
9140 }
9141 {
9142 \LWR@printpendingfootnotes
9143 \LWR@origlistoftables
9144 }
9145 }
```

## 76.2 High-level toc commands

```
\listof {<type>} {<title>}
```

Emulate the `\listof` command from the `float` package (section 230). Used to create lists of custom float types. Also used to redefine the standard L<sup>A</sup>T<sub>E</sub>X `\listoffigures` and `\listoftables` commands.

```

9146 \NewDocumentCommand{\listof}{m +m}{%
9147 \@ifundefined{l@#1}{%
9148 \csdef{l@#1}##1##2{\hypertocfloat{1}{#1}{\@nameuse{ext@#1}}{##1}{##2}}%
9149 }{ }%
9150 \LWR@subtableofcontents{\@nameuse{ext@#1}}{#2}
9151 \expandafter\newwrite\csname tf@#1\endcsname\endcsname
9152 \immediate\openout \csname tf@#1\endcsname\endcsname
9153 \jobname.\@nameuse{ext@#1}\relax
9154 }

```

### 76.3 Side toc

The “side toc” is a table-of-contents positioned to the side.

It may be renamed by redefining `\sidedocname`, and may contain paragraphs.

css may be used to format the sideroc:

*CSS related to sideroc:*

---

**div.sidetoccontainer:** The entire sideroc.

**div.sidetoctitle:** The title.

**div.sidetoccontents:** The table of contents.

---

```
9155 \end{warpHTML}
```

**for HTML & PRINT:** 9156 `\begin{warpall}`

ctr `SideTOCDepth` Controls how deep the side-TOC gets. Use a standard L<sup>A</sup>T<sub>E</sub>X section level similar to `tocdepth`.

```

9157 \newcounter{SideTOCDepth}
9158 \setcounter{SideTOCDepth}{1}

```

`\sidedocname` Holds the default name for the sideroc.

```
9159 \newcommand{\sidedocname}{Contents}
```

```
9160 \end{warpall}
```

**for HTML output:** 9161 `\begin{warpHTML}`

`\LWR@sidetoc` Creates the actual side-TOC.

```
9162 \newcommand*{\LWR@sidetoc}{
9163 \LWR@forcenewpage
9164 \LWR@stoppars
9165 }
```

The entire sideroc is placed into a nav of class sidetoc.

```
9166 \LWR@htmlElementclass{div}{sidetoccontainer}
9167 \LWR@htmlElementclass{nav}{sidetoc}
9168
9169 \setcounter{tocdepth}{\value{SideTOCDepth}}
9170 }
```

The title is placed into a `<div>` of class sidetocTitle, and may contain paragraphs.

```
9171 \begin{BlockClass}{sidetocTitle}
9172 \ifcvoid{thetitle}{\InlineClass{sidetocThetitle}{\thetitle}\par}
9173 \sidetocname
9174 \end{BlockClass}
```

The table of contents is placed into a `<div>` of class sidetoccontents.

```
9175 \begin{BlockClass}{sidetoccontents}
9176 \LinkHome
9177
9178 \LWR@myshorttoc{sidetoc}
9179 \end{BlockClass}
9180 \LWR@htmlElementclassend{nav}{sidetoc}
9181 \LWR@htmlElementclassend{div}{sidetoccontainer}
9182 }
```

## 76.4 Low-level toc line formatting

`\numberline`  $\{\langle number \rangle\}$

(Called from each line in the .aux, .lof files.)

Record this section number for further use:

```
9183 \newcommand*{\LWR@numberline}[1]{%
9184 \LWR@sectionnumber{#1}\quad%
9185 }
9186
9187 \LetLtxMacro\numberline\LWR@numberline
```

`\LWR@maybetocdata` Replaced by `tocdata`. Adds author name.

```
9188 \newcommand*{\LWR@maybetocdata}{}
```

`\hypertoc`  $\langle 1: depth \rangle \langle 2: type \rangle \langle 3: name \rangle \langle 4: page \rangle$

Called by `\l@section`, etc. to create a hyperlink to a section.

The autopage label is always created just after the section opens.

**#1** is depth

**#2** is section, subsection, etc.

**#3** the text of the caption

**#4** page number

```
9189 \NewDocumentCommand{\hypertoc}{m m +m m}{%
9190 \LWR@traceinfo{hypertoc !#1!#2!#3!#4!}%
```

Respond to `tocdepth`:

```
9191 \ifthenelse{\cnttest{#1}{<=}{\value{tocdepth}}}{%
9192 {%
9193 \LWR@startpars%
```

Create an HTML link to `<filename>#autosec-(page)`, with the name, of the given HTML class.

```
9194 \LWR@subhyperrefclass{%
9195 \LWR@htmlrefsectionfilename{autopage-#4}%
9196 \LWR@origpound\LWR@print@mbbox{autosec-#4}%
9197 }{#3}{toc#2}%

9198 \LWR@maybetocdata%

9199 \LWR@stoppars%
9200 }%
9201 {}%
9202 \LWR@traceinfo{hypertoc done}%
9203 }
```

ctr `lofdepth` TOC depth for figures.

```
9204 \@ifclassloaded{memoir}{}{
9205 \newcounter{lofdepth}
9206 \setcounter{lofdepth}{1}
9207 }
```

ctr `lotdepth` TOC depth for tables.

```
9208 \@ifclassloaded{memoir}{}{
9209 \newcounter{lotdepth}
9210 \setcounter{lotdepth}{1}
9211 }
```

```
\hypertocfloat {<1: depth>} {<2: type>} {<3: ext of parent>} {<4: caption>} {<5: page>}
```

**#1** is depth

**#2** is figure, table, etc.

**#3** is lof, lot, of the parent.

**#4** the text of the caption

**#5** page number

```
9212 \newcommand{\hypertocfloat}[5]{%
9213 \LWR@startpars
```

If some float-creation package has not yet defined the float type's lofdepth counter, etc, define it here:

```
9214 \@ifundefined{c@#3depth}{%
9215 \newcounter{#3depth}%
9216 \setcounter{#3depth}{1}%
9217 }{ }%
```

Respond to lofdepth, etc.:

```
9218 \LWR@traceinfo{hypertocfloat depth is #1 #3depth is \arabic{#3depth}}%
9219 \ifthenelse{\cnttest{#1}{<=}{\arabic{#3depth}}}{%
9220 { }%
9221 \LWR@startpars%
```

Create an HTML link to filename#autoid-(float number), with text of the caption, of the given HTML class.

```
9222 \LWR@subhyperrefclass{%
9223 \LWR@htmlrefsectionfilename{autopage-\arabic{LWR@nextautopage}}%
9224 \LWR@origpound\LWR@print@mbbox{autoid-\arabic{LWR@nextautoid}}}%
9225 {#4}{toc#2}%

9226 \LWR@maybetocdata%

9227 \LWR@stoppars%
9228 }%
9229 { }%
9230 }
```

Automatically called by \contentsline:

```
\l@part {<name>} {<page>}
```

Uses \DeclareDocumentCommand in case the class does not happen to have a \part.

```
9231 \DeclareDocumentCommand{\l@part}{m m}{\hypertoc{-1}{part}{#1}{#2}}
```

`\l@chapter`  $\{\langle name \rangle\} \{\langle page \rangle\}$

Uses `\DeclareDocumentCommand` in case the class does not happen to have a `\chapter`.

```
9232 \ifundefined{chapter}
9233 {
9234 {
9235 \DeclareDocumentCommand{\l@chapter}{m m}
9236 {\hypertoc{0}{chapter}{#1}{#2}}
9237 }
```

`\l@section`  $\{\langle name \rangle\} \{\langle page \rangle\}$

```
9238 \renewcommand{\l@section}[2]{\hypertoc{1}{section}{#1}{#2}}
```

`\l@subsection`  $\{\langle name \rangle\} \{\langle page \rangle\}$

```
9239 \renewcommand{\l@subsection}[2]{\hypertoc{2}{subsection}{#1}{#2}}
```

`\l@subsubsection`  $\{\langle name \rangle\} \{\langle page \rangle\}$

```
9240 \renewcommand{\l@subsubsection}[2]{\hypertoc{3}{subsubsection}{#1}{#2}}
```

`\l@paragraph`  $\{\langle name \rangle\} \{\langle page \rangle\}$

```
9241 \renewcommand{\l@paragraph}[2]{\hypertoc{4}{paragraph}{#1}{#2}}
```

`\l@subparagraph`  $\{\langle name \rangle\} \{\langle page \rangle\}$

```
9242 \renewcommand{\l@subparagraph}[2]{\hypertoc{5}{subparagraph}{#1}{#2}}
```

`\l@figure`  $\{\langle name \rangle\} \{\langle page \rangle\}$

```
9243 \renewcommand{\l@figure}[2]{\hypertocfloat{1}{figure}{lof}{#1}{#2}}
```

`\l@table`  $\{\langle name \rangle\} \{\langle page \rangle\}$

```
9244 \renewcommand{\l@table}[2]{\hypertocfloat{1}{table}{lot}{#1}{#2}}
```

```
9245 \end{warpHTML}
```

## 77 Index and glossary

See:

<http://tex.stackexchange.com/questions/187038/>

[how-to-mention-section-number-in-index-created-by-imakeidx](#)



Index links are tracked by the counter `LWR@autoindex`. This counter is used to create a label for each index entry, and a reference to this label for each entry in the index listing. This method allows each index entry to link directly to its exact position in the document.

**for HTML output:** 9246 `\begin{warphTML}`

```
9247 \newcounter{LWR@autoindex}
9248 \setcounter{LWR@autoindex}{0}
9249
9250 \newcounter{LWR@autoglossary}
9251 \setcounter{LWR@autoglossary}{0}
```

Env `theindex`

```
9252 \@ifundefined{chapter}
9253 {\newcommand*\LWR@indexsection[1]{\section*{#1}}}
9254 {\newcommand*\LWR@indexsection[1]{\chapter*{#1}}}
9255
9256 \AtBeginDocument{
9257 \renewenvironment*{theindex}{%
9258 \LWR@indexsection{\indexname}%
9259 \let\item\LWR@indexitem%
9260 \let\subitem\LWR@indexsubitem%
9261 \let\subsubitem\LWR@indexsubsubitem%
9262 }{}
9263 }% AtBeginDocument
```

`\LWR@indexitem` [*index key*]      The optional argument is added to support `repeatindex`.

```
9264 \newcommand*\LWR@indexitem[1][\@empty]{
9265
9266 \InlineClass{indexitem}{#1%
9267 }
```

`\LWR@indexsubitem`

```
9268 \newcommand*\LWR@indexsubitem{
9269
9270 \InlineClass{indexsubitem}{
9271 }
```

`\LWR@indexsubsubitem`

```
9272 \newcommand*\LWR@indexsubsubitem{
9273
9274 \InlineClass{indexsubsubitem}{
9275 }
```

`\@wrindex` {*term*}      Redefined to write the `LWR@autoindex` counter instead of page.

```

9276 \def\LWR@wrintex#1{%
9277 \addtocounter{LWR@autoindex}{1}%
9278 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}%
9279 \protected@write@indexfile{%
9280 {\string\indexentry{#1}{\arabic{LWR@autoindex}}}%
9281 \endgroup
9282 \esphack}
9283
9284 \AtBeginDocument{
9285 \let\@wrintex\LWR@wrintex
9286 }

```

`\@wrglossary`  $\langle term \rangle$  Redefined to write the LWR@latestautopage counter instead of page.

```

9287 \def\@wrglossary#1{%
9288 \addtocounter{LWR@autoglossary}{1}%
9289 \LWR@new@label{LWRglossary-\theLWR@autoglossary}%
9290 \protected@write@glossaryfile{%
9291 {\string\glossaryentry{#1}{\theLWR@autoglossary}}%
9292 \endgroup
9293 \esphack}

```

`\LWR@indexnameref`  $\langle LWR@autoindex \rangle$

Creates a hyperlink based on the given entry's autoindex.

```

9294 \newcommand*\LWR@indexnameref[1]{\nameref{LWRindex-#1}}

```

`\LWR@doindexentry`  $\langle LWR@autoindex, or macros. \rangle$


Creates a hyperlink, or handles `\see`, `\textbf`, etc.

```

9295 \newrobustcmd{\LWR@doindexentry}[1]{%
9296 \IfInteger{#1}%
9297 {\LWR@indexnameref{#1}}%
9298 {#1}%
9299 }

```

`\LWR@hyperindexrefnullified` Handles macros commonly seen inside an `\index` entry. Each macro is redefined to create and format a link to its entry.

 **index formatting** To handle additional macros:

```

\appto\LWR@hyperindexrefnullified{. . . }

```

```

9300 \newcommand{\LWR@hyperindexrefnullified}{%
9301 \renewrobustcmd{\emph}[1]{\LWR@HTML@emph{\LWR@doindexentry{##1}}}%
9302 \renewrobustcmd{\textbf}[1]{\LWR@HTML@textbf{\LWR@doindexentry{##1}}}%
9303 \renewrobustcmd{\textrm}[1]{\LWR@HTML@textrm{\LWR@doindexentry{##1}}}%
9304 \renewrobustcmd{\textsf}[1]{\LWR@HTML@textsf{\LWR@doindexentry{##1}}}%
9305 \renewrobustcmd{\texttt}[1]{\LWR@HTML@texttt{\LWR@doindexentry{##1}}}%
9306 \renewrobustcmd{\textup}[1]{\LWR@HTML@textup{\LWR@doindexentry{##1}}}%

```

```

9307 \renewrobustcmd{\textsc}[1]{\LWR@HTML@textsc{\LWR@doindexentry{##1}}}%
9308 \renewrobustcmd{\textsi}[1]{\LWR@HTML@textsi{\LWR@doindexentry{##1}}}%
9309 \renewrobustcmd{\textit}[1]{\LWR@HTML@textit{\LWR@doindexentry{##1}}}%
9310 \renewrobustcmd{\textsl}[1]{\LWR@HTML@textsl{\LWR@doindexentry{##1}}}%
9311 }

```

`\hyperindexref` {*`LWR@autoindex`*}

`\hyperindexref{LWR@autoindex}` is inserted into `*.ind` by the `makeindex` style file `lwarp.ist` or the `xindy` style file `lwarp.xdy`.

```
9312 \newcommand{\hyperindexref}[1]{%
```

In long index lines with numerous entries, *makeindex* can insert a newline before the page number, resulting in an extra space before the first digit. If the first character is a space, remove it first.

```

9313 \def\LWR@tempone{#1}%
9314 \IfBeginWith{\LWR@tempone}{ }{%
9315 \StrGobbleLeft{\LWR@tempone}{1}[\LWR@tempone]%
9316 }{%

```

If a numeric entry, create a link. If not numeric, such as `\see`, use the entry as-is. `\emph`, `\textit`, etc. have been redefined above to create and format the entry.

```

9317 \IfInteger{\LWR@tempone}%
9318 {\LWR@indexnameref{\LWR@tempone}}%
9319 {%
9320 \begingroup%
9321 \LWR@hyperindexrefnullified
9322 #1%
9323 \endgroup%
9324 }%
9325 }

```

```
9326 \end{warpHTML}
```

**for PRINT output:** A null command for print mode, in case `hyperref` was not used:

```

9327 \begin{warpprint}
9328 \newcommand{\hyperindexref}[1]{#1}
9329 \end{warpprint}

```

**for HTML & PRINT:** For the `glossaries` package, try to prevent an error where `\glo@name` was not found:

```

9330 \begin{warpall}
9331 \providecommand{\glo@name}{}
9332 \end{warpall}

```

## 78 Bibliography presentation

for HTML output: 9333 \begin{warpHTML}

\bibliography {<filenames>}

Modified to use the base jobname instead of the \_html jobname.

```

9334 \def\bibliography#1{%
9335 \if@filesw
9336 \immediate\write\@auxout{\string\bibdata{#1}}%
9337 \fi
9338 % \@input@{\jobname.bbl}% original
9339 \begingroup%
9340 \@input@{\BaseJobname.bbl}% lwarp
9341 \endgroup%
9342 }
```

\@biblabel {<text-refnumber>}

```
9343 \renewcommand{\@biblabel}[1][[#1]\quad]
```

Env thebibliography To emphasize document titles in the bibliography, the following redefines \em inside thebibliography to gather everything until the next closing brace, then display these tokens with \textit.

*Adapted from embracedef.sty, which is by TAKAYUKI YATO:*

<https://gist.github.com/zr-tex8r/b72555e3e7ad2f0a37f1>

```

9344 \AtBeginDocument{
9345 \AtBeginEnvironment{thebibliography}{
9346 \providecommand*\LWR@newem}[1]{\textit{#1}}
9347
9348 \renewrobustcmd{\em}{%
9349 \begingroup
9350 \gdef\LWR@em@after{\LWR@em@finish\LWR@newem}%
9351 \afterassignment\LWR@em@after
9352 \toks@\bgroup
9353 }
9354
9355 \def\LWR@em@finish#1{%
9356 \xdef\LWR@em@after{\noexpand#1{\the\toks@}}%
9357 \endgroup
9358 \LWR@em@after\egroup
9359 }
9360 }% \AtBeginEnvironment{thebibliography}
9361 }% \AtBeginDocument

9362 \end{warpHTML}
```

## 79 Restoring original formatting

`\LWR@restoreorigformatting` Used to temporarily restore the print-mode meaning of a number of formatting, graphics, and symbols-related macros while generating SVG math or a `lateximage`.

Must be used inside a group.

Sets `\LWR@formatting` to print until the end of the group.

A number of packages will `\appto` additional actions to this macro.

Various packages add to this macro using `\appto`.

**for HTML output:** 9363 `\begin{warphTML}`

```
9364 \newcommand*{\LWR@restoreorigformatting}{%
9365 \LWR@traceinfo{\LWR@restoreorigformatting}%
```

Numerous macros change their print/HTML meaning depending on `\LWR@formatting`:

```
9366 \renewcommand*{\LWR@formatting}{print}%
9367 \linespread{1}%
```

```
9368 \let\par\LWR@origpar%
```

```
9369 \LWR@select@print@hspace%
```

```
9370 \LetLtxMacro\hfil\LWR@origfil%
```

```
9371 \let\hss\LWR@orighss%
```

```
9372 \let\llap\LWR@origllap%
```

```
9373 \let\rlap\LWR@origrlap%
```

```
9374 \let\hfilneg\LWR@origfilneg%
```

```
9375 \let\,\LWR@origcomma% disable HTML short unbreakable space
```

```
9376 \let\thinspace\LWR@origthinspace% disable HTML short unbreakable space
```

```
9377 \let\negthinspace\LWR@orignegthinspace% disable HTML negative short unbreakable space
```

```
9378 \let\textellipsis\LWR@origtextellipsis%
```

```
9379 \let\textless\LWR@origtextless%
```

```
9380 \let\textgreater\LWR@origtextgreater%
```

```
9381 \let\&\LWR@origampersand%
```

```
9382 \LetLtxMacro\rmfamily\LWR@origrmfamily%
```

```
9383 \LetLtxMacro\sffamily\LWR@origsffamily%
```

```
9384 \LetLtxMacro\ttfamily\LWR@origttfamily%
```

```
9385 \LetLtxMacro\bfseries\LWR@origbfseries%
```

```
9386 \LetLtxMacro\mdseries\LWR@origmdseries%
```

```
9387 \LetLtxMacro\upshape\LWR@origupshape%
```

```
9388 \LetLtxMacro\slshape\LWR@origslshape%
```

```
9389 \LetLtxMacro\scshape\LWR@origscshape%
```

```
9390 \LetLtxMacro\sishape\LWR@origsishape%
```

```

9391 \LetLtxMacro\itshape\LWR@origitshape%
9392 \LetLtxMacro\em\LWR@origem%
9393 \LetLtxMacro\normalfont\LWR@originormalfont%
9394 \let\sp\LWR@origsp%
9395 \let\sb\LWR@origsb%
9396 \LetLtxMacro\textsuperscript\LWR@origtextsuperscript%
9397 \LetLtxMacro\@textsuperscript\LWR@orig@textsuperscript%
9398 \LetLtxMacro\textsubscript\LWR@origtextsubscript%
9399 \LetLtxMacro\@textsubscript\LWR@orig@textsubscript%
9400 \LetLtxMacro\underline\LWR@origunderline%
9401 \let~\LWR@origtilde%
9402 \let\enskip\LWR@origenskip%
9403 \let\quad\LWR@origquad%
9404 \let\qqquad\LWR@origqqquad%

```

`\endtabular` must be restored to its original, instead of relying on `lwarp`'s `\LWR@formatted` mechanism:

```

9405 \LetLtxMacro\endtabular\LWR@origendtabular%
9406 \csletcs{endtabular*}{LWR@origendtabular*}%

9407 \LetLtxMacro\noalign\LWR@orignoalign%
9408 \LetLtxMacro\hline\LWR@orighline%

9409 \let\newline\LWR@orignewline%
9410 \LetLtxMacro\includegraphics\LWR@origincludegraphics%

9411 \LetLtxMacro\@ensuredmath\LWR@origensuredmath%
9412 %
9413 \LWR@restoreorigaccents%
9414 \LWR@restoreoriglists%
9415 %
9416 \LWR@FBcancel%
9417 }


9418 \end{warpHTML}

```

## 80 Math

### 80.1 Limitations

#### 80.1.1 Math in section names

 **math in section names** If using named HTML files, in section names use paren math `\(x+y\)` instead of dollar math `$x+y$`. (Dollar math works, but appears in the filename.) Or, use a short name for the toc entry without the math, or use `\texorpdfstring`:

```

\section{A name with math
\texorpdfstring{$1+2=3$}{text description}}

```

### 80.1.2 Rendering tradeoffs

**Math rendering** Math may be rendered as `svg` graphics or using the `MATHJAX` JavaScript display engine.

**SVG files** Rendering math as images creates a new `svg` file for each expression, except that an MD5 hash is used to combine identical duplicates of the same inline math expression into a single file, which must be converted to `svg` only once. Display math is still handled as individual files, since it may contain labels or references which are likely to change.

**SVG inline** The `svg` images are currently stored separately, but they could be encoded in-line directly into the `HTML` document. This may reduce the number of files and potentially speed loading the images, but slows the display of the rest of the document before the images are loaded.

**PNG files** Others `LATEX`-to-`HTML` converters have used `PNG` files, sometimes pre-scaled for print resolution but displayed on-screen at a scaled down size. This allows high-quality print output at the expense of larger files, but `svg` files are the preferred approach for scalable graphics.

**MathML** Conversion to `MathML` might be a better approach, among other things allowing a more compact representation of math than `svg` drawings. Problems with `MathML` include limited browser support and some issues with the fine control of the appearance of the result. Also see section 11 regarding `EPUB` output with `MATHJAX`.

### 80.1.3 `svg` option

**SVG math option** For `svg` math, math is rendered as usual by `LATEX` into the initial `PDF` file using the current font<sup>18</sup>, then is captured from the `PDF` and converted to `svg` graphics via a number of utility programs. The `svg` format is a scalable-vector web format, so math may be typeset by `LATEX` with its fine control and precision, then displayed or printed at any size, depending on (sometimes broken) browser support. An `HTML alt` attribute carries the `LATEX` code which generated the math, allowing copy/paste of the `LATEX` math expression into other documents.

**SVG image font size** For the `lateximage` environment, the size of the math and text used in the `svg` image may be adjusted by setting `\LateximageFontSizeName` to a font size name — *without the backslash*, which defaults to:

```
\renewcommand{\LateximageFontSizeName}{normalsize}
```


For inline `svg` math, font size is instead controlled by `\LateximageFontScale`, which defaults to:

```
\newcommand*{\LateximageFontScale}{.75}
```

**SVG math copy/paste** For `svg` math, text copy/paste from the `HTML <alt>` tags lists the equation number or tag for single equations, along with the `LATEX` code for the math expression. For `AMS` environments with multiple numbers in the same environment, only the first and

<sup>18</sup>See section 506 regarding fonts and fractions.

last is copy/pasted, as a range. No tags are listed inside a starred  $\mathcal{AMS}$  environment, although the `\tag` macro will still appear inside the  $\LaTeX$  math expression.

 **SVG math in  $\TeX$  boxes** SVG math does not work inside  $\TeX$  boxes, since a `\newpage` is required before and after each image.

#### 80.1.4 MATHJAX option

**MATHJAX math option** The popular MATHJAX alternative ([mathjax.org](http://mathjax.org)) may be used to display math.

Prog MathJax

When MATHJAX is enabled, math is rendered twice:

1. As regular  $\LaTeX$  PDF output placed inside an HTML comment, allowing equation numbering and cross referencing to be almost entirely under the control of  $\LaTeX$ , and
2. As detokenized printed  $\LaTeX$  commands placed directly into the HTML output for interpretation by the MATHJAX display scripts. An additional script is used to pre-set the equation number format and value according to the current  $\LaTeX$  values, and the MATHJAX cross-referencing system is ignored in favor of the  $\LaTeX$  internal system, seamlessly integrating with the rest of the  $\LaTeX$  code.

#### 80.1.5 Customizing MATHJAX

MATHJAX does not have preexisting support every possible math function. Additional MATHJAX function definitions may be defined. These will be declared at the start of each HTML page, and thus will have a global effect.

Examples:

```
\CustomizeMathJax{
 \newcommand{\expval}[1]{\langle#1\rangle}
 \newcommand{\abs}[1]{\lvert#1\rvert}
}
\CustomizeMathJax{\newcommand{\arsinh}{\text{arsinh}}}
\CustomizeMathJax{\newcommand{\arcosh}{\text{arcosh}}}
\CustomizeMathJax{\newcommand{\NN}{\mathbb{N}}}
```

#### 80.1.6 MATHJAX limitations

**MATHJAX limitations** Limitations when using MATHJAX include:

Prog MathJax



**subequations**

- MATHJAX itself does not support subequations. This may be improved by parsing the  $\LaTeX$  math expression to manually insert tags, but this has not yet been done.

**footnotes in math**

- Footnotes inside equations are not yet supported while using MATHJAX.



- [lateximage](#)
  - Math appearing inside a `lateximage`, and therefore also inside a `Tikz` or `picture` environment, is rendered as SVG math even if `MATHJAX` is used in the rest of the document.
- [siunitx](#)
  - Usage of `siunitx` inside a math equation is supported via a third-party `MATHJAX` extension. While inside a math expression, do not use `\SI` or `\si` inside `\text`, where it will be rendered as normal text.  
<https://github.com/burnpanck/MathJax-siunitx>  
 Also see section 9.7.11.
-  [siunitx inside an equation](#)
- [tabbing](#)
  - A `tabbing` environment is emulated using an HTML `<pre>`. While `MATHJAX` is enabled inside `tabbing`, the browser may not correctly render the horizontal alignment of the math and text following after on the same line.
-  [other macros and packages](#)
  - Other math-related macros and packages are not supported by `MATHJAX`, including `\ensuremath` and `bigdelim`, along with occasionally-used macros such as `\relax`. `lwarp` emulates footnotes, units, and `nicefrac` for `MathJax`.

### 80.1.7 Catcode changes

[preamble macros with math](#) The math shift character `$` is not set for HTML output until after the preamble. Macros defined in the preamble which contain `$` must be enclosed between `\StartDefiningMath` and `\StopDefiningMath` to temporarily change to the HTML meaning of `$`:

```
\StartDefiningMath
\newcommand{. . .}
\StopDefiningMath
```

As an alternative, use `\(` and `\)` instead of `$`, in which case `\StartDefiningMath` and `\StopDefiningMath` are not necessary.

If a package defines macros using `$`, it may be necessary to use `\StartDefiningMath` and `\StopDefiningMath` before and after loading the package.

### 80.1.8 Complicated inline math objects

`\inlinemathnormal`  
`\inlinemathother`  
[changing contents](#)  
[complicated alt tag](#) An inline math expression is usually converted to a reusable hashed svg math image, or a `MathJax` expression. The hash or expression depends on the contents of the math expression. In most cases this math expression is static, such as  $x+1$ , so the image can be reused for multiples instances of the same expression. In some cases, the math expression includes a counter or other object which may change between uses. Another problem is complicated contents which do not expand well in an `alt` tag. The macro `\inlinemathother` may be used before a dynamic math expression, and `\inlinemathnormal` after. Doing so tells `lwarp` to use an unhashed svg math image, even if `MathJax` is in use. See section 45.

### 80.1.9 Complicated display math objects

`\displaymathnormal` By default, or when selecting `\displaymathnormal`, `MATHJAX` math display environ-

ments print their contents as text into HTML, and SVG display math environments render their contents as SVG images and use their contents as the alt tag of HTML output. To do so, the contents are loaded into a macro for reuse. In some cases, such as complicated Tikz pictures, compilation will fail.

`\displaymathother`  
**MathJax unsupported**  
 complicated alt tag

When selecting `\displaymathother`, it is assumed that the contents are more complicated than “pure” math. An example is an elaborate Tikz picture, which will not render in MATHJAX and will not make sense as an HTML alt tag. In this mode, MATHJAX is turned off, math display environments become SVG images, even if MATHJAX is selected, and the HTML alt tags become simple messages. The contents are internally processed as an environment instead of a macro argument, so complicated objects such as Tikz pictures are more likely to compile successfully.

## 80.2 HTML alt tag names

Redefinable names for the HTML alt tags, for translation according to the reader’s native language.

**for HTML & PRINT:** 9419 `\begin{warpall}`

`\mathim名称` The HTML alt tag for an SVG math image.  
 Default: ‘math image’

9420 `\newcommand*{\mathim名称}{math image}`

`\packagediagramname` Appended to the `lateximage` HTML alt tag for the images generated by many packages.  
 Default: ‘diagram’

9421 `\newcommand*{\packagediagramname}{diagram}`

9422 `\end{warpall}`

## 80.3 Inline and display math

**for HTML output:** 9423 `\begin{warpHTML}`

Ctr LWR@externalfilecnt Counter for the external files which are generated and then referenced from the HTML:

9424 `\newcounter{LWR@externalfilecnt}`

Bool LWR@indisplaymathimage True if processing display math for SVG output. Inside a `lateximage`, display math is only set to print-mode output if `LWR@indisplaymathimage` is false. Used to avoid nullifying display math before it has been completed.

9425 `\newbool{LWR@indisplaymathimage}`

Bool LWR@xfakebold True if `xfakebold \setBold` is in use.

```
9426 \newbool{LWR@xfakebold}
9427 \boolfalse{LWR@xfakebold}
```

`\LWR@orig@setBold` Redefined by `lwarp-xfakebold`.

```
9428 \newcommand*{\LWR@orig@setBold}{}
```

`\LWR@orig@unsetBold` Redefined by `lwarp-xfakebold`.

```
9429 \newcommand*{\LWR@orig@unsetBold}{}
```

`\LWR@applyxfakebold` Redefined by `lwarp-xfakebold`.

```
9430 \newcommand*{\LWR@applyxfakebold}{}
```

`\$` Plain dollar signs appearing in the HTML output may be interpreted by MATHJAX to be math shifts. For a plain text dollar `\$`, use an HTML entity to avoid it being interpreted by MATHJAX, unless are inside a `lateximage`, in which case it will not be seen by MATHJAX.

```
9431 \let\LWR@origtextdollar\$
9432
9433 \renewcommand*{\$}{%
9434 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
9435 {\LWR@origtextdollar}%
9436 {\HTMLentity{dollar}}%
9437 }
```

File `lwarp_baseline_marker.png` A marker to be used to help *pdfcrop* identify the inline math baseline and width. If either `graphicx` or `graphics` is loaded, this marker is placed at the lower left and lower right corners of the inline math. *pdfcrop* is then able to identify the width of the image, and also the height of an image such as a horizontal dash which does not otherwise touch the baseline.

File `lwarp_baseline_marker.eps`

A marker with alpha or opacity of 0% is not registered by *pdfcrop*, so the marker is a small square block of 1% alpha, which seems to work while still being effectively invisible in the final SVG image.

If `graphicx` is loaded, this marker is sized as a tiny 1 sp square. If `graphics` is loaded, this marker is used at its default size of around .25 pt. If neither `graphics` package is loaded, the marker is replaced by a 10 sp horizontal space, and there is no assistance for determining baseline or width of the inline math image. The best results are obtained when using `graphicx`.

`\LWR@addbaselinemarker` Places a small marker in an svg inline image. If `graphics` or `graphicx` are loaded, the marker is a mostly transparent image. If neither is loaded, no marker is used.

```
9438 \AtBeginDocument{
9439
9440 \ifpdf
```

```

9441 \newcommand*\LWR@baselinename}{lwarp_baseline_marker.png}
9442 \else
9443 \ifXeTeX
9444 \newcommand*\LWR@baselinename}{lwarp_baseline_marker.png}
9445 \else
9446 \newcommand*\LWR@baselinename}{lwarp_baseline_marker.eps}
9447 \fi
9448 \fi
9449
9450 \IfFileExists{\LWR@baselinename}%
9451 {
9452 \@ifpackageloaded{graphicx}{
9453 \newcommand*\LWR@addbaselinemarker}{%
9454 \LWR@originincludegraphics{\LWR@baselinename}%
9455 }
9456 }{
9457 \@ifpackageloaded{graphics}{
9458 \newcommand*\LWR@addbaselinemarker}{%
9459 \LWR@originincludegraphics{\LWR@baselinename}%
9460 }
9461 }{
9462 \PackageWarningNoLine{lwarp}{Load graphicx or graphics
9463 for improved SVG math baselines,}
9464 \newcommand*\LWR@addbaselinemarker}{}
9465 }
9466 }
9467 }{% lwarp_baseline_marker.png or .eps is not present
9468 \PackageWarningNoLine{lwarp}{File \LWR@baselinename\space is not installed alongside
9469 the lwarp-*.sty files, so SVG math baselines may not be accurate,}
9470 \newcommand*\LWR@addbaselinemarker}{}
9471 }
9472
9473 }% AtBeginDocument

```

`\LWR@subsingledollar` \*  $\langle 2: alt\ text \rangle$   $\langle 3: add'l\ hashing \rangle$   $\langle 4: math\ expression \rangle$

For inline math. Uses MathJax, or for svg math the image is measured and adjusted to the baseline of the HTML output, and placed inside a `lateximage`.

[image filename hashing](#) If starred, a hashed filename is used. If so, the hash is based on the `alt` tag and also the additional hashing argument.

This may be used to provide an expression with a simple `alt` tag but also enough additional information to provide a unique hash.

An example is when the expression is a complicated TEX expression, which would not copy/paste well. A simplified tag may be used, while the complicated expression is duplicated in the additional hashing argument.

Another example is when the expression is simple, but the image depends on options. These options may be decoded into text form and included in the additional hashing argument in order to make the hash unique according to the set of options, even if the simple `alt` tag is still the same.

```

9474 \newlength{\LWR@singledollarwidth}
9475 \newlength{\LWR@singledollarheight}
9476 \newlength{\LWR@singledollardepth}
9477
9478 \newsavebox{\LWR@singledollarbox}
9479
9480 \NewDocumentCommand{\LWR@subsingledollar}{s m m m}{%
9481 \LWR@traceinfo{\LWR@subsingledollar}%

9482 \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}%
9483 {%
9484 \LWR@traceinfo{\LWR@subsingledollar: already in a lateximage}%
9485 #4% contents
9486 }%
9487 {% not in a lateximage
9488 \begingroup%

```

Support for xfakebold:

```
9489 \LWR@applyxfakebold%
```

MathJax cannot parse the often complicated T<sub>E</sub>X expressions which appear in the various uses of `\ensuredmath`. `\ensuremath` forces the `alt` tag to “(math image)”, as translated according to `\mathimagename`. If this is the case, force the use of a `lateximage` even if MathJax. Likewise for `siunitx` if `parse-numbers=false`.

If MathJax, or if formatting math for a word processor, and not `\ensuredmath`, and not a dynamic math expression, print the math expression:

```

9490 \ifboolexpr{%
9491 (
9492 bool{mathjax} or
9493 (bool{FormatWP} and bool{WPMarkMath})
9494) and
9495 (not test { \ifstrequal {#2} {\mathimagename} }) and % from \ensuredmath
9496 (not bool{\LWR@dynamicmath})
9497 }%

```

For MATHJAX, print the math between `\(` and `\)`:

```

9498 {%
9499 \LWR@traceinfo{\LWR@subsingledollar: Mathjax}%
9500 {\textbackslash(\LWR@HTMLsanitize{#4}\textbackslash)}%
9501 }% mathjax

```

For SVG, print the math inside a `lateximage`, with an `<alt>` tag of the L<sup>A</sup>T<sub>E</sub>X code, and a css style to control the baseline adjustment.

```

9502 {% not mathjax
9503 \LWR@traceinfo{\LWR@subsingledollar: NOT mathjax, or is ensuremath, or is dynamic}%

```

Measure the depth, width, and height of the math image:

```
9504 \begingroup%
```

Temporarily disable formatting while measuring the image parameters:

```
9505 \LWR@restoreorigformatting%
9506 \RenewDocumentEnvironment{lateximage}{s o o o}{\}{\}% inside group
9507 \LWR@print@normalsize%
```

Temporarily set font for the HTML PDF output:

```
9508 \LWR@traceinfo{Using font family \LWR@f@family}%
9509 \@nameuse{LWR@orig\LWR@f@family family}%
9510 \LWR@traceinfo{Using font series \LWR@f@series}%
9511 \@nameuse{LWR@orig\LWR@f@series series}%
9512 \LWR@traceinfo{Using font shape \LWR@f@shape}%
9513 \@nameuse{LWR@orig\LWR@f@shape shape}%
```

`lateximagedepth` must be nested to avoid generating paragraph tags.  $\mathcal{AMS}$  math modifies the `\text` macro such that `\addtocounter` does not always occur as expected. Lower-level code is used instead.

```
9514 \global\advance\c@LWR@lateximagedepth 1\relax%
```

Typeset and save the contents, depending on how they were generated:

**SVG math:** `\LWR@origensuredmath` is part of argument #4.

**SVG math \ensuremath:** `\LWR@origensuredmath` is part of argument #4.

**SVG dynamic math:** `\LWR@origensuredmath` is part of argument #4.

**Mathjax:** Argument #4 is the contents of the math expression without `\LWR@origensuredmath`. This case is handled above.

**Mathjax \ensuremath:** `\LWR@origensuredmath` is part of argument #4.

**Mathjax dynamic math:** Argument #4 is the contents of the math expression without `\LWR@origensuredmath`, so `\LWR@origensuredmath` is added below.

**\ifmmode:** Included “just in case”.

```
9515 \ifmmode%
9516 \global\sbox{\LWR@singledollarbox}{#4}%
9517 \else%
9518 \ifbool{LWR@dynamicmath}{%
9519 \ifbool{mathjax}{%
9520 \global\sbox{\LWR@singledollarbox}{\LWR@origensuredmath{#4}}%
9521 }{%
9522 \global\sbox{\LWR@singledollarbox}{#4}%
9523 }%
9524 }{%
9525 \global\sbox{\LWR@singledollarbox}{#4}%
9526 }%
9527 \fi%
```

Add a small and almost transparent marker at the depth of the image.

A math minus sign has the same depth as a plus, even though it does not draw anything below the baseline. This means that *pdfcrop* would crop the image without depth. The marker below the baseline is seen by *pdfcrop* and preserves the depth.

```
9528 \global\sbox{\LWR@singledollarbox}{%
9529 \usebox{\LWR@singledollarbox}%
9530 \raisebox{-\dp\LWR@singledollarbox}{%
9531 \LWR@addbaselinemarker%
9532 }%
9533 }%
```

More low-level code to undo the counter change.

```
9534 \global\advance\c@LWR@lateximagedepth -1\relax% Due to AmS \text macro.
```

Measure the depth:

```
9535 \setlength{\LWR@singledollardepth}{%
9536 \LateximageFontScale\dp\LWR@singledollarbox%
9537 }%
```

Make the length a global change:

```
9538 \global\LWR@singledollardepth=\LWR@singledollardepth%
```

Likewise for width:

```
9539 \setlength{\LWR@singledollarwidth}{%
9540 \LateximageFontScale\wd\LWR@singledollarbox%
9541 }%
9542 \global\LWR@singledollarwidth=\LWR@singledollarwidth%
```

Likewise for total height:

```
9543 \setlength{\LWR@singledollarheight}{%
9544 \LateximageFontScale\ht\LWR@singledollarbox%
9545 }%
9546 \addtolength{\LWR@singledollarheight}{%
9547 \LateximageFontScale\dp\LWR@singledollarbox%
9548 }%
9549 \global\LWR@singledollarheight=\LWR@singledollarheight%

9550 \endgroup%
```

Set a style for the the height or width. The em unit is used so that the math scales according to the user's selected font size.

Start with the greater of the width or the height, biased towards the width:

```
9551 \ifdimgreater{\LWR@singledollarwidth}{.7\LWR@singledollarheight}{%
9552 \def\LWR@singledollarstyle{%
```

```

9553 width:\LWR@convertto{em}{\the\LWR@singledollarwidth} em%
9554 }%
9555 }{%
9556 \def\LWR@singledollarstyle{%
9557 height:\LWR@convertto{em}{\the\LWR@singledollarheight} em%
9558 }%
9559 }%

```

If a very narrow width, use the height.

```

9560 \ifdimless{\LWR@singledollarwidth}{.2em}%
9561 {%
9562 \def\LWR@singledollarstyle{%
9563 height:\LWR@convertto{em}{\the\LWR@singledollarheight} em%
9564 }%
9565 }%
9566 {}%

```

If very wide and short, use the width:

```

9567 \ifdimless{\LWR@singledollarheight}{.2em}%
9568 {%
9569 \def\LWR@singledollarstyle{%
9570 width:\LWR@convertto{em}{\the\LWR@singledollarwidth} em%
9571 }%
9572 }%
9573 {}%

```

If there is significant text depth, add the depth to the style.

```

9574 \ifdimgreater{\LWR@singledollardepth}{0.05ex}{%
9575 \def\LWR@singledollardepthstyle{%
9576 \ ; % extra space
9577 \LWR@print@mbbox{%
9578 vertical-align:-\LWR@convertto{em}{\the\LWR@singledollardepth} em%
9579 } % extra space
9580 }%
9581 }{%
9582 \def\LWR@singledollardepthstyle{%
9583 }%

```

Create the `lateximage` using the alternate tag and the computed size and depth. The star causes `lateximage` to use an MD5 hash as the filename. When hashing, also include the current font and color in the hash.

```

9584 \ifbool{LWR@dynamicmath}{%
9585 \LWR@traceinfo{subsingledollar: dynamic}%
9586 \begin{lateximage}% no hashing
9587 [(\mathimagenam)]% alt tag
9588 [% no add'l hashing
9589 [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
9590 }{%
9591 \LWR@traceinfo{subsingledollar: static}%
9592 \IfValueTF{#1}{%
9593 \LWR@findcurrenttextcolor% sets \LWR@tempcolor

```



## Support for xfakebold:

```

9594 \ifbool{LWR@xfakebold}%
9595 {\def\LWR@tempone{Y}}%
9596 {\def\LWR@tempone{N}}%

9597 \begin{lateximage}*% use hashing
9598 [#2]% alt
9599 [% addl' hashing
9600 #3%
9601 FM\LWR@f@family%
9602 SR\LWR@f@series%
9603 SH\LWR@f@shape%
9604 CL\LWR@tempcolor%
9605 FB\LWR@tempone% xfakebold
9606]%
9607 [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
9608 }{%
9609 \begin{lateximage}% no hashing
9610 [#2]% alt
9611 [% no add'l hashing
9612 [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
9613]%
9614 }%

```

Place small and almost transparent markers on the baseline at the left and right edges of the image. These markers are seen by *pdfcrop*, and force vertically-centered objects such as a dash to be raised off the baseline in the cropped image, and also force the total width and left/right margins to be correct. (Except that in some fonts a character may exceed the bounding box, and thus may appear wider than expected when converted to an image.)

```
9615 \LWR@addbaselinemarker%
```

## Support for xfakebold:

```
9616 \LWR@applyxfakebold%
```

## Typeset the contents:

```
9617 \usebox{\LWR@singledollarbox}%
```

## The closing baseline marker:

```
9618 \LWR@addbaselinemarker%
```

```

9619 \end{lateximage}%
9620 %
9621 }% not mathjax
9622 \endgroup%
9623 }% not in a lateximage
9624 \LWR@traceinfo{LWR@subsingledollar: done}%
9625 }

```

```
9626 \LetLtxMacro\LWR@origdollar$
9627 \LetLtxMacro\LWR@secondorigdollar$% balance for editor syntax highlighting
```

```
9628 \LetLtxMacro\LWR@origopenparen\(
9629 \LetLtxMacro\LWR@origcloseparen\
9630 \LetLtxMacro\LWR@origopenbracket\
9631 \LetLtxMacro\LWR@origclosebracket\]
```

Redefine the dollar sign to place math inside a lateximage, or use MATHJAX:

```
9632 \begingroup
9633 \catcode'\$=\active%
9634 \protected\gdef$\@ifnextchar$\LWR@doubledollar\LWR@singledollar}%
```

Used by chemformula to escape single-dollar math:

```
9635 \protected\gdef\LWR@newsingledollar{\@ifnextchar$\LWR@doubledollar\LWR@singledollar}%
```

`\LWR@doubledollar` Redefine the double dollar sign to place math inside a lateximage, or use MATHJAX:

```
9636 \protected\gdef\LWR@doubledollar$#1$${%
```

If MATHJAX or formatting for a word processor, print the L<sup>A</sup>T<sub>E</sub>X expression:

```
9637 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }{%
```

For MATHJAX, print the math between `\[` and `\]`:

```
9638 {
9639
9640 \textbackslash[
9641 \LWR@HTMLsanitize{#1}%
9642 \textbackslash]
9643
9644 }% mathjax
```

For SVG, print the math inside a lateximage, with an `<alt>` tag of the L<sup>A</sup>T<sub>E</sub>X code:

```
9645 {% not mathjax
9646 \begin{BlockClass}{displaymath}%
9647 \LWR@newautoidanchor%
9648 \booltrue{LWR@indisplaymathimage}%
9649 \begin{lateximage}%
9650 [%
9651 \textbackslash[] % extra space
9652 \LWR@HTMLsanitize{#1} % extra space
9653 \textbackslash[]}%
9654]%
```

Support for xfakebold:

```
9655 \LWR@applyxfakebold%
```

```

9656 \LWR@origdollar\LWR@origdollar#1\LWR@origdollar\LWR@origdollar%
9657 \end{lateximage}%
9658 \end{BlockClass}%
9659 }% not mathjax
9660 }%

```

`\LWR@singledollar`  $\langle alt\ text\rangle\langle math\ expression\rangle$

```

9661 \protected\gdef\LWR@singledollar#1${%
9662 \ifbool{mathjax}{%
9663 \LWR@subsingledollar*%
9664 {% alt tag
9665 \textbackslash(%
9666 \LWR@HTMLsanitize{#1} % extra space
9667 \textbackslash)%
9668 }%
9669 {singledollar}% add'l hashing
9670 {#1}% contents
9671 }{% not mathjax
9672 \LWR@subsingledollar*%
9673 {% alt tag
9674 \textbackslash(%
9675 \LWR@HTMLsanitize{#1} % extra space
9676 \textbackslash)%
9677 }%
9678 {singledollar}% add'l hashing
9679 {\LWR@origensuredmath{#1}}% contents
9680 }% not mathjax
9681 }

```

`\(` Redefine to the above dollar macros.

`\[`

```

9682 \AtBeginDocument{
9683 \protected\gdef\(#1\){#1$}
9684 \protected\gdef\[#1\]{$$#1$$}
9685 }
9686
9687 \endgroup

```

```

9688 \AtBeginDocument{
9689 \LetLtxMacro\LWR@openbracketnormal\[
9690 \LetLtxMacro\LWR@closebracketnormal\]
9691 }

```

`\@ensuredmath`  $\langle expression\rangle$

If MathJax, a `lateximage` is used, since `\ensuremath` is often used for complex T<sub>E</sub>X expressions which MathJax may not render. If `svg math`, a hashed file is used with a simple `alt` tag, but additional hashing provided by the contents.

```

9692 \LetLtxMacro\LWR@origensuredmath\@ensuredmath
9693

```

```

9694 \renewcommand{\@ensuredmath}[1]{%
9695 \ifbool{mathjax}{%
9696 \LWR@subsingledollar*{(\mathim名称)}{%
9697 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
9698 }{\relax%
9699 \LWR@origensuredmath{#1}}%
9700 }%
9701 }{% SVG math

```

If already inside a lateximage in math mode, continue as-is.

```

9702 \ifmmode%
9703 \LWR@origensuredmath{#1}%
9704 \else%

```

Create an inline math lateximage with a simple alt tag and additional hashing according to the contents.

```

9705 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
9706 {\LWR@origensuredmath{#1}}%
9707 {%
9708 \LWR@subsingledollar*{(\mathim名称)}{%
9709 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
9710 }{%
9711 \LWR@origensuredmath{#1}}%
9712 }%
9713 }%
9714 \fi%
9715 }%
9716 }

```

Remove the old math and displaymath environments:

```

9717 \let\math\relax
9718 \let\endmath\relax
9719 \let\displaymath\relax
9720 \let\enddisplaymath\relax

```

Env `math` Set math mode then typeset the body of what was between the begin/end. See the `environ` package for `\BODY`.

```

9721 \NewEnviron{math}{\expandafter\(\BODY\)}

```

Env `LWR@displaymathnormal` Set math mode then typeset the body of what was between the begin/end. See the `environ` package for `\BODY`.

```

9722 \NewEnviron{LWR@displaymathnormal}{\expandafter\[\BODY\]\@ignoretrue}

```

Set the default displaymath to the normal version:

```

9723 \LetLtxMacro\[\LWR@openbracketnormal%

```

```

9724 \LetLtxMacro\}\LWR@closebracketnormal%
9725 \LetLtxMacro\displaymath\LWR@displaymathnormal%
9726 \LetLtxMacro\enddisplaymath\endLWR@displaymathnormal%

```

Env LWR@displaymathother A version of `displaymath` which can handle complicated objects, but does not supply `MATHJAX` or `HTML alt` tags.

```

9727 \newenvironment{LWR@displaymathother}
9728 {%
9729 \begin{BlockClass}{displaymath}%
9730 \LWR@newautoidanchor%
9731 \booltrue{LWR@indisplaymathimage}%
9732 \begin{lateximage}%
9733 [(display math)]%
9734 \LWR@origdollar\LWR@origdollar%
9735 }
9736 {%
9737 \LWR@origdollar\LWR@origdollar%
9738 \end{lateximage}%
9739 \end{BlockClass}%
9740 }

```

Env LWR@equationother A version of `displaymath` which can handle complicated objects, but does not supply `MATHJAX` or `HTML alt` tags.

```

9741 \newenvironment{LWR@equationother}
9742 {%
9743 \begin{BlockClass}{displaymathnumbered}%
9744 \LWR@newautoidanchor%
9745 \booltrue{LWR@indisplaymathimage}%
9746 \begin{lateximage}%
9747 [(display math)]%
9748 \LWR@origequation%
9749 }
9750 {%
9751 \LWR@origendequation%
9752 \end{lateximage}%
9753 \end{BlockClass}%
9754 }

```

## 80.4 MATHJAX support

Ctr LWR@nextequation Used to add one to compute the next equation number.

```
9755 \newcounter{LWR@nextequation}
```

`\LWR@syncmathjax` Sets the `MATHJAX` equation format and number for the following equations.

These `MATHJAX` commands are printed inside “\( $\)” and “\( $\)” characters. They are printed to `HTML` output, not interpreted by `LATEX`.$$

```
9756 \newcommand*{\LWR@syncmathjax}{%
```

If using chapters, place the chapter number in front of the equation. Otherwise, use the simple equation number.

```
9757 \ifcsdef{thechapter}{
9758 \InlineClass{hidden}{
9759 \textbackslash(
9760 \textbackslash{}seteqsection \{\thechapter\}
9761 \textbackslash)
9762 }
9763 }
9764 {}% not using chapters
```

MATHJAX doesn't allow setting the equation number to 1:

```
9765 \ifthenelse{\cnttest{\value{equation}}>0}
9766 {
```

Tell MATHJAX that the next set of equations begins with the current L<sup>A</sup>T<sub>E</sub>X equation number, plus one.

```
9767 \setcounter{LWR@nextequation}{\value{equation}}
9768 \addtocounter{LWR@nextequation}{1}
```

Place the MATHJAX command inside “\( $\) and “\( $\)” characters, to be printed to HTML, not interpreted by L<sup>A</sup>T<sub>E</sub>X.$$

```
9769 \InlineClass{hidden}{
9770 \textbackslash(
9771 \textbackslash{}seteqnumber \{\arabic{LWR@nextequation}\}
9772 \textbackslash)
9773 }
9774 }{}% not eq > 0
9775 }
```

```
\LWR@hidelatexequation {<environment>} {<contents>}
```

Creates the L<sup>A</sup>T<sub>E</sub>X version of the equation inside an HTML comment.

```
9776 \NewDocumentCommand{\LWR@hidelatexequation}{m +m}{%
```

Stop HTML paragraph handling and open an HTML comment:

```
9777 \LWR@stoppars
9778 \LWR@htmlopencomment
9779
```

Start the L<sup>A</sup>T<sub>E</sub>X math environment inside the HTML comment:

```
9780 \begingroup
9781 \@nameuse{LWR@orig#1}
```

While in the math environment, restore various commands to their L<sup>A</sup>T<sub>E</sub>X meanings.

```
9782 \LWR@restoreorigformatting
```

See `\LWR@htmlmathlabel` in section 80.7.1.

Print the contents of the equation:

```
9783 #2
```

End the L<sup>A</sup>T<sub>E</sub>X math environment inside the HTML comment:

```
9784 \@nameuse{\LWR@origend#1}
9785 \endgroup
9786
```

Close the HTML comment and resume HTML paragraph handling:

```
9787 \LWR@htmlclosecomment
9788 \LWR@startpars
9789 }
```

```
\LWR@addmathjax {<environment>} {<contents>}
```

Given the name of a math environment and its contents, create a MATHJAX instance. The contents are printed to HTML output, not interpreted by L<sup>A</sup>T<sub>E</sub>X.

```
9790 \NewDocumentCommand{\LWR@addmathjax}{m +m}{%
```

Enclose the MATHJAX environment inside printed “\ (“ and “\)” characters.

```
9791 \LWR@origtilde\LWR@orignewline
9792 \textbackslash{}begin\{#1\}
```

Print the contents, sanitizing for HTML special characters.

```
9793 \LWR@HTMLsanitizeexpand{\detokenize\expandafter{#2}}
```

Close the MATHJAX environment:

```
9794 \textbackslash{}end\{#1\}
9795 \LWR@orignewline
9796 }
```

## 80.5 Equation environment

Remember existing equation environment, after redefined by `amsmath`, if loaded.

```
9797 \AtBeginDocument{
9798 \let\LWR@origequation\equation
```

```

9799 \let\LWR@origendequation\endequation
9800 \csletcs[LWR@origequation*]{equation*}
9801 \csletcs[LWR@origendequation*]{endequation*}
9802 }

```

```
\LWR@doequation {<env contents>} {<env name>}
```

For SVG math output, the contents are typeset using the original equation inside a `lateximage`, along with an `<alt>` tag containing a detokenized copy of the  $\LaTeX$  source for the math.

For MATHJAX output, the contents are typeset in an original equation environment placed inside a HTML comment, with special processing for `\labels`. The contents are also printed to the HTML output for processing by the MATHJAX script.

```

9803 \newcommand*\LWR@doequation}[2]{%
9804

```

If `mathjax` or `FormatWP`, print the  $\LaTeX$  expression:

```
9805 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
```

MATHJAX output:

```
9806 {
```

Print commands to synchronize MATHJAX's equation number and format to the current  $\LaTeX$  chapter/section and equation number:

```
9807 \LWR@syncmathjax
```

Print the  $\LaTeX$  math inside an HTML comment:

```

9808 \LWR@hidelatexequation{#2}{#1}
9809 }

```

SVG output: Create the `lateximage` along with an HTML `<alt>` tag having an equation number, the  $\LaTeX$  equation environment commands, and the contents of the environment's `\BODY`.

```
9810 {% not mathjax
```

Begin the `lateximage` with an `<alt>` tag containing the math source:

```

9811 \ifstrequal{#2}{equation*}{%
9812 \begin{BlockClass}{displaymath}%
9813 }{%
9814 \begin{BlockClass}{displaymathnumbered}%
9815 }%
9816 \LWR@newautoidanchor%
9817 \booltrue{LWR@indisplaymathimage}%
9818 \begin{lateximage}{%
9819 \ifstrequal{#2}{equation*}{%

```



```

9820 \ifdefequal{\LWR@equationtag}{\theequation}{%
9821 % no tag was given
9822 }{%
9823 (\LWR@equationtag) % tag was given
9824 }%
9825 }{%
9826 (\LWR@equationtag) % automatic numbering
9827 }%
9828 \textbackslash{begin\{#2\}} % extra space
9829 \LWR@HTMLSanitizeexpand{\detokenize\expandafter{#1}} % extra space
9830 \textbackslash{end\{#2\}}%
9831]% alt tag

```

Support for xfakebold:

```

9832 \LWR@applyxfakebold%

```

Create the actual L<sup>A</sup>T<sub>E</sub>X-formatted equation inside the lateximage using the contents of the environment.

```

9833 \@nameuse{LWR@orig#2}%
9834 #1% contents collected by \collect@body
9835 \@nameuse{LWR@origend#2}%
9836 \end{lateximage}%
9837 \end{BlockClass}%
9838 }% not mathjax
9839 }

```

After the environment, if MATHJAX, print the math to the HTML output for MATHJAX processing:

```

9840 \newcommand*{\LWR@doendequation}[1]{%
9841 \ifbool{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
9842 {%
9843 \LWR@addmathjax{#1}{\BODY}%
9844 }{%
9845
9846 }

```

Remove existing equation environment:

```

9847 \AtBeginDocument{
9848 \let\equation\relax
9849 \let\endequation\relax
9850 \csletcs{equation*}{relax}
9851 \csletcs{endequation*}{relax}
9852 }

```

Env equation The new equation environment is created with `\NewEnviron` (from the `environ` package), which stores the contents of its environment in a macro called `\BODY`.

```

9853 \AtBeginDocument{
9854 \NewEnviron{equation}%

```

```

9855 {\LWR@doequation{\BODY}{equation}}%
9856 [\LWR@doendequation{equation}]
9857
9858 \LetLtxMacro\LWR@equationnormal\equation
9859 \LetLtxMacro\endLWR@equationnormal\endequation
9860 }

```

Env `equation*`

```

9861 \AtBeginDocument{
9862 \NewEnviron{equation*}%
9863 {\LWR@doequation{\BODY}{equation*}}%
9864 [\LWR@doendequation{equation*}]
9865
9866 \csletcs{LWR@equationnormalstar}{equation*}
9867 \csletcs{LWR@endequationnormalstar}{endequation*}
9868 }

```

Remember the “less” version of `equation`, which uses `MATHJAX` and `alt` tags, but does not support complicated contents such as some `Tikz` expressions.

```

9869 \AtBeginDocument{
9870 \LetLtxMacro\LWR@equationless\equation
9871 \LetLtxMacro\endLWR@equationless\endequation
9872 \csletcs{LWR@equationlessstar}{equation*}
9873 \csletcs{LWR@endequationlessstar}{endequation*}
9874 }

```

## 80.6 `\displaymathnormal` and `\displaymathother`

`\displaymathnormal` By default, or when selecting `\displaymathnormal`, `MATHJAX` math display environments print their contents as text into `HTML`, and `SVG` display math environments render their contents as `SVG` images and use their contents as the `alt` tag of `HTML` output. To do so, the contents are loaded into a macro for reuse. In some cases, such as complicated `Tikz` pictures, compilation will fail.

`\displaymathother` When selecting `\displaymathother`, it is assumed that the contents are more complicated than “pure” math. An example is an elaborate `Tikz` picture, which will not render in `MATHJAX` and will not make sense as an `HTML alt` tag. In this mode, `MATHJAX` is turned off, math display environments become `SVG` images, even if `MATHJAX` is selected, and the `HTML alt` tags become simple messages. The contents are internally processed as an environment instead of a macro argument, so complicated objects such as `Tikz` pictures are more likely to compile successfully.

`\displaymathnormal` Use when display math environments have simple math which is to be sent to `MATHJAX` or included in `HTML alt` tags.  
**simple math objects**

```

9875 \newcommand*{\displaymathnormal}{%
9876 \ifbool{LWR@origmathjax}{\booltrue{mathjax}}{\boolfalse{mathjax}}%
9877 \LetLtxMacro\[\LWR@openbracketnormal%

```

```

9878 \LetLtxMacro\]\LWR@closebracketnormal%
9879 \LetLtxMacro\displaymath\LWR@displaymathnormal%
9880 \LetLtxMacro\enddisplaymath\endLWR@displaymathnormal%
9881 \LetLtxMacro\equation\LWR@equationnormal%
9882 \LetLtxMacro\endequation\endLWR@equationnormal%
9883 \csletcs{equation*}{LWR@equationnormalstar}%
9884 \csletcs{endequation*}{LWR@endequationnormalstar}%
9885 }

```

`\displaymathother`  
[complicated math objects](#)

Use when display math environments have complicated objects which will not work with MathJax or should not be included in HTML alt tags. Complicated contents are more likely to compile correctly.

```

9886 \newcommand*{\displaymathother}{%
9887 \boolfalse{mathjax}%
9888 \LetLtxMacro\displaymath\LWR@displaymathother%
9889 \LetLtxMacro\enddisplaymath\endLWR@displaymathother%
9890 \LetLtxMacro[\LWR@displaymathother%
9891 \LetLtxMacro\]\endLWR@displaymathother%
9892 \LetLtxMacro\equation\LWR@equationother%
9893 \LetLtxMacro\endequation\endLWR@equationother%
9894 \csletcs{equation*}{displaymath}%
9895 \csletcs{endequation*}{enddisplaymath}%
9896 }

```

```
9897 \end{warpHTML}
```

**for PRINT output:** 9898 \begin{warpprint}

Print-mode versions:

```

9899 \newcommand*{\displaymathnormal}{}
9900 \newcommand*{\displaymathother}{}

9901 \end{warpprint}

```

**for HTML output:** 9902 \begin{warpHTML}

## 80.7 AMS Math environments

### 80.7.1 Support macros

**Bool** `LWR@amsmultiline` True if processing a multiline environment.

To compensate for multiline-specific code, `LWR@amsmultiline` is used to add extra horizontal space in `\LWR@htmlmathlabel` if is used in an `amsmath` environment which is not a multiline environment and not an equation.

```

9903 \newbool{LWR@amsmultiline}
9904 \boolfalse{LWR@amsmultiline}

```

`\LWR@htmlmathlabel`  $\{\langle label \rangle\}$

`lwarp` points `\ltx@label` here. This is used by `\label` when inside a  $\LaTeX$  AMS math environment's math display environment.

`\LWR@origltx@label` points to the  $\LaTeX$  original, modified by `lwarp`, then by `amsmath`, then by `cleveref`.

```
9905 \newcommand*\LWR@htmlmathlabel[1]{%
9906 \LWR@traceinfo{\LWR@htmlmathlabelb #1}%
```

If `mathjax` or `FormatWP`, print the  $\LaTeX$  expression:

```
9907 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
9908 {%
```

The combined  $\LaTeX$  & HTML label is printed in a `\text` field:

```
9909 \text{%
```

Shift the label over to the right side of the environment to avoid over-printing the math:

```
9910 \ifbool{\LWR@amsmultiline}{\hspace*\totwidth}}%
```

Temporarily end the HTML comment, insert the  $\LaTeX$  & HTML label, then resume the HTML comment. `\@firstofone` is required to remove extra braces introduced by the `amsmath` package.)

```
9911 \LWR@htmlclosecomment%
9912 \LWR@origltx@label{#1}%
9913 \LWR@htmlopencomment%
9914 }% text
9915 }% mathjax
9916 {%
9917 \LWR@origltx@label{#1}%
9918 }%
9919 }
```

`\LWR@beginhideamsmath` Starts hiding  $\LaTeX$  math inside an HTML comment.

```
9920 \newcommand*\LWR@beginhideamsmath{%
9921 \LWR@stoppars
9922 \LWR@origtilde\LWR@orignewline
9923 \LWR@htmlopencomment
9924
9925 \begingroup
9926 \LWR@restoreorigformatting
9927 }
```

`\LWR@endhideamsmath` Ends hiding  $\LaTeX$  math inside an HTML comment.

```

9928 \newcommand*{\LWR@endhideamsmath}{
9929 \endgroup
9930
9931 \LWR@htmlclosecomment
9932 \LWR@orignewline
9933 \LWR@startpars
9934 }

```

### 80.7.2 Environment patches

The `amsmath` environments already collect their contents in `\@envbody` for further processing. `eqnarray` is not an  $\mathcal{AMS}$  package, and thus requires special handling.

For `svg math`: Each environment is encapsulated inside a `lateximage` environment, along with a special optional argument of `\LWR@amsmathbody` or `\LWR@amsmathbodynumbered` telling `lateximage` to use as the `HTML <alt>` tag the environment's contents which were automatically captured by the  $\mathcal{AMS}$  environment.

For `MATHJAX`: Each environment is syched with  $\text{\LaTeX}$ 's equation numbers, typeset with  $\text{\LaTeX}$  inside an `HTML` comment, then printed to `HTML` output for `MATHJAX` to process.

Env `eqnarray` This environment is not an  $\mathcal{AMS}$  environment and thus its body is not automatically captured, so the `environ` package is used to capture the environment into `\BODY`.

```

9935 \let\LWR@origeqnarray\eqnarray
9936 \let\LWR@origendeqnarray\endeqnarray

```

To remember whether the starred environment was used, and thus whether to number the equations:

```

9937 \newbool{\LWR@numbereqnarray}
9938 \booltrue{\LWR@numbereqnarray}

```

Common code used by `eqnarray` and `Beqnarray` (from `fancybox`):

```

9939 \newcommand{\LWR@eqnarrayfactor}{%

```

If `mathjax` or `FormatWP`, print the  $\text{\LaTeX}$  expression:

```

9940 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
9941 {%

```

If `MATHJAX`, the environment contents (the `\BODY`) are executed in a `HTML` comment to trigger the correct equation number increment (if not starred), then are included verbatim in the output for `MATHJAX` to interpret:

```

9942 \LWR@syncmathjax
9943 \boolfalse{\LWR@amsmultline}
9944 \ifbool{\LWR@numbereqnarray}
9945 {

```

If numbering the equations, execute a copy inside an HTML comment block:

```
9946 \LWR@beginhideamsmath
9947 \LWR@origeqnarray
9948 \BODY
9949 \LWR@origendeqnarray
9950 \LWR@endhideamsmath
```

Then print the (sanitized) contents to the output for MATHJAX to interpret:

```
9951 \LWR@addmathjax{eqnarray}{\BODY}
9952 }%
9953 {% not LWR@numbereqnarray
```

If not numbering equations, just create the contents for MATHJAX:

```
9954 \LWR@addmathjax{eqnarray*}{\BODY}
9955 }% LWR@numbereqnarray
9956 }% mathjax
9957 {% not mathjax
9958 \ifbool{LWR@numbereqnarray}
9959 {
```

For numbered svg equations, first create a latex image with an alt attribute containing sanitized copy of the source code:

```
9960 \begin{BlockClass}{displaymathnumbered}%
9961 \LWR@newautoidanchor%
9962 \booltrue{LWR@indisplaymathimage}%
9963 \begin{lateximage}[{\LWR@startingequationtag--\LWR@equationtag}
9964 \LWR@addmathjax{eqnarray}{\BODY}]
```

Support for xfakebold:

```
9965 \LWR@applyxfakebold%
```

Create the image contents using an actual eqnarray:

```
9966 \LWR@origeqnarray
9967 \BODY
9968 \LWR@origendeqnarray
9969 \end{lateximage}
9970 \end{BlockClass}
9971 }%
9972 {% not LWR@numbereqnarray
```

If not numbered, do the same, but an extra \nonumber seems to be required:

```
9973 \begin{BlockClass}{displaymath}
9974 \LWR@newautoidanchor%
9975 \booltrue{LWR@indisplaymathimage}%
9976 \begin{lateximage}[{\LWR@addmathjax{eqnarray*}{\BODY}]
```

Support for xfakebold:

```

9977 \LWR@applyxfakebold%

9978 \LWR@origeqnarray
9979 \BODY
9980 \nonumber
9981 \LWR@origendeqnarray
9982 \end{lateximage}
9983 \end{BlockClass}
9984 }% LWR@numbereqnarray
9985 }% not mathjax

```

Default to number equations in the future:

```

9986 \booltrue{LWR@numbereqnarray}
9987 }

```

eqnarray itself is made with a blank line before and after to force it to be on its own line:

```

9988 \RenewEnviron{eqnarray}
9989 {%
9990
9991 \LWR@eqnarrayfactor
9992
9993 }

```

The starred version is patched to turn off the numbering:

```

9994 \csgpreto{eqnarray*}{\boolfalse{LWR@numbereqnarray}}

9995 \end{warpHTML}

```

## 81 Lateximages

### 81.1 Description

Env lateximage A lateximage is a piece of the document which is typeset in L<sup>A</sup>T<sub>E</sub>X then included in the HTML output as an image. This is used for math if SVG math is chosen, and also for the picture, tikzpicture, and other environments.

Before typesetting the lateximage a large number of formatting, graphics, and symbols-related macros are temporarily restored to their print-mode meaning by \LWR@restoreorigformatting. (See section 79.)

A lateximage is typeset on its own PDF page inside an HTML comment which starts on the preceding page and ends on following page, and instructions are written to lateximage.txt for *lwarpmk* to extract the lateximage from the page of the PDF file

then generate an accompanying `.svg` file image file. Meanwhile, instructions to show this image are placed into the HTML file after the comment.

An HTML `<span>` is created to hold both the HTML comment, which will have the *pdftotext* conversion, and also the link to the final `.svg` image.

A L<sup>A</sup>T<sub>E</sub>X label is used to remember which PDF page has the image. A label is used because footnotes, endnotes, and pagenotes may cause the image to appear at a later time. The label is declared along with the image, and so it correctly remembers where the image finally ended up.

**HTML alt tag** The HTML `alt` tag is set to the L<sup>A</sup>T<sub>E</sub>X source for `svg` math, some chemistry expressions, and perhaps some other expressions which make sense for text copy/paste. In some other cases, the `alt` tag is set according to the package name.

When creating an `svg` math image, its `alt` tag may be set to the math expression, which may be hashed for image reuse. In the case of `\ensuremath` or after `\inlinemathother`, where the contents require a unique image for each instance of the same expression, the `alt` tag is set to `\mathimagename`, and the image is not reused.

This expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is “math image”, and it may be changed according to the document’s language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following `svg` math images.

For many packages, the output is placed inside a `lateximage` with an HTML `alt` tag set to the package name followed by `\packagediagramname`. For example:

```
(-xy- diagram)
```

This expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is “diagram”, and may it be changed according to the document’s language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following `lateximages`.

**SVG image font size** For the `lateximage` environment, the size of the math and text used in the `svg` image may be adjusted by setting `\LateximageFontSizeName` to a font size name — *without the backslash*, which defaults to:

```
\renewcommand{\LateximageFontSizeName}{normalsize}
```

For inline `svg` math, font size is instead controlled by `\LateximageFontScale`, which defaults to:

```
\newcommand*{\LateximageFontScale}{.75}
```

## 81.2 Support counters and macros

**for HTML output:** 9996 `\begin{warpHTML}`

Ctrl LWR@lateximagenumber Sequence the images.

```
9997 \newcounter{LWR@lateximagenumber}
```



```
9998 \setcounter{LWR@lateximagenumber}{0}
```

Ctrl LWR@lateximagedepth Do not create `\lateximage` inside of `\lateximage`.

```
9999 \newcounter{LWR@lateximagedepth}
10000 \setcounter{LWR@lateximagedepth}{0}
```

A few utility macros to write special characters:

```
10001 \edef\LWR@hashmark{\string#} % for use in \write
10002 \edef\LWR@percent{\@percentchar} % for use in \write
```

Ctrl LWR@LIpage Used to reference the PDF page number of a `lateximage` to be written into `<project>-images.txt`.


```
10003 \newcounter{LWR@LIpage}
```

```
10004 \end{warpHTML}
```

### 81.3 Font size

**for HTML & PRINT:** 10005 `\begin{warpall}`

`\LateximageFontSizeName` Declares how large to write text in `\lateximages`. The `.svg` file text size should blend well with the surrounding HTML text size.

 **no backslash** Do not include the leading backslash in the name.

```
10006 \newcommand*{\LateximageFontSizeName}{normalsize}
```

`\LateximageFontScale` Declares how large to scale inline SVG math images. The `.svg` file text size should blend well with the surrounding HTML text size. The default is `.75`, but it may be redefined as needed depending on the HTML font.

```
10007 \newcommand*{\LateximageFontScale}{.75}
```

```
10008 \end{warpall}
```

### 81.4 Sanitizing math expressions for HTML

**for HTML output:** 10009 `\begin{warpHTML}`

`\LWR@HTMLsanitize` `{<text>}`

Math expressions are converted to `lateximages`, and some math environments may contain `&`, `<`, or `>`, which should not be allowed inside an HTML `<alt>` tag, so must convert them to HTML entities.

Two versions follow, depending on expansion needs. There may be a better way...

```
10010 \newrobustcmd{\LWR@HTMLsanitize}[1]{%
```

Cancel French babel character handling, and fully expand the strings:

```
10011 \begingroup%
10012 \LWR@FBcancel%
10013 \fullexpandarg%
```

The &, <, and > may be interpreted by the browser:

```
10014 \protect\StrSubstitute{\detokenize{#1}}%
10015 {\detokenize{&}}{\detokenize{&}}[\LWR@strresult]%

10016 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
10017 {\detokenize{<}}{\detokenize{<}}[\LWR@strresult]%

10018 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
10019 {\detokenize{>}}{\detokenize{>}}[\LWR@strresult]%
```

The double quote occasionally causes problems.

```
10020 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
10021 {\detokenize{"}}{\detokenize{"}}[\LWR@strresult]%
```

MathJax allows expressions to be defined with `\newcommand`. These expressions would appear with ## for each argument, and each must be changed to a single #. This must be done after all the above changes. Attempting another conversion after this causes an error upon further expansion.

```
10022 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
10023 {\detokenize{##}}{\LWR@origpound}[\LWR@strresult]%

10024 \LWR@strresult%
10025 \endgroup%
10026 }
```

```
\LWR@HTMLsanitizeexpand {${text}$}
```

This version expands the argument before sanitizing it.

```
10027 \newrobustcmd{\LWR@HTMLsanitizeexpand}[1]{%
```

Cancel French babel character handling, and fully expand the strings:

```
10028 \begingroup%
10029 \LWR@FBcancel%
10030 \fullexpandarg%
```

The difference between this and `\LWR@HTMLsanitize` (without “expand”) is the following `\expandafter`:

```
10031 \protect\StrSubstitute{\detokenize\expandafter{#1}}%
10032 {\detokenize{&}}{\detokenize{&}}[\LWR@strresult]%

10033 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
10034 {\detokenize{<}}{\detokenize{<}}[\LWR@strresult]%

10035 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
10036 {\detokenize{>}}{\detokenize{>}}[\LWR@strresult]%

10037 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
10038 {\detokenize{"}}{\detokenize{"}}[\LWR@strresult]%
```

`\LWR@HTMLsanitizeexpand` is not used for defining new MathJax macros, so the `##` conversion is not needed here.

```
10039 \LWR@strresult%
10040 \endgroup%
10041 }
```

## 81.5 Equation numbers

**Ctrl** `LWR@startingequation` For use with `lateximage` and multi-line numbered equations. Remembers the next equation number so that it may be printed in the alt tag.

```
10042 \newcounter{LWR@startingequation}
10043
10044 \@ifundefined{chapter}
10045 {
10046 \renewcommand{\theLWR@startingequation}{%
10047 \arabic{LWR@startingequation}%
10048 }
10049 }
10050 {% chapter defined
10051 \renewcommand{\theLWR@startingequation}{%
10052 \ifnumcomp{\value{chapter}}{>}{0}{\arabic{chapter}.}%
10053 \arabic{LWR@startingequation}%
10054 }
10055 }
```

**Bool** `LWR@isstartingequation` True for the first equation tag, false for later tags in the same environment.

```
10056 \newbool{LWR@isstartingequation}
```

`\LWR@startingequationtag` Prints the starting equation number or tag.

```
10057 \let\LWR@startingequationtag\theLWR@startingequation
```

`\LWR@equationtag` Prints the ending equation number or tag.

This is reset by `lateximage`, may be temporarily overwritten by `\tag` calling `\LWR@remember tag`.

```
10058 \newcommand*{\LWR@equationtag}{}

```

Only if `svg math`, patch `\tag` after packages have loaded, in case someone else modified `\tag`.

```
10059 \AtBeginDocument{
10060
10061 \ifbool{mathjax}{}{% not mathjax

```

`\LWR@remembertag` `{\langle tag \rangle}`

For use inside the math environments while using `svg math`. Sets `\theLWR@startingequation` and `\theequation` to the given tag.

```
10062 \NewDocumentCommand{\LWR@remembertag}{m}{%
10063 \ifbool{LWR@isstartingequation}%
10064 {%
10065 \global\boolfalse{LWR@isstartingequation}%
10066 \xdef\LWR@startingequationtag{#1}%
10067 }{}%
10068 \xdef\LWR@equationtag{#1}%
10069 }%

10070 }% not mathjax
10071 }% AtBeginDocument

```

## 81.6 HTML alt tags

`\LWR@amsmathbody` `{\langle envname \rangle}` For use inside the optional argument to a `lateximage` to add the contents of a AMS math environment to the `<alt>` tag.

```
10072 \newcommand*{\LWR@amsmathbody}[1]
10073 {%
10074 \textbackslash\{begin\}\{#1\} % extra space
10075 \LWR@HTMLsanitizeexpand{\detokenize\expandafter{\the\@envbody}}%
10076 \textbackslash\{end\}\{#1\}%
10077 }

```

`\LWR@amsmathbodynumbered` `{\langle envname \rangle}` For use inside the optional argument to a `lateximage` to add the contents of a AMS math environment to the `alt` tag, prefixed by the equation numbers.

```
10078 \newcommand*{\LWR@amsmathbodynumbered}[1]
10079 {%
10080 \ifnumcomp{\value{LWR@startingequation}}{=}{\value{equation}}%
10081 {(\LWR@equationtag)}%

```

```

10082 {(\LWR@startingequationtag--\LWR@equationtag)} % extra space
10083 \LWR@amsmathbody{#1} % extra space
10084 }

```

## 81.7 lateximage environment

```
Env lateximage * [<2: <alt> tag>] [<3: add'l hashing>] [<4: css style>]
```

Typesets the contents and then renders the result as an SVG file. Star causes the image to be hashed for reuse.

The optional `<alt>` tag is included in the HTML code for use with copy/paste.

**image filename hashing** If starred, a hashed filename is used. If so, the hash is based on the `alt` tag and also the additional hashing argument.

This may be used to provide an expression with a simple `alt` tag but also enough additional information to provide a unique hash.

An example is when the expression is a complicated TEX expression, which would not copy/paste well. A simplified tag may be used, while the complicated expression is duplicated in the additional hashing argument.

Another example is when the expression is simple, but the image depends on options. These options may be decoded into text form and included in the additional hashing argument in order to make the hash unique according to the set of options, even if the simple `alt` tag is still the same.

```
File *_html.aux A new label is placed into the file *_html.aux:
```

```
\newlabel{LWRlateximage-<BaseJobname>-<number>}{<x>}{<y>}}
```

This is used to find the image in the PDF file, according to its name.

```
File *-images.txt A list of images to generate is created in <jobname>-images.txt. Each line has three pipe-delimited fields, containing the PDF page number from <jobname>_html.pdf, where the image is located, a boolean indicating whether the image is hashed, and the filename of the image. The last line has "end" in each field, and is used to detect an incomplete compile.
```

```

10085 \catcode'\$=\active%
10086
10087 \NewDocumentEnvironment{lateximage}{s O{(image)} O{} O{}}
10088 {%
10089 \LWR@traceinfo{lateximage: starting on \jobname.pdf page \arabic{page}}%
10090 \LWR@traceinfo{lateximage: entering depth is \arabic{LWR@lateximagedepth}}%

```

Nested lateximages remain one large lateximage:

```
10091 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
```

If nesting inside an already-existing lateximage, simply record one more level. *AMS* packages redefine `\addtocounter` to do nothing if inside a `\text`, so lower-level *TeX* macros are used for tracking nested lateximages.

```
10092 {%
10093 % \addtocounter{LWR@lateximagedepth}{1}%
10094 \global\advance\c@LWR@lateximagedepth 1\relax% Due to AmS \text macro.
10095 }%
```

Otherwise, this is the outer-most lateximage:

```
10096 {% start of outer-most lateximage
```

Remember the next equation number to be allocated, in case it must be printed in a multi-equation environment:

```
10097 \LWR@traceinfo{lateximage: starting outer-most lateximage}%
10098 \setcounter{LWR@startingequation}{\value{equation}}%
10099 \addtocounter{LWR@startingequation}{1}%
10100 \booltrue{LWR@isstartingequation}%
10101 \let\LWR@startingequationtag\theLWR@startingequation%
```

The default equation tag, unless overwritten by `\tag`:

```
10102 \let\LWR@equationtag\theequation%
```

Starting a new lateximage:

```
10103 \addtocounter{LWR@lateximagenumber}{1}%
10104 \LWR@traceinfo{lateximage: LWR@lateximagenumber is \arabic{LWR@lateximagenumber}}%
```

While inside a lateximage, locally do not use mathjax:

```
10105 \boolfalse{mathjax}%
```

Be sure that are doing a paragraph:

```
10106 \LWR@ensuredoingapar%
```

Next file:

```
10107 \addtocounter{LWR@externalfilecnt}{1}%
10108 \LWR@traceinfo{lateximage: LWR@externalfilecnt is \arabic{LWR@externalfilecnt}}%
```

Figure out what the next page number will be. `\setcounterpageref` assigns `LWR@LIpage` to the page number for the reference `LWR@lateximage-BaseJobname-XXX`:

```
10109 \setcounterpageref{LWR@LIpage}{%
10110 LWR@lateximage-\BaseJobname-\arabic{LWR@lateximagenumber}%
10111 }%
10112 \LWR@traceinfo{lateximage: LWR@LIpage is \arabic{LWR@LIpage}}%
```

Create an HTML span which will hold the comment which contains the *pdftotext* translation of the image's page, and also will hold the link to the .svg file:

```
10113 \LWR@htmltag{span\LWR@indentHTML%
10114 id="lateximage-\BaseJobname-\arabic{LWR@lateximagenumber}"\LWR@indentHTML
10115 class="lateximagesource"\LWR@orignewLine
10116 }%
```

Write instructions to the <ImagesDirectory>.txt file:

```
10117 \LWR@traceinfo{lateximage: about to write to \BaseJobname-images.txt}%
10118 \IfBooleanTF{#1}% starred
10119 {% hash
10120 \LWR@traceinfo{lateximage: hash true, adding %
10121 !\detokenize\expandafter{#2}!\detokenize\expandafter{#3}!}%
```

Compute and save the hashed file name for later use:

```
10122 \edef\LWR@hashedname{%
10123 \LWR@mdfive{\detokenize\expandafter{#2}-!-#3}%
10124 }%
10125 \LWR@traceinfo{lateximage: hash is \LWR@hashedname}%
```

Write the page, hashing, and hashed name:

```
10126 \immediate\write\LWR@lateximagesfile{%
10127 |\arabic{LWR@LPage}|true|\LWR@hashedname|%
10128 }%
10129 }% hash
10130 {% no hash
```

No hash, so write the page, no hashing, and the image number:

```
10131 \LWR@traceinfo{lateximage: hash false}%
10132 \immediate\write\LWR@lateximagesfile{%
10133 |\arabic{LWR@LPage}|false|\LWR@ImagesName\arabic{LWR@externalfilecnt}}%
10134 }%
10135 }% no hash
```

Place an open comment tag. This will hide any traces of the lateximage PDF page which were picked up by *pdftotext*.

```
10136 \LWR@traceinfo{lateximage: about to create open comment}%
10137 \LWR@htmlopencomment%
```

One level deeper. At this outer-most lateximage, it is known that this is not being used inside an  $\mathcal{AMS}$   $\text{\textbackslash text}$ , since the outer-most level will never be in math mode.

```
10138 \addtocounter{LWR@lateximagedepth}{1}%
```

Start the new PDF page:

```
10139 \LWR@traceinfo{lateximage: about to create a new page}%
10140 \LWR@orignewpage%
```

Typeset the image in a “standard” width page and font size:

```
10141 \LWR@traceinfo{lateximage: about to create minipage}%
10142 \LWR@print@minipage{6in}%
10143 \@nameuse{LWR@print@LateximageFontSizeName}%
```

Temporarily restore formatting to its PDF definitions: Do not produce HTML tags for \hspace, etc. inside a lateximage.

```
10144 \LWR@traceinfo{lateximage: about to temporarily restore formatting}%
10145 \LWR@restoreorigformatting%
```

Use full-page footnotes instead of minipage footnotes. These become HTML footnotes.

```
10146 \def\@mpfn{footnote}%
10147 \def\thempfn{\thefootnote}%
10148 \LetLtxMacro\@footnotetext\LWR@footnotetext%
```

Create the LWRlateximage<number> label:

```
10149 \LWR@traceinfo{lateximage: about to create label}%
10150 \LWR@orig@label{LWRlateximage-\BaseJobname-\arabic{LWR@lateximagenumber}}%
10151 \LWR@traceinfo{lateximage: finished creating the label}%
```

Enable print-mode math functions:

```
10152 \LetLtxMacro$\LWR@origdollar%
10153 \catcode'\$=3% math shift
10154 \LetLtxMacro\(\LWR@origopenparen%
10155 \LetLtxMacro\)\LWR@origcloseparen%
```

Only enable print-mode display math if are not already inside display math:

```
10156 \ifbool{LWR@indisplaymathimage}{}{% not in display math
10157 \LetLtxMacro\[\LWR@origopenbracket%
10158 \LetLtxMacro\]\LWR@origclosebracket%
10159 \let\equation\LWR@origequation%
10160 \let\endequation\LWR@origendequation%
10161 \csletcs{equation*}{LWR@origequation*}%
10162 \csletcs{endequation*}{LWR@origendequation*}%
10163 }% not in display math
```

For chemformula:

```
10164 \LetLtxMacro\LWR@newsingledollar$%
10165 \LetLtxMacro\LWR@newsingledollar$% syntax highlighting
```

```
10166 }% end of outer-most lateximage
10167 \LWR@traceinfo{lateximage: finished start of environment}%
10168 }% end of \begin{lateximage}
```

`\endlateximage` When the environment closes:



```
10169 {% start of \end{lateximage}
10170 \LWR@traceinfo{lateximage: starting end of lateximage}%
```

Nested more than one deep?

```
10171 \LWR@traceinfo{lateximage: internal depth was \arabic{LWR@lateximagedepth}}%
10172 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{1}%
```

If nesting inside an already existing lateximage, simply record one less level. Uses a lower-level T<sub>E</sub>X macro due to  $\mathcal{AMS}$  \text change of \addtocounter.

```
10173 {%
10174 \LWR@traceinfo{lateximage: unnesting}%
10175 \global\advance\c@LWR@lateximagedepth -1\relax%
10176 }%
```

If this is the outer-most lateximage:

```
10177 {% end of outer-most lateximage
```

Finish the lateximage minipage and start a new PDF page:

```
10178 \LWR@traceinfo{lateximage: ending outer-most lateximage}%
10179 \endLWR@print@minipage%
10180 \LWR@orignewpage%
```

Close the HTML comment which encapsulated any traces of the lateximage picked up by *pdftotext*:

```
10181 \LWR@print@vspace*{.5\baselineskip}%
10182 \LWR@htmlclosecomment%
10183 \LWR@traceinfo{lateximage: The page after the image is \arabic{page}}%
```

Create a link to the lateximage, allowing its natural height:

```
10184 \IfBooleanTF{#1}% starred
10185 {% hash
10186 \LWR@subinlineimage[#2]{lateximage}%
10187 {%
10188 \LWR@ImagesDirectory\OSPathSymbol%
10189 \LWR@print@mbox{\LWR@hashedname}%
10190 }{svg}{#4}%
10191 }% hash
10192 {% no hash
10193 \LWR@subinlineimage[#2]{lateximage}%
10194 {%
10195 \LWR@ImagesDirectory\OSPathSymbol%
10196 \LWR@print@mbox{\LWR@ImagesName\theLWR@externalfilecnt}%
10197 }{svg}{#4}%
10198 }% no hash
```

Be sure that are doing a paragraph:

```
10199 \LWR@ensuredoingapar%
```

Close the HTML span which has the *pdftotext* comment and also the link to the .svg image:

```
10200 \LWR@htmltag{/span}%
10201 \ifbool{HTMLDebugComments}{%
10202 \LWR@htmlcomment{End of lateximage}%
10203 }{}
```

Undo one lateximage level. This is not inside an  $\mathcal{AMS}$  \text, so regular \addtocounter may be used here.

```
10204 \addtocounter{LWR@lateximagedepth}{-1}%
10205 }% end of outer-most lateximage
10206 \LWR@traceinfo{lateximage: exiting depth is \arabic{LWR@lateximagedepth}}%
10207 \LWR@traceinfo{lateximage: done}%
10208 }%
10209 \catcode'\$=3% math shift
10210 \end{warpHTML}
```

**for PRINT output:** 10211 \begin{warpprint}

Env lateximage [ $\langle$ alt *tag* $\rangle$ ] [ $\langle$ css *style* $\rangle$ ]

varwidth is used to create a box of the natural width of its contents.

```
10212 \NewDocumentEnvironment{lateximage}{s o o o}
10213 {\begin{varwidth}[b]{\linewidth}}
10214 {\end{varwidth}}
```

```
10215 \end{warpprint}
```

## 82 center, flushleft, flushright

**for HTML output:** 10216 \begin{warpHTML}

Env center Replace center functionality with css tags:

```
10217 \renewenvironment*{center}
10218 {
10219 \LWR@forcenewpage
10220 \ifbool{FormatWP}
10221 {\BlockClass[\LWR@print@mbbox{text-align:center}]{center}}
10222 {\BlockClass{center}}
10223 }
10224 {\endBlockClass}
```

Env flushright

```

10225 \renewenvironment*{flushright}
10226 {
10227 \LWR@forcenewpage
10228 \ifbool{FormatWP}
10229 {\BlockClass[\LWR@print@mbx{text-align:right}]{flushright}}
10230 {\BlockClass{flushright}}
10231 }
10232 {\endBlockClass}

```

Env flushleft

```

10233 \renewenvironment*{flushleft}
10234 {
10235 \LWR@forcenewpage
10236 \ifbool{FormatWP}
10237 {\BlockClass[\LWR@print@mbx{text-align:left}]{flushleft}}
10238 {\BlockClass{flushleft}}
10239 }
10240 {\endBlockClass}

```

`\centering`, `\raggedleft`, and `\raggedright` usually have no effect on the HTML output, but they may be used to compare with the next token to identify their use at the start of a float. See `\LWR@floatalignment`.

`\centering`

```

10241 \newcommand*{\LWR@HTML@centering}{%
10242 \ifbool{HTMLDebugComments}{%
10243 \LWR@htmlcomment{centering}%
10244 }}{%
10245 }
10246 \LWR@formatted{centering}

```

`\raggedleft`

```

10247 \newcommand*{\LWR@HTML@raggedleft}{%
10248 \ifbool{HTMLDebugComments}{%
10249 \LWR@htmlcomment{raggedleft}%
10250 }}{%
10251 }
10252 \LWR@formatted{raggedleft}

```

`\raggedright`

```

10253 \newcommand*{\LWR@HTML@raggedright}{%
10254 \ifbool{HTMLDebugComments}{%
10255 \LWR@htmlcomment{raggedright}%
10256 }}{%
10257 }
10258 \LWR@formatted{raggedright}

```

```
\leftline {<text>}
```

```
10259 \renewcommand{\leftline}[1]{\begin{flushleft}#1\end{flushleft}}
```

```
\centerline {<text>}
```

```
10260 \renewcommand{\centerline}[1]{\begin{center}#1\end{center}}
```

```
\rightline {<text>}
```

```
10261 \renewcommand{\rightline}[1]{\begin{flushright}#1\end{flushright}}
```

```
10262 \end{warpHTML}
```

## 83 Preloaded packages

**for HTML output:** 10263 \begin{warpHTML}

If the given package was loaded before or by lwarp, load the lwarp version as well.

```
\LWR@PreloadedPackage {<packagename>}
```

```
10264 \newcommand*\LWR@PreloadedPackage}[1]{%
10265 \ifpackageloaded{#1}%
10266 {%
10267 \AtBeginDocument{
10268 \LWR@origRequirePackage{lwarp-#1}%
10269 }
10270 }%
10271 }%
10272 }
```

If `inputtrc` was loaded before lwarp, as is usually done, explicitly load the lwarp patches now:

```
10273 \LWR@PreloadedPackage{inputtrc}
```

If `textcomp` was loaded before lwarp, perhaps as part of the font-related packages, explicitly load the lwarp patches now:

```
10274 \LWR@PreloadedPackage{textcomp}
```

If `xunicode` was loaded before lwarp, perhaps as part of the font-related packages, explicitly load the lwarp patches now:

```
10275 \LWR@PreloadedPackage{xunicode}
```

If `graphics` or `graphicx` were loaded before `lwarp`, perhaps by `xunicode`, explicitly load the `lwarp` patches now:

```
10276 \LWR@PreloadedPackage{graphics}
10277 \LWR@PreloadedPackage{graphicx}
```

`ulem` may be preloaded by `ctex`, `ctexart`, and related classes.

```
10278 \LWR@PreloadedPackage{ulem}
```

`xetexko-vertical` may be preloaded by `xetexko`.

```
10279 \LWR@PreloadedPackage{xetexko-vertical}
```

`geometry` is preloaded by `lwarp`, and perhaps by various classes.

```
10280 \LWR@PreloadedPackage{geometry}
```

`plext` is preloaded by some CJK classes.

```
10281 \LWR@PreloadedPackage{plext}
```

`stfloats` is preloaded by `ltj*` classes.

```
10282 \LWR@PreloadedPackage{stfloats}
```

`lltjtext` is preloaded by `ltj*` classes.


```
10283 \LWR@PreloadedPackage{lltjtext}
```

```
10284 \end{warpHTML}
```


## 84 siunitx

`Pkg siunitx` The `lwarp` core passes a few options to `siunitx`.

**fractions** Due to *pdftotext* limitations, fraction output is replaced by symbol output for `per-mode` and `quotient-mode`.

 **math mode required** Some units will require that the expression be placed inside math mode.

**NOTE:** As of this writing, the `siunitx` extension for `MATHJAX` is not currently hosted at any public CDN, thus `siunitx` is not usable with `MATHJAX` unless a local copy of this extension is created first. See `\MathJaxFileName` to select a custom `MathJax` script.

 **tabular** Tabular `S` columns are rendered as simple `c` columns, and tabular `s` columns are not supported. These may be replaced by `c` columns with each cell contained in `\num` or `\si`.

**for HTML output:** `10285 \begin{warpHTML}`

## Options for siunitx:

```


10286 \newrobustcmd{\LWR@siunitx@textcelsius}{\HTMLentity{deg}C}
10287 \newrobustcmd{\LWR@siunitx@textdegree}{\HTMLentity{deg}}
10288 \newrobustcmd{\LWR@siunitx@textprime}{\HTMLunicode{2032}}
10289 \newrobustcmd{\LWR@siunitx@textdblprime}{\HTMLunicode{2033}}
10290 \newrobustcmd{\LWR@siunitx@textplanckbar}{\text{\textit{\HTMLunicode{0127}}}}
10291
10292 \appto\LWR@restoreorigformatting{%
10293 \renewrobustcmd{\LWR@siunitx@textcelsius}{\text{\ensuremath{^\circ}C}}%
10294 \renewrobustcmd{\LWR@siunitx@textdegree}{\text{\ensuremath{^\circ}}}%
10295 \renewrobustcmd{\LWR@siunitx@textprime}{\text{\ensuremath{^\prime}}}%
10296 \renewrobustcmd{\LWR@siunitx@textdblprime}{\text{\ensuremath{^\prime\prime}}}%
10297 \renewrobustcmd{\LWR@siunitx@textplanckbar}{\text{\ensuremath{\hbar}}}%
10298 }
10299
10300 \PassOptionsToPackage{
10301 detect-mode=true,
10302 per-mode=symbol,% fraction is not seen by pdftotext
10303 text-celsius = {\LWR@siunitx@textcelsius},
10304 text-degree = {\LWR@siunitx@textdegree},
10305 text-arcminute = {\LWR@siunitx@textprime} ,
10306 text-arcsecond = {\LWR@siunitx@textdblprime} ,
10307 }{siunitx}

10308 \end{warpHTML}

```

## 85 Graphics print-mode modifications

### 85.1 General limitations

 **scale** Avoid using the `\includegraphics scale` option. Change:

```
\includegraphics[scale=<xx>]{...}
```

to:

```
\includegraphics[width=<yy>\linewidth]{...}
```

**`\includegraphics` file formats** For `\includegraphics` with `.pdf` or `.eps` files, the user must provide a `.pdf` or `.eps` image file for use in print mode, and also a `.svg`, `.png`, or `.jpg` version of the same image for use in HTML.

```
\includegraphics{filename} % print:.pdf/.eps HTML:.svg, etc.
```

For print output, `lwarp` will automatically choose the `.pdf` or `.eps` format if available, or some other format otherwise. For HTML, one of the other formats is used instead.

If a `.pdf` or `.eps` image is referred to with its file extension, the extension will be changed to `.svg` for HTML:

```
\includegraphics{filename.pdf} % uses .svg in html
\includegraphics{filename.eps} % uses .svg in html
```

Prog `pdftocairo` To convert a PDF image to SVG, use the utility *pdftocairo*:  
**PDF to SVG**

Enter ⇒ **`pdftocairo -svg filename.pdf`**

Prog `lwarpmk pdftosvg` For a large number of images, use *lwarpmk*:

Enter ⇒ **`lwarpmk pdftosvg *.pdf`** (or a list of filenames)

Prog `lwarpmk epstopdf` For EPS images converted to PDF using the package *epstopdf*, use

Prog `epstopdf`  
**epstopdf package**

Enter ⇒ **`lwarpmk pdftosvg *.PDF`**

to convert to SVG images.

**DVI latex** When using DVI *latex*, it is necessary to convert EPS to PDF and then to SVG:

Enter ⇒ **`lwarpmk epstopdf *.eps`** (or a list of filenames)

Enter ⇒ **`lwarpmk pdftosvg *.pdf`** (or a list of filenames)

**PNG and JPG** For PNG or JPG while using *pdflatex*, *lualatex*, or *xelatex*, the same file may be used in both print or HTML versions, and may be used with a file extension, but will also be used without the file extension if it is the only file of its base name.

**GIF** GIF files may be used for HTML, but another format must also be provided for print output.

**file extension priorities** If a file extension is not used, for HTML the file extension priorities are: SVG, GIF, PNG, then JPG.

⚠ **graphics vs. graphicx** If using the older *graphics* syntax, use both optional arguments for `\includegraphics`. A single optional parameter is interpreted as the newer *graphicx* syntax. Note that viewports are not supported by *lwarp* — the entire image will be shown.

⚠ **viewport**

⚠ **viewport units**


For `\includegraphics`, avoid `px` and `%` units for width and height, or enclose them inside `warpHTML` environments. For font-proportional image sizes, use `ex` or `em`. For fixed-sized images, use `cm`, `mm`, `in`, `pt`, or `pc`. Use the keys `width=.5\linewidth`, or similar for `\textwidth` or `\textheight` to give fixed-sized images proportional to a 6 by 9 inch text area. Do not use the `scale` option, since it is not well supported by HTML browsers.

**options** `\includegraphics` accepts `width` and `height`, `origin`, `rotate` and `scale`, plus new `class` and `alt` keys.

**HTML class** With HTML output, `\includegraphics` accepts an optional `class=xyz` keyval combination, and if this is given then the HTML output will include that class for the image. The class is ignored for print output.

**HTML alt tags** Likewise, the `\includegraphics alt` key adds an HTML `alt` tag to an image, and is ignored for print output. If not assigned, each image is given an `alt` tag of “(image)”.

**\rotatebox** `\rotatebox` accepts the optional `origin` key.

 **browser support** `\rotatebox`, `\scalebox`, and `\reflectbox` depend on modern browser support. The CSS3 standard declares that when an object is transformed the whitespace which they occupied is preserved, unlike L<sup>A</sup>T<sub>E</sub>X, so expect some ugly results for scaling and rotating.

## 85.2 Print-mode modifications

**for PRINT output:** For print output, accept and then discard the new class key:

```
10309 \begin{warpprint}
10310 \define@key{Gin}{class}{}
10311 \define@key{Gin}{alt}{}

```

Print-mode additions for the `overpic` package. See section 352 for the HTML version.

```
10312 \AtBeginDocument{
10313 \ifpackageloaded{overpic}{
10314 \newcommand*{\overpicfontsize}{12}
10315 \newcommand*{\overpicfontskip}{14}
10316 }{}
10317 }
10318 \end{warpprint}

```

## 86 xcolor boxes

**Pkg** `xcolor` A few new definitions are provided for enhanced HTML colored boxes, and `\fcolorbox` is slightly modified. Print-mode version are also provided.

Print-mode versions of new `xcolor` definitions. These are defined inside `warppall` because they are also used for HTML while inside a `lateximage`. They are defined `\AtBeginDocument` so that the `xcolor` originals may first be loaded and saved for reuse.

The framed versions are modified to allow a background color of none, in which case only the frame is drawn, allowing the background page color to show.

**for HTML & PRINT:** 10319 `\begin{warppall}`

After `xparse` may have been loaded ...

```
10320 \AtBeginDocument{

```

... and *only* if `xcolor` was loaded:

```
10321 \ifpackageloaded{xcolor}{
10322 \LWR@traceinfo{patching xcolor}

```

The print version:



`\colorboxBlock` `\colorboxBlock` is the same as `\colorbox`:

```
10323 \LetLtxMacro\colorboxBlock\colorbox
```

The original definition is reused by the new versions:

```
10324 \LetLtxMacro\LWR@orig@print@fcolorbox\colorbox
```

`\fcolorbox` [*framemodel*] [*framecolor*] [*boxmodel*] [*boxcolor*] [*text*]

In print mode, `\fcolorbox` is modified to accept a background color of none.

(`\fcolorbox` is particular about its optional arguments, thus the elaborate combinations of `\ifthenelse`.)

```
10325 \newsavebox{\LWR@colorminipagebox}
10326
10327 \NewDocumentCommand{\LWR@print@fcolorbox}{o m o m +m}{%
10328 \LWR@traceinfo{\LWR@print@fcolorbox #2 #4}%
```

Pre-load the contents into an LR box so that they can be used inside a `\fcolorbox`:

```
10329 \begin{lrbox}{\LWR@colorminipagebox}%
10330 #5%
10331 \end{lrbox}%
```

Sort out the various optional arguments and the background color of none. In each case, the LRbox is placed inside a `\fcolorbox`.

The current color is remembered, then set to the frame, then the current color is used for the contents.

```
10332 \ifstrequal{#4}{none}%
10333 {% #4 none
10334 \LWR@traceinfo{background is none}%
10335 {% scope the \colorlet
10336 \colorlet{\LWR@currentcolor}{.}%
10337 \color{#2}%
10338 \fbox{%
10339 \color{\LWR@currentcolor}%
10340 \usebox{\LWR@colorminipagebox}%
10341 }% fbox
10342 }% colorlet
10343 }% #4 none
10344 {% #4 not none
10345 \LWR@traceinfo{background not none}%
10346 \IfValueTF{#1}%
10347 {%
10348 \IfValueTF{#3}%
10349 {\LWR@orig@print@fcolorbox[#1][#2][#3][#4]{\usebox{\LWR@colorminipagebox}}}%
10350 {\LWR@orig@print@fcolorbox[#1][#2][#4]{\usebox{\LWR@colorminipagebox}}}%
10351 }%
10352 {% no value #1
10353 \IfValueTF{#3}%
```

```

10354 {\LWR@orig@print@fcolorbox{#2}[#3][#4]{\usebox{\LWR@colorminipagebox}}}%
10355 {\LWR@orig@print@fcolorbox{#2}[#4]{\usebox{\LWR@colorminipagebox}}}%
10356 }% no value #1
10357 }% #4 not none
10358 \LWR@traceinfo{\LWR@print@fcolorbox done}%
10359 }
10360
10361 \renewcommand*{\fcolorbox}{\LWR@print@fcolorbox}

```

`\fcolorboxBlock` [*framemodel*] [*framecolor*] [*boxmodel*] [*boxcolor*] [*text*]

In print mode, `\fcolorboxBlock` is the same as `\fcolorbox`.

```

10362 \newcommand*{\LWR@print@fcolorboxBlock}{\LWR@print@fcolorbox}
10363 \newcommand*{\fcolorboxBlock}{\LWR@print@fcolorboxBlock}

```

Env `fcolorminipage` [*1:framemodel*] [*2:framecolor*] [*3:boxmodel*] [*4:boxcolor*] [*5:align*] [*6:height*] [*7:inner-align*] [*8:width*]

In print mode, becomes a `\fcolorbox` containing a minipage:

```

10364 \NewDocumentEnvironment{\LWR@print@fcolorminipage}{o m o m O{c} O{ } o m}
10365 {%
10366 \LWR@traceinfo{*** fcolorminipage: #2 #4 #8}%

```

Pre-load the contents into an LR box so that they can be used inside a `\fcolorbox`:

```

10367 \begin{lrbox}{\LWR@colorminipagebox}%

```

If inner alignment is not given, use the outer alignment instead:

```

10368 \IfValueTF{#7}%
10369 {\begin{minipage}[#5][#6][#7]{#8}}%
10370 {\begin{minipage}[#5][#6][#5]{#8}}%
10371 }%
10372 {%
10373 \end{minipage}%
10374 \end{lrbox}%
10375 \LWR@traceinfo{*** starting end fcolorminipage #1 #2 #3 #4 #8}%

```

Sort out the various optional arguments and the background color of none. In each case, the LRbox is placed inside a `\fcolorbox`.

The current color is remembered, then set to the frame, then the current color is used for the contents.

```

10376 \ifstrequal{#4}{none}%
10377 {% #4 none
10378 {% scope the \colorlet
10379 \colorlet{\LWR@currentcolor}{.}%
10380 \color{#2}%
10381 \fbox{%
10382 \color{\LWR@currentcolor}%

```

```

10383 \usebox{\LWR@colorminipagebox}%
10384 }% fbox
10385 }% colorlet
10386 }% #4 none
10387 {% #4 not none
10388 \IfValueTF{#1}%
10389 {%
10390 \IfValueTF{#3}%
10391 {\LWR@orig@print@fcolorbox[#1][#2][#3]{#4}{\usebox{\LWR@colorminipagebox}}}%
10392 {\LWR@orig@print@fcolorbox[#1][#2]{#4}{\usebox{\LWR@colorminipagebox}}}%
10393 }%
10394 {% no value #1
10395 \IfValueTF{#3}%
10396 {\LWR@orig@print@fcolorbox{#2}[#3]{#4}{\usebox{\LWR@colorminipagebox}}}%
10397 {\LWR@orig@print@fcolorbox{#2}{#4}{\usebox{\LWR@colorminipagebox}}}%
10398 }% no value #1
10399 }% #4 not none
10400 \LWR@traceinfo{*** finished end fcolorminipage}%
10401 }
10402
10403 \newenvironment*{fcolorminipage}
10404 {\LWR@print@fcolorminipage}
10405 {\endLWR@print@fcolorminipage}

10406 \LWR@traceinfo{xcolor patches done}
10407 }{}% xcolor loaded
10408 }% AtBeginDocument

10409 \end{warppall}

```

## 87 chemmacros environments

`\makepolymerdelims` and redox reactions must be enclosed in a `lateximage` during HTML output. These environments are provided here in print mode, and in the `chemmacros` code in HTML mode, as a high-level semantic syntax which automatically embeds the contents in a `lateximage` with an appropriate `alt` tag.

**for PRINT output:** 10410 `\begin{warpprint}`

```

10411 \AtBeginDocument{
10412 \@ifpackageloaded{chemmacros}{

```

Env `polymerdelims`

```

10413 \DeclareDocumentEnvironment{polymerdelims}{}
10414 {}{}

```

Env `redoxreaction` `{\langle space above \rangle}{\langle space below \rangle}`

For print output, extra space is include above and below the image, and a `lateximage` is not necessary. This extra space must be enforced, even inside a float, so zero-width rules are used.

For the HTML version, see section 168.4.

```

10415 \DeclareDocumentEnvironment{redoxreaction}{m m}
10416 {\rule{0pt}{#1}}{\rule[-#2]{0pt}{#2}}


10417 }{}% chemmacros
10418 }% AtBeginDocument

10419 \end{warpprint}

```

## 88 cleveref

Pkg `cleveref` `cleveref` package is used as-is with minor patches.

 **cleveref page numbers** `cleveref` and `varioref` are supported, but printed page numbers do not map to HTML, so a section name or a text phrase are used for `\cpageref` and `\cpagerefrange`. This phrase includes `\cpagerefFor`, which defaults to “for”.

Ex:

```

\cpageref{tab:first,tab:second}
in html becomes:
“pages for table 4.1 and for table 4.2”

```

See `\cpagerefFor` at page 541 to redefine the message which is printed for page number references.

**loading order** `cleveref` and the following associated macro patches are automatically preloaded at the end of the preamble via `\AtEndPreamble` and `\AfterEndPreamble`. This is done because the HTML conversion requires `cleveref`. The user’s document may not require `cleveref`, thus the user may never explicitly load it, so during HTML output `lwarp` loads it last. If the user’s document preamble uses `cleveref` options, or functions such as `\crefname`, then `cleveref` may be loaded in the user’s preamble near the end, and `lwarp`’s additional loading of `cleveref` will have no effect.

Table 12 on page 463 shows the data structure of the label/reference system as revised by `lwarp` and `cleveref`.

A few patches allow `cleveref` to work as-is:

**for HTML output:** 10420 `\begin{warppHTML}`

`\AtEndPreamble` forces `cleveref` to be loaded last:

```

10421 \AtEndPreamble{
10422 \RequirePackage{cleveref}
10423 }

```

The following patches are applied after `cleveref` has loaded, and after `\AtBeginDocument`. Print-mode versions are not required since they all come down to `\ref` eventually, and `\ref` has a print-mode version.

```
10424 \AfterEndPreamble{
10425 \LWR@traceinfo{Patching cleveref.}
```

```
\@@@setcref {<kindofref>} {<label>}
```

`\@templabel` becomes the section number.

```
10426 \def\LWR@orig@@@setcref#1#2{\cref@getlabel{#2}{\@templabel}#1{\@templabel}{}}%
10427
10428 \ifdefequal{\@@@setcref}{\LWR@orig@@@setcref}{% before v0.21
10429 \renewcommand*\@@@setcref}[2]{#1{\ref{#2}}{}}
10430 }{
10431 \ifdefequal{\@@@setcref}{\LWR@orig@@@setcref}{% as of v0.21
10432 \renewcommand*\@@@setcref}[2]{#1{\ref{#2}}{}}
10433 }{
10434 \PackageWarning{lwarp-cleveref}{
10435 Unknown version of cleveref.
10436 \protect\cref\space will fail.
10437 }%
10438 }
10439 }
```

```
\@@@setcrefrange {<text>} {<label>} {<label>}
```

```
10440 \def\LWR@orig@@@setcrefrange#1#2#3{%
10441 \cref@getlabel{#2}{\@labela}%
10442 \cref@getlabel{#3}{\@labelb}%
10443 #1{\@labela}{\@labelb}{}}}%
10444
10445 \ifdefequal{\@@@setcrefrange}{\LWR@orig@@@setcrefrange}{
10446 \renewcommand{\@@@setcrefrange}[3]{%
10447 #1{\ref{#2}}{\ref{#3}}{}}}%
10448 }
10449 }{
10450 \ifdefequal{\@@@setcrefrange}{\LWR@orig@@@setcrefrange}{
10451 \renewcommand{\@@@setcrefrange}[3]{%
10452 #1{\ref{#2}}{\ref{#3}}{}}}%
10453 }
10454 }{
10455 \PackageWarning{lwarp-cleveref}{
10456 Unknown version of cleveref.
10457 \protect\crefrange\space will fail.
10458 }
10459 }
10460 }
10461 }
```

`\cpagerefFor` Redefinable word between “page(s)” and the page numbers.

```
10462 \newcommand*{\cpagerefFor}{for}
```

`\@@@setcpageref {<typeofref>} {<label>}`, where `typeofref` is “page” or “pages”

```
10463 \def\LWR@orig@@setcpageref#1#2{% before v0.21
10464 \cref@getpageref{#2}{\@temppage}#1{\@temppage}{}}%
10465
10466 \def\LWR@orig@@@setcpageref#1#2{% as of v0.21
10467 \cpageref@getlabel{#2}{\@temppage}#1{\@temppage}{}}%
10468
10469 \ifdefequal{\@@setcpageref}{\LWR@orig@@setcpageref}{
10470 \renewcommand*{\@@setcpageref}[2]{%
10471 #1{\cpagerefFor\ \cref{#2}}{}}%
10472 }
10473 }{
10474 \ifdefequal{\@@@setcpageref}{\LWR@orig@@@setcpageref}{
10475 \renewcommand*{\@@@setcpageref}[2]{%
10476 #1{\cpagerefFor\ \cref{#2}}{}}%
10477 }
10478 }
10479 {
10480 \PackageWarning{lwarp-cleveref}{
10481 Unknown version of cleveref.
10482 \protect\cpageref\space will fail.
10483 }
10484 }
10485 }

10486 \def\LWR@orig@@setcpagerefrange#1#2#3{% before v0.21
10487 \cref@getpageref{#2}{\@pagea}%
10488 \cref@getpageref{#3}{\@pageb}%
10489 #1{\@pagea}{\@pageb}{}}%
10490
10491 \def\LWR@orig@@@setcpagerefrange#1#2#3{% as of v0.21
10492 \cpageref@getlabel{#2}{\@pagea}%
10493 \cpageref@getlabel{#3}{\@pageb}%
10494 #1{\@pagea}{\@pageb}{}}%
10495
10496 \ifdefequal{\@@setcpagerefrange}{\LWR@orig@@setcpagerefrange}{
10497 \renewcommand*{\@@setcpagerefrange}[3]{%
10498 #1{\cpagerefFor\ \cref{#2}}{\cref{#3}}{}}%
10499 }
10500 }{
10501 \ifdefequal{\@@@setcpagerefrange}{\LWR@orig@@@setcpagerefrange}{
10502 \renewcommand*{\@@@setcpagerefrange}[3]{%
10503 #1{\cpagerefFor\ \cref{#2}}{\cref{#3}}{}}%
10504 }
10505 }
10506 {
10507 \PackageWarning{lwarp-cleveref}{
10508 Unknown version of cleveref.
10509 \protect\cpagerefrange\space will fail.
10510 }
10511 }
10512 }
```

```
10513
10514 }% AfterEndPreamble
```

Remember and patch some label-related definitions. These will be further encased and patched by other packages later.

`\label` and `\pageref` do NOT change their behavior according to print or HTML output, and thus do not use the `\LWR@formatted` system.

```
10515 \LetLtxMacro\LWR@orig@label\label
10516 \RenewDocumentCommand{\label}{}{\LWR@new@label}
10517
10518 \LetLtxMacro\LWR@orig@pageref\pageref
10519 \RenewDocumentCommand{\pageref}{}{\LWR@new@pageref}
10520 \end{warpHTML}
```

## 89 picture environment

Env `picture` The picture environment is enclosed inside a `\lateximage`.

for HTML output: 10521 `\begin{warpHTML}`


Env `picture`

```
10522 \BeforeBeginEnvironment{picture}{\begin{lateximage}[(picture)]}
10523
10524 \AfterEndEnvironment{picture}{\end{lateximage}}

10525 \end{warpHTML}
```





## 90 Minipages and Boxes

A CSS flexbox is used for minipages and parboxes, allowing external and internal vertical positioning.

 **inline** A line of text with an inline minipage or `\parbox` will have the minipage or `\parbox` placed onto its own line, because a paragraph is a block element and cannot be made inline-block.

**placement** minipages and `\parboxes` will be placed side-by-side in HTML unless you place a `\newline` between them.

**side-by-side** Side-by-side minipages may be separated by `\quad`, `\qquad`, `\enskip`, `\hspace`, `\hfill`, or a `\rule`. When inside a center environment, the result is similar in print and HTML. Paragraph tags are suppressed between side-by-side minipages and these spacing commands, but not at the start or end of the paragraph.

-  **minipage in a span** There is limited support for minipages inside an HTML `<span>`. An HTML `<div>` cannot appear inside a `<span>`. While in a `<span>`, minipages, and `\parboxes`, and any enclosed lists have limited HTML tags, resulting in an “inline” format, without markup except for HTML breaks. Use `\newline` or `\par` for an HTML break.
-  **minipage size** When using `\linewidth`, `\textwidth`, and `\textheight`, widths and heights in HTML are scaled proportionally to a 6×9 inch text area, and inside a `multicols` `\linewidth` is divided by the specified number of columns.
- if width is `\linewidth`** If a minipage or `\parbox` is assigned a width of exactly `\linewidth`, in HTML it is automatically given no HTML width, thus allowed to fill the line as needed, similar to how it appears in print output.
- full-width if HTML** A new macro `\minipagefullwidth` requests that, during HTML output, the next single minipage or `\parbox` be generated without an HTML width attribute, allowing it to be the full width of the display rather than the declared print-output width. This may be useful where the printed version’s width makes no sense in HTML.
-  **tabular, multicols** Inside a `tabular` or `multicols` environment, where the width depends on the browser window, `\minipagefullwidth` is effectively used by default for every minipage or `\parbox` inside the environment. `\UseMinipageWidths` may be used to tell lwarp to honor the specified widths of all following minipages and `\parboxes` until the end of the local scope, and `\IgnoreMinipageWidths` may be used to tell lwarp to ignore the specified widths.
-  **text alignment** Nested minipages adopt their parent’s text alignment in HTML, whereas in regular L<sup>A</sup>T<sub>E</sub>X PDF output they do not. Use a `flushleft` or similar environment in the child minipage to force a text alignment.

**for HTML output:** 10526 `\begin{warpHTML}`

## 90.1 Counters and lengths

**Ctr** `LWR@minipagedepth` Used to only reset the line width at the outermost minipage.

```
10527 \newcounter{LWR@minipagedepth}
10528 \setcounter{LWR@minipagedepth}{0}
```

**Len** `\LWR@minipagewidth` Used to convert the width into printable units.

```
10529 \newlength{\LWR@minipagewidth}
```

**Len** `\LWR@minipageheight` Used to convert the height into printable units.

```
10530 \newlength{\LWR@minipageheight}
```

## 90.2 Footnote handling

Also see section 60 for other forms of footnotes. Minipage footnotes are gathered in section 60.5, and then placed into the document in section 90.3.



### 90.3 Minipage handling

Bool LWR@minipagefullwidth Should the next minipage have no HTML width?

```
10531 \newbool{LWR@minipagefullwidth}
10532 \boolfalse{LWR@minipagefullwidth}
```

Bool LWR@forceminipagefullwidth Should the next minipage have no HTML width? Used to force full width for all minipages in an environment such as tabular or multicols, where the actual width depends on the browser width. Controlled by \useminipagewidths and \ignoreminipagewidths.

```
10533 \newbool{LWR@forceminipagefullwidth}
10534 \boolfalse{LWR@forceminipagefullwidth}
```

\minipagefullwidth Requests that the next minipage have no width tag in HTML:

**for HTML output:** 10535 \newcommand\*{\minipagefullwidth}{\global\booltrue{LWR@minipagefullwidth}}

\UseMinipageWidths Locally requests that minipage widths be honored.

```
10536 \newcommand*{\UseMinipageWidths}{\boolfalse{LWR@forceminipagefullwidth}}
```

\IgnoreMinipageWidths Locally requests that minipage widths be honored.

```
10537 \newcommand*{\IgnoreMinipageWidths}{\booltrue{LWR@forceminipagefullwidth}}
10538 \end{warpHTML}
```

**for PRINT output:** 10539 \begin{warpprint}  
10540 \newcommand\*{\minipagefullwidth}{}  
10541 \newcommand\*{\UseMinipageWidths}{}  
10542 \newcommand\*{\IgnoreMinipageWidths}{}  
10543 \end{warpprint}

**for HTML output:** 10544 \begin{warpHTML}

Bool LWR@minipagethispar Has a minipage been seen this paragraph? If true, prevents paragraph tags around horizontal space between minipages.

```
10545 \newbool{LWR@minipagethispar}
10546 \boolfalse{LWR@minipagethispar}
```

Env minipage [*vert position*] [*height*] [*inner vert position*] {*width*}

The vertical positions may be 'c', 't', or 'b'. The inner position may also be 's'.

When using \linewidth, \textwidth, or \textheight, these are scaled proportionally to a 6×9 inch text area.

```
10547 \NewDocumentEnvironment{LWR@HTML@sub@minipage}{m m m m}
```

```
10548 {%
10549 \LWR@traceinfo{minipage}%
```

Temporarily open a group, in which width and height is computed based on a virtual page size instead of the extra-large PDF page used during HTML tag generation.

The following used to be an actual L<sup>A</sup>T<sub>E</sub>X minipage.

```
10550 \begingroup
```

Compute width, adjusted for frames:

```
10551 \setlength{\LWR@minipagewidth}{#4}%
10552 \ifthenelse{\cinttest{\value{LWR@minipagedepth}}{=}{0}}{%
```

Only create a new page if not yet nested:

```
10553 \LWR@orignewpage%
```

Adjust virtual page size:

```
10554 \addtolength{\LWR@minipagewidth}{3em}% room for frames
10555 \setlength{\linewidth}{6in}%
10556 \setlength{\textwidth}{6in}%
10557 \setlength{\textheight}{9in}%
10558 }{%
10559 \LWR@traceinfo{computed width is \LWR@printlength{\LWR@minipagewidth}}%
```

Compute height:

```
10560 \setlength{\LWR@minipageheight}{\textheight}% default unless specified
10561 \ifblank{#2}{\setlength{\LWR@minipageheight}{#2}}%
```

Track nesting depth:

```
10562 \addtocounter{LWR@minipagedepth}{1}%
```

L<sup>A</sup>T<sub>E</sub>X wants to start a paragraph for the virtual minipage, then start a paragraph again for the contents of the minipage, so cancel the paragraph tag handling until the minipage has begun.

```
10563 \ifbool{FormatWP}{\newline}{}%
10564 \LWR@stoppars%
```

If FormatWP, add a text frame:

```
10565 \ifbool{FormatWP}{%
10566
10567 \addtocounter{LWR@thisautoidWP}{1}%
10568 \LWR@htmltag{%
10569 div id="\LWR@print@mbox{autoidWP-\arabic{LWR@thisautoidWP}}" %
10570 class="wminipage"%
10571 }%
```

```
10572
10573 }{}%
```

Create the <div> tag with optional alignment style:

```
10574 \LWR@traceinfo{minipage: creating div class}%
10575 \LWR@htmltag{div class="minipage" style="%
10576 \ifthenelse{\equal{#1}{t}}{\LWR@print@mbox{vertical-align:bottom} ; }{}%
10577 \ifthenelse{\equal{#1}{c}}{\LWR@print@mbox{vertical-align:middle} ; }{}%
10578 \ifthenelse{\equal{#1}{b}}{\LWR@print@mbox{vertical-align:top} ; }{}%
10579 \ifthenelse{\equal{#3}{t}}{\LWR@print@mbox{justify-content:flex-start} ; }{}%
10580 \ifthenelse{\equal{#3}{c}}{\LWR@print@mbox{justify-content:center} ; }{}%
10581 \ifthenelse{\equal{#3}{b}}{\LWR@print@mbox{justify-content:flex-end} ; }{}%
10582 \ifthenelse{\equal{#3}{s}}{\LWR@print@mbox{justify-content:space-between} ; }{}%
```

Print the width and optional height styles:

```
10583 \LWR@traceinfo{minipage: about to print the width of \LWR@printlength{\LWR@minipagewidth}}%
10584 \ifbool{LWR@minipagefullwidth}%
10585 \global\boolfalse{LWR@minipagefullwidth}}%
10586 {%
10587 \ifbool{LWR@forceminipagefullwidth}%
10588 {}%
10589 {%
10590 \ifthenelse{\lengthtest{#4}=\linewidth}%
10591 {}%
10592 {width:\LWR@printlength{\LWR@minipagewidth} ; }%
10593 }%
10594 }%
10595 \LWR@traceinfo{minipage: about to print the height}%
10596 \ifblank{#2}{}{height:\LWR@printlength{\LWR@minipageheight} ; }%
10597 "%}
```

Finish with an empty line to start the contents on a new line.

```
10598
10599 % The preceding empty line is required.
```

Set the user-accessible line and text width and height values inside the virtual minipage. These do not affect the actual size of the PDF output, but are used by any reference to `\linewidth`, etc. inside the virtual minipage being created here.

```
10600 \setlength{\linewidth}{#4}% the original width
10601 \setlength{\textwidth}{6in}%
10602 \setlength{\textheight}{9in}%
```

`\raggedright` cancels hyphenation, which will be done by HTML instead.

```
10603 \LWR@print@raggedright%
```

Set minipage footnotes:

```
10604 \def\@mpfn{mpfootnote}%
10605 \def\thempfn{\thempfootnote}\c@mpfootnote\z@%
```

```
10606 \let\@footnotetext\@mpfootnotetext%
```

Resume paragraph tag handling for the contents of the minipage:

```
10607 \LWR@startpars%
10608 \ifboolexpr{bool{FormatWP} and bool{WPMarkMinipages}}{%
10609
10610 === begin minipage ===
10611
10612 }{%
10613 \LWR@traceinfo{minipage: finished starting the minipage}%
10614 }% finished \minipage
10615 {% \endminipage
```

Print pending minipage footnotes:

```
10616 \LWR@printpendingmpfootnotes%
```

End the environment with closing tag:

```
10617 \ifboolexpr{bool{FormatWP} and bool{WPMarkMinipages}}{%
10618
10619 === end minipage ===
10620
10621 }{%
10622 \LWR@stoppars%
```

The following used to be an actual L<sup>A</sup>T<sub>E</sub>X minipage.

```
10623 \endgroup%
10624
10625 \ifbool{FormatWP}{%
10626
10627 \LWR@html elementend{div}%
10628
10629 }{%
10630 \LWR@htmldivclassend{minipage}%
10631
10632 \addtocounter{LWR@minipagedepth}{-1}%
10633 \LWR@startpars%
10634 \ifbool{FormatWP}{\newline}{}%
```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```
10635 \global\booltrue{LWR@minipagethispar}%
10636 \LWR@traceinfo{LWR@minipage: done}%
10637 }
10638
10639 \NewDocumentEnvironment{LWR@HTML@minipage}{O{t} O{} O{t} m}
10640 {\LWR@HTML@sub@minipage{#1}{#2}{#3}{#4}}
10641 {\endLWR@HTML@sub@minipage}
10642
10643 \LWR@formattedenv{minipage}
```

## 90.4 `\parbox`, `\mbox`, `\makebox`, `\framebox`, `\fbox`, `\raisebox`

for HTML output:

`\parbox` [*⟨pos⟩*] [*⟨height⟩*] [*⟨inner-pos⟩*] {*⟨width⟩*} {*⟨text⟩*}

A `parbox` uses the `minipage` code:

```
10644 \NewDocumentCommand{\LWR@HTML@parbox}{O{t} O{} O{t} m +m}
10645 {
10646 \LWR@traceinfo{parbox of width #4}%
10647 \begin{minipage}[#1][#2][#3]{#4}%
10648 #5
10649 \end{minipage}%
10650 }
10651
10652 \LWR@formatted{parbox}
```

`\mbox` {*⟨text⟩*} Nullified for HTML.

```
10653 \newcommand*{\LWR@HTML@mbox}[1]{#1}
10654
10655 \LWR@formatted{mbox}
```

`\LWR@makebox@paren` {*⟨width⟩*}, {*⟨height⟩*}

Adds to the style in `\LWR@temptwo`.

```
10656 \NewDocumentCommand{\LWR@makebox@paren}{m m}{%
10657 \IfValueTF{#2}{%
10658 \setlength{\LWR@tempwidth}{#1\unitlength}%
10659 \setlength{\LWR@tempheight}{#2\unitlength}%
10660 \appto{\LWR@temptwo}{%
10661 \LWR@print@mbox{width:\LWR@printlength{\LWR@tempwidth}} ; % space
10662 \LWR@print@mbox{height:\LWR@printlength{\LWR@tempheight}} ; % space
10663 }%
10664 }{%
10665 \PackageError{lwarp}%
10666 {(width,height) is missing a comma ',' character}%
10667 {\protect\makebox\space \protect\framebox\space accept
10668 a size in the format (width,height).}%
10669 }%
10670 }
```

`\LWR@makebox@align` {*⟨alignment character⟩*}

Adds to the style in `\LWR@temptwo`.

```
10671 \newcommand*{\LWR@makebox@align}[1]{%
10672 \def\LWR@align{center}%
10673 \ifstrequal{#1}{l}{\def\LWR@align{left}}{%
10674 \ifstrequal{#1}{r}{\def\LWR@align{right}}{%
10675 \ifstrequal{#1}{s}{\def\LWR@align{justify}}{%
```

```

10676 \appto{\LWR@temptwo}{%
10677 \LWR@print@mbx{text-align:\LWR@align} ; %
10678 }%
10679 }

```

`\makebox` (*(width,height)*) [*(width)*] [*(pos)*] {*(text)*}

```
10680 \NewDocumentCommand{\LWR@HTML@makebox}{>\SplitArgument{1}{,}}d() o o +m}{%
```

Build the style depending on arguments:

```

10681 {% scope
10682 \def\LWR@temptwo{%
10683 \IfValueTF{#1}%
10684 {% (width,height) ..
10685 \LWR@makebox@paren #1%
10686 \IfValueT{#2}%
10687 {% (width,height) [posn]
10688 \LWR@makebox@align{#2}%
10689 }%
10690 }%
10691 {% [width]
10692 \IfValueT{#2}% [width]
10693 {%
10694 \setlength{\LWR@tempwidth}{#2}%
10695 \ifdimgreater{\LWR@tempwidth}{0pt}{%
10696 \appto{\LWR@temptwo}{%
10697 width:\LWR@printlength{\LWR@tempwidth} ; % space
10698 }%
10699 }{%}
10700 }%
10701 }%
10702 \IfValueT{#3}%
10703 {% [width] [posn]
10704 \LWR@makebox@align{#3}%
10705 }%
10706 \InlineClass[%
10707 \LWR@print@mbx{display:inline-block} ; %
10708 \LWR@temptwo%
10709]%
10710 {makebox}%
10711 {#4}%
10712 }% scope
10713 }
10714 \LWR@formatted{makebox}

```

`\framebox` (*(width,height)*) [*(width)*] [*(pos)*] {*(text)*}

```

10715 \NewDocumentCommand{\LWR@HTML@framebox}{d() o o +m}{%
10716 \fbox{\makebox(#1)[#2][#3]{#4}}%
10717 }
10718
10719 \LWR@formatted{framebox}

```

`\LWR@forceminwidth`  $\{\langle\mathit{legth}\rangle\}$

Sets `\LWR@atleastonept` to be at least 1pt.

```

10720 \newlength{\LWR@atleastonept}
10721
10722 \newcommand*{\LWR@forceminwidth}[1]{%
10723 \setlength{\LWR@atleastonept}{#1}%
10724 \ifthenelse{%
10725 \lengthtest{\LWR@atleastonept>0pt}\AND%
10726 \lengthtest{\LWR@atleastonept<1pt}%
10727 }%
10728 {\setlength{\LWR@atleastonept}{1pt}}%
10729 {}%
10730 }
```

`\LWR@fboxstyle` Prints the HTML attributes for a black border and padding.

`\LWR@forceminwidth` must be used first in order to set the border width.

```

10731 \newcommand*{\LWR@fboxstyle}{%
10732 \LWR@findcurrenttextcolor%
10733 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@origpound\LWR@tempcolor ; %
10734 padding:\LWR@printlength{\fboxsep} ; %
10735 color:\LWR@origpound\LWR@tempcolor%
10736 }
```

`\fbox`  $\{\langle\mathit{text}\rangle\}$

Creates a framed inline span enclosing the text.

Create a new HTML version, but don't use it until after `xcolor` may have loaded:

```

10737 \newcommand{\LWR@HTML@fbox}[1]{%
10738 \LWR@traceinfo{HTML fbox}%
10739 \LWR@forceminwidth{\fboxrule}%
10740 \InlineClass[%
10741 \LWR@print@mbox{display:inline-block} ; %
10742 \LWR@fboxstyle%
10743]{\fbox}{#1}%
10744 }
```

`xcolor` lets things to `\fbox` when it is loaded, and this must remain even for HTML output while in a `lateximage`, so `\fbox` is not modified until `\AtBeginDocument`:

```

10745 \AtBeginDocument{\LWR@formatted{fbox}}
```

`\fboxBlock`  $\{\langle\mathit{text}\rangle\}$  Creates a framed HTML `<div>` of the text.

First, a print-mode version. This is newly defined for print mode, so it is defined inside `warpall`.

**for HTML & PRINT:** 10746 `\end{warpHTML}`

```

10747 \begin{warpall}
10748 \let\fbxBLOCK\fbx
10749 \end{warpall}
10750
10751 \begin{warpHTML}

```

**for HTML output:** Next, an HTML version:

```

10752 \newcommand{\LWR@HTML@fbxBLOCK}[1]{%
10753 \LWR@forceminwidth{\fbxrule}%
10754 \begin{BlockClass}[%
10755 \LWR@fbxstyle%
10756]{fbxBLOCK}
10757 #1
10758 \end{BlockClass}
10759 }
10760
10761 \LWR@formatted{fbxBLOCK}
10762
10763 \end{warpHTML}

```

Env fminipage [*align*] [*height*] [*align*] {*width*}

Creates a framed HTML <div> around its contents.

**for HTML & PRINT:** Print version:

```

10764 \begin{warpall}
10765
10766 \newsavebox{\LWR@fminipagebox}
10767
10768 \NewDocumentEnvironment{\LWR@print@fminipage}{0{t} o 0{t} m}
10769 {%

```

An outer minipage will be used for vertical alignment. An inner minipage will be framed with \fbx.

If the optional inner alignment is not given, use the outer instead:

```

10770 \IfValueTF{#3}%
10771 {\def\LWR@thisalign{#3}}
10772 {\def\LWR@thisalign{#1}}%

```

Form the outer minipage depending on whether a height was given. Make the outer minipage larger to compensate for the frame.

```

10773 \IfValueTF{#2}%
10774 {\minipage[#1][#2+2\fbxsep+2\fbxrule][\LWR@thisalign]{#4+2\fbxsep+2\fbxrule}}%
10775 {\minipage[#1][#4+2\fbxsep+2\fbxrule]}%

```

Capture the contents of the environment:

```

10776 \begin{lrbox}{\LWR@fminipagebox}%

```



Nest the contents inside an inner minipage of the desired size:

```
10777 \IfValueTF{#2}%
10778 {\minipage[#1][#2][\LWR@thisalign]{#4}}%
10779 {\minipage[#1]{#4}}%
10780 }
10781 {%
```

Close the inner minipage and the LR box with the contents:

```
10782 \endminipage%
10783 \end{lrbox}%
```

Create a frame around the contents of the environment:

```
10784 \fbox{\usebox{\LWR@fminipagebox}}%
```

The entire thing is placed inside the outer minipage:

```
10785 \endminipage%
10786 }
10787
10788 \LetLtxMacro\fminipage\LWR@print@fminipage
10789 \LetLtxMacro\endfminipage\endLWR@print@fminipage
10790 % \newenvironment{fminipage}{\LWR@print@fminipage}{\endLWR@print@fminipage}
10791
10792 \end{warpall}
```

**HTML version:**

```
for HTML output: 10793 \begin{warpHTML}
10794
10795 \NewDocumentEnvironment{LWR@HTML@fminipage}{O{t} o O{t} m}
10796 {%
10797 \LWR@traceinfo{fminipage #1 #2 #3 #4}%
10798 \LWR@forceminwidth{\fboxrule}%
10799 \setlength{\LWR@tempwidth}{#4}%
10800 \IfValueT{#2}{\setlength{\LWR@tempheight}{#2}}%
10801 \LWR@stoppars%
10802 \begin{BlockClass}[%
10803 \LWR@fboxstyle ; %
10804 \IfValueT{#2}{height:\LWR@printlength{\LWR@tempheight} ; }%
10805 \ifbool{LWR@minipagefullwidth}%
10806 {\global\boolfalse{LWR@minipagefullwidth}}%
10807 {%
10808 \ifbool{LWR@forceminipagefullwidth}%
10809 {}%
10810 {%
10811 \ifthenelse{\lengthtest{\LWR@tempwidth}=\linewidth}%
10812 {}%
10813 {width:\LWR@printlength{\LWR@tempwidth} ; }%
10814 }%
}
```

```

10815 }%
10816]{fminipage}%
10817 }
10818 {%
10819 \end{BlockClass}%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

10820 \global\booltrue{LWR@minipagethispar}%
10821 \LWR@traceinfo{fminipage done}%
10822 }
10823
10824 \LWR@formattedenv{fminipage}

```

`\raisebox`  $\langle\textit{raiselen}\rangle$  [ $\langle\textit{height}\rangle$ ] [ $\langle\textit{depth}\rangle$ ]  $\langle\textit{text}\rangle$


```


10825 \NewDocumentCommand{\LWR@HTML@raisebox}{m o o m}{%
10826 #4%
10827 }
10828
10829 \LWR@formatted{raisebox}

10830 \end{warpHTML}

```

## 91 Direct formatting

 `\bfseries`, etc. `\textbf`, etc. are supported, but `\bfseries`, etc. work only in some situations.

 **HTML special chars** `&`, `<`, and `>` have special meanings in HTML. If `\&`, `\textless`, and `\textgreater` are used, proper HTML entities will be used, but there may be HTML parsing problems if these special characters occur unescaped in program listings or other verbatim text.

**program listings** For program listings, the `listings` package is supported, and its `literate` option is used to convert `&`, `<`, and `>` to proper HTML entities.

**verbatim** The various `verbatim`-related environments do not convert `&`, `<`, and `>`, so care must be taken to avoid accidentally including valid HTML code inside these environments. Adding a space on either side may be sufficient.

For high-level block and inline custom CSS classes, see section 52.9.

**for HTML output:** 10831 `\begin{warpHTML}`

`\emph`  $\langle\textit{text}\rangle$

```

10832 \DeclareRobustCommand{\LWR@HTML@emph}[1]{%
10833 {%
10834 \itshape%
10835 \LWR@htmlspan{em}{#1}%

```

```
10836 }%
10837 }
10838 \LWR@formatted{emph}
10839
10840 \DeclareRobustCommand{\LWR@null@emph}[1]{#1}
```

`\textmd`  $\langle text \rangle$

```
10841 \DeclareRobustCommand{\LWR@HTML@textmd}[1]{%
10842 {%
10843 \mdseries%
10844 \InlineClass(font-weight:normal){textmd}{#1}%
10845 }%
10846 }
10847 \LWR@formatted{textmd}
10848
10849 \DeclareRobustCommand{\LWR@null@textmd}[1]{#1}
```

`\textbf`  $\langle text \rangle$

```
10850 \DeclareRobustCommand{\LWR@HTML@textbf}[1]{%
10851 {%
10852 \bfseries%
10853 \LWR@htmlspan{b}{#1}%
10854 }%
10855 }
10856 \LWR@formatted{textbf}
10857
10858 \DeclareRobustCommand{\LWR@null@textbf}[1]{#1}
```

`\textrm`  $\langle text \rangle$

```
10859 \DeclareRobustCommand{\LWR@HTML@textrm}[1]{%
10860 {%
10861 \rmfamily%
10862 \InlineClass(font-family:serif){textrm}{#1}%
10863 }%
10864 }
10865 \LWR@formatted{textrm}
10866
10867 \DeclareRobustCommand{\LWR@null@textrm}[1]{#1}
```

`\textsf`  $\langle text \rangle$

```
10868 \DeclareRobustCommand{\LWR@HTML@textsf}[1]{%
10869 {%
10870 \sffamily%
10871 \InlineClass(font-family:sans){textsf}{#1}%
10872 }%
10873 }
10874 \LWR@formatted{textsf}
10875
10876 \DeclareRobustCommand{\LWR@null@textsf}[1]{#1}
```

`\texttt {<text>}`

```
10877 \DeclareRobustCommand{\LWR@HTML@texttt}[1]{%
10878 {%
10879 \ttfamily%
10880 \LWR@htmlspan{kbd}{#1}%
10881 }%
10882 }
10883 \LWR@formatted{texttt}
10884
10885 \DeclareRobustCommand{\LWR@null@texttt}[1]{#1}
```

`\textup {<text>}`

```
10886 \DeclareRobustCommand{\LWR@HTML@textup}[1]{%
10887 {%
10888 \upshape%
10889 \InlineClass(font-style:normal){textup}{#1}%
10890 }%
10891 }
10892 \LWR@formatted{textup}
10893
10894 \DeclareRobustCommand{\LWR@null@textup}[1]{#1}
```

`\textit {<text>}`

```
10895 \DeclareRobustCommand{\LWR@HTML@textit}[1]{%
10896 {%
10897 \itshape%
10898 \LWR@htmlspan{i}{#1}%
10899 }%
10900 }
10901 \LWR@formatted{textit}
10902
10903 \DeclareRobustCommand{\LWR@null@textit}[1]{#1}
```

`\textsc {<text>}`

```
10904 \DeclareRobustCommand{\LWR@HTML@textsc}[1]{%
10905 {%
10906 \scshape%
10907 \InlineClass(
10908 font-variant: small-caps ;
10909 font-variant-numeric: oldstyle-nums ;
10910){textsc}{#1}%
10911 }%
10912 }
10913 \LWR@formatted{textsc}
10914
10915 \DeclareRobustCommand{\LWR@null@textsc}[1]{#1}
```

`\textsi {<text>}`

```

10916 \@ifundefined{textsi}{
10917 \LetLtxMacro\LWR@print@textsi\LWR@print@textsc
10918 }{}
10919
10920 \DeclareRobustCommand{\LWR@HTML@textsi}[1]{%
10921 {%
10922 \sishape%
10923 \InlineClass(
10924 font-style: italic;
10925 font-variant: small-caps ;
10926 font-variant-numeric: oldstyle-nums ;
10927){textsi}{#1}%
10928 }%
10929 }
10930 \LWR@formatted{textsi}
10931
10932 \DeclareRobustCommand{\LWR@null@textsi}[1]{#1}

```

`\textsl`  $\langle text \rangle$

```

10933 \DeclareRobustCommand{\LWR@HTML@textsl}[1]{%
10934 {%
10935 \slshape%
10936 \InlineClass(font-style:oblique){textsl}{#1}%
10937 }%
10938 }
10939 \LWR@formatted{textsl}
10940
10941 \DeclareRobustCommand{\LWR@null@textsl}[1]{#1}

```

`\textnormal`  $\langle text \rangle$

```

10942 \DeclareRobustCommand{\LWR@HTML@textnormal}[1]{\textmd{\textrm{\textup{#1}}}}
10943 \LWR@formatted{textnormal}
10944
10945 \DeclareRobustCommand{\LWR@null@textnormal}[1]{#1}

10946 \DeclareRobustCommand{\LWR@null@rmfamily}{}
10947 \DeclareRobustCommand{\LWR@null@sfamily}{}
10948 \DeclareRobustCommand{\LWR@null@ttfamily}{}
10949 \DeclareRobustCommand{\LWR@null@bfseries}{}
10950 \DeclareRobustCommand{\LWR@null@mdseries}{}
10951 \DeclareRobustCommand{\LWR@null@upshape}{}
10952 \DeclareRobustCommand{\LWR@null@slshape}{}
10953 \DeclareRobustCommand{\LWR@null@scshape}{}
10954 \DeclareRobustCommand{\LWR@null@itshape}{}
10955 \DeclareRobustCommand{\LWR@null@normalfont}{}

10956 \DeclareRobustCommand{\LWR@null@em}{}

```

`\LWR@nullfont` Removes formatting during filename operations, file references, and HTML comments.

 Use only inside a group.

The following are *not* made robust, since they must be expanded to their nullified versions.

```

10957 \catcode'\$=\active% redefining $ below
10958 \catcode'_ =12% redefining _ below
10959 \newcommand*{\LWR@nullfonts}{%
10960 \LetLtxMacro\emph\LWR@null@emph%
10961 \LetLtxMacro\textmd\LWR@null@textmd%
10962 \LetLtxMacro\textbf\LWR@null@textbf%
10963 \LetLtxMacro\textrm\LWR@null@textrm%
10964 \LetLtxMacro\textsf\LWR@null@textsf%
10965 \LetLtxMacro\texttt\LWR@null@texttt%
10966 \LetLtxMacro\textup\LWR@null@textup%
10967 \LetLtxMacro\textit\LWR@null@textit%
10968 \LetLtxMacro\textsc\LWR@null@textsc%
10969 \LetLtxMacro\textsi\LWR@null@textsi%
10970 \LetLtxMacro\textsl\LWR@null@textsl%
10971 \LetLtxMacro\textnormal\LWR@null@textnormal%
10972 \LetLtxMacro\rmfamily\LWR@null@rmfamily%
10973 \LetLtxMacro\sffamily\LWR@null@sffamily%
10974 \LetLtxMacro\ttfamily\LWR@null@ttfamily%
10975 \LetLtxMacro\bfseries\LWR@null@bfseries%
10976 \LetLtxMacro\mdseries\LWR@null@mdseries%
10977 \LetLtxMacro\upshape\LWR@null@upshape%
10978 \LetLtxMacro\slshape\LWR@null@slshape%
10979 \LetLtxMacro\scshape\LWR@null@scshape%

10980 \LetLtxMacro\sisshape\LWR@null@sisshape%

10981 \LetLtxMacro\itshape\LWR@null@itshape%
10982 \LetLtxMacro\normalfont\LWR@null@normalfont%
10983 \LetLtxMacro\em\LWR@null@em%

```

Various built-in symbols.

```

10984 \renewcommand*{\$}{-}%
10985 \renewcommand*{\%}{-}%
10986 \renewcommand*{_}{-}%
10987 \renewcommand*{\}}{-}%
10988 \renewcommand*{\{}{-}%
10989 \renewcommand*{\&}{and}%
10990 \renewcommand*{\#}{-}%
10991 \renewcommand*{\,}{-}%
10992 \renewcommand*{\~}{-}%
10993 \renewcommand*{\^[1]}{-}%
10994 \renewcommand*{\~{1]}{-}%
10995 \renewcommand*{\newline}{-}%
10996 \renewcommand*{\textasciicircum}{-}%
10997 \renewcommand*{\textasciitilde}{-}%
10998 \renewcommand*{\textasteriskcentered}{-}%
10999 \renewcommand*{\textbackslash}{-}%
11000 \renewcommand*{\textbar}{-}%
11001 \renewcommand*{\textbardbl}{-}%
11002 \renewcommand*{\textbigcircle}{-}%

```

11003 \renewcommand\*{\textbraceleft}{-}%  
11004 \renewcommand\*{\textbraceright}{-}%  
11005 \renewcommand\*{\textbullet}{-}%  
11006 \renewcommand\*{\textcopyright}{-}%  
11007 \renewcommand\*{\textdagger}{-}%  
11008 \renewcommand\*{\textdaggerdbl}{-}%  
11009 \renewcommand\*{\textdollar}{-}%  
11010 \renewcommand\*{\textellipsis}{-}%  
11011 \renewcommand\*{\textemdash}{-}%  
11012 \renewcommand\*{\textendash}{-}%  
11013 \renewcommand\*{\textexclamdown}{-}%  
11014 \renewcommand\*{\textgreater}{-}%  
11015 \renewcommand\*{\textless}{-}%  
11016 \renewcommand\*{\textordfeminine}{-}%  
11017 \renewcommand\*{\textordmasculine}{-}%  
11018 \renewcommand\*{\textparagraph}{-}%  
11019 \renewcommand\*{\textperiodcentered}{-}%  
11020 \renewcommand\*{\textpertenthousand}{-}%  
11021 \renewcommand\*{\textperthousand}{-}%  
11022 \renewcommand\*{\textquestiondown}{-}%  
11023 \renewcommand\*{\textquotedblleft}{-}%  
11024 \renewcommand\*{\textquotedblright}{-}%  
11025 \renewcommand\*{\textquoteleft}{-}%  
11026 \renewcommand\*{\textquoteright}{-}%  
11027 \renewcommand\*{\textregistered}{-}%  
11028 \renewcommand\*{\textsection}{-}%  
11029 \renewcommand\*{\textsterling}{-}%  
11030 \renewcommand\*{\texttrademark}{-}%  
11031 \renewcommand\*{\textunderscore}{-}%  
11032 \renewcommand\*{\textvisiblespace}{-}%  
11033 \renewcommand\*{\copyright}{-}%  
11034 \renewcommand\*{\dag}{-}%  
11035 \renewcommand\*{\ddag}{-}%  
11036 \renewcommand\*{\dots}{-}%  
11037 \renewcommand\*{\P}{-}%  
11038 \renewcommand\*{\pounds}{-}%  
11039 \renewcommand\*{\S}{-}%  
11040 \renewcommand\*{\aa}{a}%  
11041 \renewcommand\*{\AA}{A}%  
11042 \renewcommand\*{\AE}{AE}%  
11043 \renewcommand\*{\ae}{ae}%  
11044 \renewcommand\*{\dh}{d}%  
11045 \renewcommand\*{\DH}{D}%  
11046 \renewcommand\*{\DJ}{D}%  
11047 \renewcommand\*{\dj}{d}%  
11048 \renewcommand\*{\IJ}{IJ}%  
11049 \renewcommand\*{\ij}{ij}%  
11050 \renewcommand\*{\L}{L}%  
11051 \renewcommand\*{\l}{l}%  
11052 \renewcommand\*{\NG}{NG}%  
11053 \renewcommand\*{\ng}{ng}%  
11054 \renewcommand\*{\O}{O}%  
11055 \renewcommand\*{\o}{o}%  
11056 \renewcommand\*{\oe}{oe}%  
11057 \renewcommand\*{\OE}{OE}%

```

11058 \renewcommand*\ss}{ss}%
11059 \renewcommand*\SS}{SS}%
11060 \renewcommand*\th}{th}%
11061 \renewcommand*\TH}{TH}%
11062 \renewcommand*\guillemotleft}{}%
11063 \renewcommand*\guilsinglleft}{}%
11064 \renewcommand*\quotedblbase}{}%
11065 \renewcommand*\textquotedbl}{}%
11066 \renewcommand*\guillemotright}{}%
11067 \renewcommand*\guilsinglright}{}%
11068 \renewcommand*\quotesinglbase}{}%

11069 \renewcommand*\HTMLUnicode}[1]{}%
11070 \renewcommand*\HTMLentity}[1]{}%

11071 \renewcommand{\textsuperscript}[1]{##1}%
11072 \renewcommand{\textsubscript}[1]{##1}%

11073 \renewcommand{\underline}[1]{##1}%

11074 \RenewDocumentCommand{\LWR@htmlspanclass}{o m +m}{##3}%
11075 \DeclareExpandableDocumentCommand{\InlineClass}{D{({})}{ } o m +m}{##4}%

```

Nullify math macros.

```

11076 \def\(\##1\){}%
11077 \def\[##1\]{}%
11078 \RenewDocumentCommand{\LWR@subsingledollar}{s m m m}{}%
11079 \protected\def$##1${}%

```

Nullify logos:

```

11080 \renewcommand*\TeX}{TeX}%
11081 \renewcommand*\LaTeX}{LaTeX}%
11082 \renewcommand*\LaTeXe}{LaTeX2e}%
11083 \renewcommand*\LuaTeX}{LuaTeX}%
11084 \renewcommand*\LuaLaTeX}{LuaLaTeX}%
11085 \renewcommand*\XeTeX}{XeTeX}%
11086 \renewcommand*\XeLaTeX}{XeLaTeX}%
11087 \renewcommand*\ConTeXt}{ConTeXt}%
11088 \renewcommand*\BibTeX}{BibTeX}%
11089 \renewcommand*\MakeIndex}{MakeIndex}%
11090 \renewcommand*\AmS}{AmS}%
11091 \renewcommand*\MiKTeX}{MiKTeX}%
11092 \renewcommand*\LyX}{LyX}%

```

Use the simpler form with `\texorpdfstring`:

```

11093 \let\texorpdfstring\relax%
11094 \newcommand{\texorpdfstring}[2]{##2}%
11095 }
11096 \catcode'\$=3%
11097 \catcode'_ =8%

```



`\FilenameNullify` {*<redefinitions>*}

Adds more nullifying definitions for filename generation.

```
11098 \newcommand*\FilenameNullify[1]{%
11099 \appto{\LWR@nullfonts}{#1}%
11100 }
```

Remembers the current font family, series, and shape.

```
11101 \newcommand*\LWR@f@family}{rm}
11102 \newcommand*\LWR@f@series}{md}
11103 \newcommand*\LWR@f@shape}{up}
```

`\LWR@textcurrentfont` {*<text>*}

Prints the text with the current font choices. Avoids nesting repeated font selections.

```
11104 \newcounter{LWR@textcurrentfontdepth}
11105 \setcounter{LWR@textcurrentfontdepth}{0}
11106
11107 \newcommand*\LWR@textcurrentfont[1]{%
11108 \ifnumcomp{\value{LWR@textcurrentfontdepth}}{>}{0}%
11109 {%
11110 \addtocounter{LWR@textcurrentfontdepth}{1}%
11111 #1%
11112 \addtocounter{LWR@textcurrentfontdepth}{-1}%
11113 }%
11114 {%
11115 \addtocounter{LWR@textcurrentfontdepth}{1}%
11116 \InlineClass{%
11117 text\LWR@f@family\LWR@origtilde{%
11118 text\LWR@f@series\LWR@origtilde{%
11119 text\LWR@f@shape%
11120 }%
11121 }%
11122 \addtocounter{LWR@textcurrentfontdepth}{-1}%
11123 }%
11124 }
```

Env `LWR@blocktextcurrentfont` Prints the contents with the current font choices.

```
11125 \newenvironment*LWR@blocktextcurrentfont{%
11126 \BlockClass{%
11127 text\LWR@f@family\LWR@origtilde{%
11128 text\LWR@f@series\LWR@origtilde{%
11129 text\LWR@f@shape%
11130 }%
11131 }{\endBlockClass}
```

`\mdseries`

```
11132 \renewrobustcmd*\mdseries{\renewcommand*\LWR@f@series}{md}}
```

```

\bfseries
11133 \renewrobustcmd*{\bfseries}{\renewcommand*{\LWR@f@series}{bf}}

\rmfamily
11134 \renewrobustcmd*{\rmfamily}{\renewcommand*{\LWR@f@family}{rm}}

\sffamily
11135 \renewrobustcmd*{\sffamily}{\renewcommand*{\LWR@f@family}{sf}}

\ttfamily
11136 \renewrobustcmd*{\ttfamily}{\renewcommand*{\LWR@f@family}{tt}}

\upshape
11137 \renewrobustcmd*{\upshape}{\renewcommand*{\LWR@f@shape}{up}}

\itshape
11138 \renewrobustcmd*{\itshape}{\renewcommand*{\LWR@f@shape}{it}}

\scshape
11139 \renewrobustcmd*{\scshape}{\renewcommand*{\LWR@f@shape}{sc}}

\sihape
11140 \@ifundefined{sihape}{
11141 \newrobustcmd*{\sihape}{\renewcommand*{\LWR@f@shape}{si}}
11142 }{
11143 \renewrobustcmd*{\sihape}{\renewcommand*{\LWR@f@shape}{si}}
11144 }

\slshape
11145 \renewrobustcmd*{\slshape}{\renewcommand*{\LWR@f@shape}{sl}}

\normalfont
11146 \renewrobustcmd*{\normalfont}{\rmfamily\mdseries\upshape}

\sp {<text>}

For siunitx. Must work in math mode.

11147 \renewcommand{\sp}[1]{\text{^{#1}}}

```

`\sb`  $\langle text \rangle$

For `siunitx`. Must work in math mode.

```
11148 \renewcommand{\sb}[1]{\text{_{#1}{}}}
```

`\textsuperscript`  $\langle text \rangle$

```
11149 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{#1}}
```

`\@textsuperscript`  $\langle text \rangle$

```
11150 \renewcommand{\@textsuperscript}[1]{\LWR@htmlspan{sup}{#1}}
```

`\textsubscript`  $\langle text \rangle$

```
11151 \AtBeginDocument{
11152 \renewrobustcmd{\textsubscript}[1]{\LWR@htmlspan{sub}{#1}}
11153 }
```

`\@textsubscript`  $\langle text \rangle$

```
11154 \AtBeginDocument{
11155 \renewcommand{\@textsubscript}[1]{\LWR@htmlspan{sub}{#1}}
11156 }
```

`\up`  $\langle text \rangle$  Prints superscript.

This is `\let` at the beginning of the document in case some other package has changed the definition.

```
11157 \AtBeginDocument{\let\up\textsuperscript}
```

`\fup`  $\langle text \rangle$  Prints superscript.

Supports `fntcount` package.

This is `\let` at the beginning of the document in case some other package has changed the definition.

```
11158 \AtBeginDocument{\let\fup\textsuperscript}
```

`\underline`  $\langle text \rangle$

```
11159 \renewcommand{\underline}[1]{%
11160 \InlineClass%
11161 (text-decoration:underline; text-decoration-skip: auto)%
11162 {underline}{#1}%
11163 }
```

`\LWR@overline` {<*text*>}

```
11164 \newcommand{\LWR@overline}[1]{%
11165 \InlineClass%
11166 (text-decoration:overline; text-decoration-skip: auto)%
11167 {overline}{#1}%
11168 }
```

`\LWR@currenttextcolor` The color to use for text and `\rule`, defaulting to black:

```
11169 \newcommand*{\LWR@currenttextcolor}{black}
```

`\LWR@tempcolor` The color converted to HTML colorspace.  
`\LWR@tempcolortwo`

```
11170 \newcommand*{\LWR@tempcolor}{}
11171 \newcommand*{\LWR@tempcolortwo}{}

```

`\LWR@findcurrenttextcolor` Sets `\LWR@tempcolor` to the current color.

```
11172 \newcommand*{\LWR@findcurrenttextcolor}{%
11173 \renewcommand{\LWR@tempcolor}{000000}%
11174 }
```

`\LWR@textcurrentcolor` {<*text*>} Like `\textcolor` but uses the current `\color` instead.

```
11175 \NewDocumentCommand{\LWR@textcurrentcolor}{m}{%
11176 \renewcommand*{\LWR@currenttextcolor}{black}%
11177 #1%
11178 }
```

```
11179 \end{warpHTML}
```

**for PRINT output:** 11180 `\begin{warpprint}`

`\LWR@textcurrentfont` {<*text*>}

Prints the text with the current font choices.

```
11181 \newcommand*{\LWR@textcurrentfont}[1]{#1}
```

Env `\LWR@blocktextcurrentfont` Prints the contents with the current font choices.

```
11182 \newenvironment*\LWR@blocktextcurrentfont{}{}

```

`\FilenameNullify` {<*macros to nullify*>}

```
11183 \newcommand*{\FilenameNullify}[1]{}

```

```
11184 \end{warpprint}
```

## 92 Skips, spaces, font sizes

**for HTML output:** 11185 \begin{warpHTML}

\, and \thinspace may be redefined by other packages, so are redefined \AtBeginDocument here.

Direct-formatting space commands become HTML entities:

```
11186 \AtBeginDocument{
11187 \renewrobustcmd*{\,}{\HTMLUnicode{202f}} % HTML thin non-breakable space
11188 \renewrobustcmd*{\thinspace}{\HTMLUnicode{202f}} % HTML thin non-breakable space
11189 \renewrobustcmd*{\negthinspace}{\HTMLUnicode{202f}} % HTML thin non-breakable space
11190 \renewrobustcmd*{~}{\HTMLentity{nbsp}}
11191 \renewrobustcmd*{\textellipsis}{\HTMLUnicode{2026}}
11192 }
```

Direct-formatting font sizes are ignored:

```
11193 \newrobustcmd*{\LWR@HTML@normalsize}{}
11194 \LWR@formatted{normalsize}
11195
11196 \newrobustcmd*{\LWR@HTML@small}{}
11197 \LWR@formatted{small}
11198
11199 \newrobustcmd*{\LWR@HTML@footnotesize}{}
11200 \LWR@formatted{footnotesize}
11201
11202 \newrobustcmd*{\LWR@HTML@scriptsize}{}
11203 \LWR@formatted{scriptsize}
11204
11205 \newrobustcmd*{\LWR@HTML@tiny}{}
11206 \LWR@formatted{tiny}
11207
11208 \newrobustcmd*{\LWR@HTML@large}{}
11209 \LWR@formatted{large}
11210
11211 \newrobustcmd*{\LWR@HTML@Large}{}
11212 \LWR@formatted{Large}
11213
11214 \newrobustcmd*{\LWR@HTML@LARGE}{}
11215 \LWR@formatted{LARGE}
11216
11217 \newrobustcmd*{\LWR@HTML@huge}{}
11218 \LWR@formatted{huge}
11219
11220 \newrobustcmd*{\LWR@HTML@Huge}{}
11221 \LWR@formatted{Huge}

11222 \DeclareDocumentCommand{\onecolumn}{}{}
11223
11224 \DeclareDocumentCommand{\twocolumn}{0}{}
11225
```

```
11226 #1
11227
11228 }
```

`\hfill`

```
11229 \newcommand*\LWR@HTML@hfill{\quad}
11230 \LWR@formatted{hfill}
```

`\hrulefill`

```
11231 \newcommand*\LWR@HTML@hrulefill{\rule{1in}{1pt}}
11232 \LWR@formatted{hrulefill}
```

`\dotfill`

```
11233 \newcommand*\LWR@HTML@dotfill{\dots}
11234 \LWR@formatted{dotfill}
```

`\newpage`

```
11235 \renewcommand*\newpage{
11236
11237 }
```

`\newline` Uses the HTML `<br />` element.

```
11238 \newrobustcmd*\LWR@newlinebr{\unskip\LWR@htmltag{br /}\LWR@orignewline}%
11239 \LetLtxMacro\newline\LWR@newlinebr
```

`\` Redefined to `\LWR@endofline` or `\LWR@tabularendofline`.

`\LWR@endofline` \* [*len*]

`\` is assigned to `\LWR@endofline` at `\LWR@LwarpStart`.

Inside tabular, `\` is temporarily changed to `\LWR@tabularendofline`.

```
11240 \LetLtxMacro\LWR@origendofline\
11241 \NewDocumentCommand{\LWR@endofline}{s O{0pt}}
11242 {%
11243 \newline%

11244 \setlength{\LWR@templengthone}{#2}%
11245 \ifdimgreater{\LWR@templengthone}{0pt}{\newline}{}%
11246 }
```

`\LWR@minipagestartpars` Minipages are often placed side-by-side inside figures, with a bit of horizontal space to separate them. Since HTML does not allow a `<div>` to be inside a `p`, paragraphs must

be turned off during the generation of the minipage, then turned on after the minipage is complete. When this occurs between side-by-side minipages, `lwarp` correctly suppresses the paragraph tags between the minipages, unless some other text is between the minipages. Such text forms its own paragraph, resulting in text after a minipage to be on its own line. Since people often place small horizontal space between minipages, it is desirable to maintain this space if possible. `lwarp` tries to do this by remembering that a minipage has been seen, in which case paragraph tags are suppressed around `\hspace`, `\enskip`, `\quad`, and `\qqquad` until the end of the paragraph, when the closing `p` tag is created.

When a minipage is seen, the boolean `LWR@minipagethispar` is set, telling the following horizontal whitespace commands to try to suppress their surrounding paragraph tags. `LWR@minipagethispar` is cleared at the next end of paragraph, when the HTML paragraph closing tag is generated.

Placed just before `\hspace`, `\quad`, or `\qqquad`'s HTML output.

```
11247 \newcommand*{\LWR@minipagestartpars}{%
11248 \ifbool{LWR@minipagethispar}{\LWR@startpars}{}%
11249 }
```

`\LWR@minipagestoppars` Placed just after `\hspace`, `\quad`, or `\qqquad`'s HTML output.

```
11250 \newcommand*{\LWR@minipagestoppars}{%
11251 \ifbool{LWR@minipagethispar}{\LWR@stoppars}{}%
11252 }
```

`\quad` Handles special minipage & horizontal space interactions. Uses `2003` EM SPACE to pass validation.

```
11253 \renewrobustcmd*{\quad}{%
11254 \LWR@minipagestoppars%
11255 \HTMLUnicode{2003}%
11256 \LWR@minipagestartpars%
11257 }
```

`\qqquad` Handles special minipage & horizontal space interactions.

```
11258 \renewrobustcmd*{\qqquad}{\quad\quad}
```

`\enskip` Handles special minipage & horizontal space interactions.

```
11259 \renewrobustcmd*{\enskip}{%
11260 \LWR@minipagestoppars%
11261 \HTMLUnicode{2002}%
11262 \LWR@minipagestartpars%
11263 }
```

Len `\LWR@tempwidth` Used to compute span width, height, raise for `\hspace` and `\rule`:

```
Len \LWR@tempheight
Len \LWR@tempraize 11264 \newlength{\LWR@tempwidth}
```

```
11265 \newlength{\LWR@tempheight}
11266 \newlength{\LWR@tempraise}
```

```
\LWR@select@html@hspace * {\length} * {\length}
\hspace
```

Handles special minipage & horizontal space interactions.

Prints a span of a given width. Ignores the optional star.

`\hspace{\fill}` is converted to `\hspace{2em}`, equal to `\quad`.

```
11267 \newcommand{\LWR@select@html@hspace}{%
11268 \RenewDocumentCommand{\hspace}{s m}{%
11269 \setlength{\LWR@tempwidth}{##2}}%
```

If `\fill`, change to `\quad`:

```
11270 \ifnum\gluestretchorder\LWR@tempwidth>0%
11271 \setlength{\LWR@tempwidth}{2em}%
11272 \fi%
```

Only if the width is not zero:

```
11273 \ifdimcomp{\LWR@tempwidth}{=}{0pt}{}{}%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
11274 \LWR@minipagestoppars%
```

Support the HTML thin wrappable space:

```
11275 \ifdimcomp{\LWR@tempwidth}{=}{.16667em}%
11276 {%
11277 \HTMLUnicode{2009}% thin breakable space
11278 }%
```

Print the span with the converted width. Not rounded.

```
11279 {%
11280 \LWR@htmltagc{%
11281 span style="width:\LWR@printlength{\LWR@tempwidth}; % extra space
11282 display:inline-block"%
11283 }%
```

If formatting for a word processor, approximate with a number of `\quads`, in case a span of a given width is not supported:

```
11284 \ifbool{FormatWP}{%
11285 \setlength{\LWR@templengthone}{\LWR@tempwidth}%
11286 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
11287 \quad%
11288 \addtolength{\LWR@templengthone}{-1em}}%
```



```
11289 }%
11290 }{}%
```

Close the span:

```
11291 \LWR@htmltagc{/span}%
11292 }%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
11293 \LWR@minipagestartpars%
11294 }% width not 0
11295 }%
11296 }
```

```
\LWR@select@html@nohspace * {<length>}
 \hspace
```

Used to disable \hspace while creating description \items.

```
11297 \newcommand{\LWR@select@html@nohspace}{%
11298 \RenewDocumentCommand{\hspace}{s m}{}%
11299 }
```

```
\LWR@select@print@hspace
```

```
11300 \newcommand*{\LWR@select@print@hspace}{%
11301 \renewrobustcmd\hspace{\@ifstar\@hspacer\@hspace}%
11302 }
```

```
\hspace * {<length>}
```

Handles special minipage & horizontal space interactions.

```
11303 \LWR@select@html@hspace
```

```
\LWR@vspace * {<length>} Nullified vspace.
```

```
11304 \NewDocumentCommand{\LWR@HTML@vspace}{s m}{%
11305
11306 \LWR@formatted{vspace}}
```

```
\linebreak [num] Inserts an HTML br tag.
```

```
11307 \renewcommand*{\linebreak}[1][\newline]
```

```
\nolinebreak [num]
```

```
11308 \renewcommand*{\nolinebreak}[1][\linebreak]
```

`\pagebreak` [ $\langle num \rangle$ ] Starts a new paragraph.

```
11309 \renewcommand*\pagebreak}[1][1]{
11310
11311 }
```

`\nopagebreak` [ $\langle num \rangle$ ]

```
11312 \renewcommand*\nopagebreak}[1][1]{}
```

`\enlargethispage` \*  $\langle len \rangle$

```
11313 \RenewDocumentCommand{\enlargethispage}{s m}{}
```

`\clearpage`

`\cleardoublepage`

```
11314 \renewcommand*\clearpage{}
11315 \renewcommand*\cleardoublepage{}
```

`\rule` [ $\langle raise \rangle$ ]  $\langle width \rangle$   $\langle height \rangle$

Handles special minipage & horizontal space interactions.

Creates a span of a given width and height. Ignores the optional star.

`\fill` is zero-width, so `\hspace{\fill}` is ignored.

```
11316 \newcommand*\LWR@HTML@rule}[3][1]{}%
```

The width is copied into a temporary L<sup>A</sup>T<sub>E</sub>X length, from which comparisons and conversions may be made:

```
11317 \setlength{\LWR@tempwidth}{#2}%
```

If it's zero-width then skip the entire rule:

```
11318 \ifthenelse{\lengthtest{\LWR@tempwidth=0pt}}%
11319 {}% zero- width
11320 {}% non-zero width
```

If it's non-zero width, set a minimal thickness so that it more reliably shows in the browser:

```
11321 \ifthenelse{%
11322 \lengthtest{\LWR@tempwidth>0pt}\AND%
11323 \lengthtest{\LWR@tempwidth<1pt}}%
11324 }%
11325 {\setlength{\LWR@tempwidth}{1pt}}%
11326 }%
```

Likewise with height:

```

11327 \setlength{\LWR@tempheight}{#3}%
11328 \ifthenelse{%
11329 \lengthtest{\LWR@tempheight>0pt}\AND%
11330 \lengthtest{\LWR@tempheight<1pt}}%
11331 }%
11332 {\setlength{\LWR@tempheight}{1pt}}%
11333 {}%

```

If had a minipage this paragraph, try to inline the rule without generating paragraph tags:

```
11334 \LWR@minipagestoppars%
```

Print the span with the converted width and height. The width and height are NOT rounded, since a height of less than 1pt is quite common in L<sup>A</sup>T<sub>E</sub>X code.

```

11335 \LWR@findcurrenttextcolor%
11336 \LWR@htmltagc{%
11337 span\LWR@indentHTML%
11338 style="%

```

The background color is used to draw the filled rule. The color may be changed by `\textcolor`.

```
11339 \ifbool{FormatWP}{\background:\LWR@currenttextcolor ; }%
```

The width and height are printed, converted to PT:

```

11340 width:\LWR@printlength{\LWR@tempwidth} ; %
11341 height:\LWR@printlength{\LWR@tempheight} ; %

```

The raise height is converted to a CSS transform. The \*2 raise multiplier is to approximately match HTML output's X height. Conversion to a L<sup>A</sup>T<sub>E</sub>X length allows a typical L<sup>A</sup>T<sub>E</sub>X expression to be used as an argument for the raise, whereas printing the raise argument directly to HTML output without conversion to a L<sup>A</sup>T<sub>E</sub>X length limits the allowable syntax. To do: A superior method would compute a ratio of L<sup>A</sup>T<sub>E</sub>X ex height, then print that to HTML with an ex unit.

```

11342 \ifblank{#1}%
11343 {}%
11344 {%
11345 \setlength{\LWR@tempraise}{0pt-#1}%
11346 \setlength{\LWR@tempraise}{\LWR@tempraise*2}%
11347 \LWR@indentHTML%
11348 -ms-transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
11349 \LWR@indentHTML%
11350 -webkit-transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
11351 \LWR@indentHTML%
11352 transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
11353 \LWR@indentHTML%
11354 }%

```

Display inline-block to place the span inline with the text:

```
11355 display:inline-block;"\LWR@orignewline%
11356 }%
```

If formatting for a word processor, approximate with a number of underscores, in case a span of a given width is not supported:

```
11357 \ifbool{FormatWP}{%
11358 \setlength{\LWR@templengthone}{\LWR@tempwidth}%
11359 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
11360 _}%
11361 \addtolength{\LWR@templengthone}{-1em}%
11362 }%
11363 }{%}
```

Close the span:

```
11364 \LWR@htmltagc{/span}%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
11365 \LWR@minipagestartpars%
11366 }% non-zero width
11367 }
11368
11369 \LWR@formatted{rule}

11370 \end{warpHTML}
```

## 93 \phantomsection

**for HTML output:** 11371 \begin{warpHTML}

\phantomsection Emulate the hyperref \phantomsection command, often used to insert the bibliography into the table of contents. Ignores \ForceHTMLTOC.

```
11372 \DeclareDocumentCommand{\phantomsection}{}{}%
11373 \begingroup%
11374 \boolfalse{LWR@forcighthtmltoc}%
11375 \section*{}%
11376 \endgroup%
11377 }

11378 \end{warpHTML}
```

## 94 \LaTeX and other logos

Logos for HTML and print modes:

Some of these logos may be redefined in a later package, so after loading other packages, and at the beginning of the document, their definitions are finally set by `\LWR@formatted`.

For css conversions, see:

<http://edward.oconnor.cx/2007/08/tex-poshlet>

<http://nitens.org/taraborelli/texlogo>

and the spacing described in the `metafont` package documentation.

```

for HTML & PRINT: 11379 \begin{warpall}
11380 \newrobustcmd*{\Xe}
11381 {X\hspace{-.1667em}\raisebox{-.5ex}{E}}
11382
11383 \AtBeginDocument{
11384 \ifpackageloaded{graphics}{
11385 \ifpackageloaded{metalogo}{\{
11386 \renewrobustcmd*{\Xe}
11387 {X\hspace{-.1667em}\raisebox{-.5ex}{\reflectbox{E}}}
11388 }
11389 }{
11390 \PackageWarningNoLine{lwarp}{Load graphicx or graphics
11391 for improved XeTeX logo}
11392 }
11393 }
11394
11395 \providerobustcmd*{\XeTeX}{\mbox{\Xe\hspace{-.125em}\TeX}}
11396 \providerobustcmd*{\XeLaTeX}{\mbox{\Xe\hspace{-.125em}\LaTeX}}
11397 \providerobustcmd*{\AmS}{%
11398 \leavevmode\hbox{$\mathcal A\kern-.2em\lower.376ex%
11399 \hbox{$\mathcal M\kern-.2em\mathcal S$}%
11400 }
11401 \newrobustcmd*{\LyX}{\textsf{LyX}}
11402 \providerobustcmd*{\LuaTeX}{\mbox{Lua\TeX}}
11403 \providerobustcmd*{\LuaLaTeX}{\mbox{Lua\LaTeX}}
11404 \providerobustcmd*{\BibTeX}{\mbox{B\textsc{ib}\TeX}}
11405 \providerobustcmd*{\MakeIndex}{\mbox{\textit{MakeIndex}}}
11406 \providerobustcmd*{\ConTeXt}{\mbox{Con\TeX{t}}}
11407 \providerobustcmd*{\MiKTeX}{\mbox{MiK\TeX}}
11408 \end{warpall}

```

```

for HTML output: 11409 \begin{warpHTML}

```

The print-mode versions of the following may be changed by `metalogo`, so their print formatting is recorded `\AtBeginDocument`.

`\TeX` `TEX`

`latexlogo` is a css class used to properly typeset the E and A in  $\LaTeX$  and friends.

`latexlogofont` is a css class used to select the font for the rest of the logo in  $\LaTeX$ , `LuaTeX`, `ConTeXt`, etc.

```

11410 \newrobustcmd*{\LWR@HTML@TeX}
11411 {%

```

```

11412 \InlineClass{latexlogofont}%
11413 {%
11414 \InlineClass{latexlogo}%
11415 {%
11416 T%
11417 \InlineClass{latexlogosub}{e}%
11418 X%
11419 }%
11420 }%
11421 }
11422 \AtBeginDocument{\LWR@formatted{TeX}}% may have been patched by metalogo

```

\LaTeX L<sup>A</sup>T<sub>E</sub>X, L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub>  
\LaTeXe

```

11423 \newrobustcmd*{\LWR@HTML@LaTeX}
11424 {%
11425 \InlineClass{latexlogofont}%
11426 {%
11427 \InlineClass{latexlogo}%
11428 {%
11429 L%
11430 \InlineClass{latexlogosup}{a}%
11431 T%
11432 \InlineClass{latexlogosub}{e}%
11433 X%
11434 }%
11435 }%
11436 }
11437
11438 \AtBeginDocument{\LWR@formatted{LaTeX}}% may have been patched by metalogo
11439
11440
11441 \newrobustcmd*{\LWR@HTML@LaTeXe}
11442 {%
11443 \LaTeX%
11444 \InlineClass{latexlogofont}{%
11445 \InlineClass{latexlogotwoe}{%
11446 2%
11447 \InlineClass{latexlogotwoesub}{\HTMLUnicode{03B5}}%
11448 }%
11449 }%
11450 }
11451 \AtBeginDocument{\LWR@formatted{LaTeXe}}% may have been patched by metalogo

```

\LuaTeX LuaT<sub>E</sub>X, LuaL<sup>A</sup>T<sub>E</sub>X  
\LuaLaTeX

```

11452 \newrobustcmd*{\LWR@HTML@LuaTeX}{\InlineClass{latexlogofont}{Lua}\TeX}
11453 \AtBeginDocument{\LWR@formatted{LuaTeX}}% may have been patched by metalogo
11454
11455 \newrobustcmd*{\LWR@HTML@LuaLaTeX}{\InlineClass{latexlogofont}{Lua}\LaTeX}
11456 \AtBeginDocument{\LWR@formatted{LuaLaTeX}}% may have been patched by metalogo

```

`\XeTeX` XeTeX, XeLaTeX  
`\XeLaTeX`

`xetexlogo` is a css class which aligns the backwards E in XeTeX and spaces TeX appropriately.

`xelatexlogo` is a css class which aligns the backwards E in XeLaTeX and spaces LaTeX appropriately.

```
11457 \newrobustcmd*{\LWR@HTML@Xe}
11458 {%
11459 X%
11460 \InlineClass{xetexlogosub}{\HTMLunicode{18e}}%
11461 }
11462 \AtBeginDocument{\LWR@formatted{Xe}}% may have been patched by metalogo
11463
11464 \newrobustcmd*{\LWR@HTML@XeTeX}{\InlineClass{xetexlogo}{\Xe}\TeX}
11465 \AtBeginDocument{\LWR@formatted{XeTeX}}% may have been patched by metalogo
11466
11467 \newrobustcmd*{\LWR@HTML@XeLaTeX}{\InlineClass{xelatexlogo}{\Xe}\LaTeX}
11468 \AtBeginDocument{\LWR@formatted{XeLaTeX}}% may have been patched by metalogo
```

`\ConTeXt` ConTeXt

```
11469 \newrobustcmd*{\LWR@HTML@ConTeXt}{%
11470 \InlineClass{latexlogofont}{Con}\TeX{}}%
11471 \InlineClass{latexlogofont}{t}}%
11472 }
11473 \LWR@formatted{ConTeXt}
```

`\BibTeX` BibTeX, *MakeIndex*  
`\MakeIndex`

```
11474 \newrobustcmd*{\LWR@HTML@BibTeX}
11475 {\InlineClass{latexlogofont}{B\textsc{ib}}\TeX}
11476 \LWR@formatted{BibTeX}
11477
11478 \newrobustcmd*{\LWR@HTML@MakeIndex}
11479 {\InlineClass{latexlogofont}{\textit{MakeIndex}}}
11480 \LWR@formatted{MakeIndex}
```

`\AmS` AMS

`amslogo` is a css class used for the AMS logo.

```
11481 \AtBeginDocument{%
11482 \newrobustcmd*{\LWR@HTML@AmS}
11483 {%
11484 \InlineClass{amslogo}{%
11485 \textit{%
11486 A%
11487 \InlineClass{latexlogosub}{M}%
11488 S%
11489 }}%
11490 }%
```

```

11491 }%
11492 \LWR@formatted{AmS}
11493 }

```

`\MiKTeX` `MiKTeX`

```

11494 \newrobustcmd*{\LWR@HTML@MiKTeX}{\InlineClass{latexlogofont}{MiK}\TeX}
11495 \LWR@formatted{MiKTeX}

```

`\LyX` `LyX`

`lyxLogo` is a css class used for the LyX logo.

```

11496 \newrobustcmd*{\LWR@HTML@LyX}{\InlineClass{lyxlogo}{LyX}}
11497 \LWR@formatted{LyX}

```

```

11498 \end{warpHTML}

```

## 95 `\AtBeginDocument`, `\AtEndDocument`

**for HTML output:** 11499 `\begin{warpHTML}`

`\LWR@LwarpStart` Automatically sets up the HTML-related actions for the start and end of the document.

```

\LWR@LwarpEnd
11500 \AfterEndPreamble{\LWR@LwarpStart}
11501 \AtEndDocument{\LWR@LwarpEnd}

```

```

11502 \end{warpHTML}

```

## 96 Loading KOMA-SCRIPT class patches

Load patches to koma-script.

**for HTML output:** 11503 `\begin{warpHTML}`

```

11504 \@ifclassloaded{scrbook}{\RequirePackage{lwarp-patch-komascript}}{}
11505 \@ifclassloaded{scrartcl}{\RequirePackage{lwarp-patch-komascript}}{}
11506 \@ifclassloaded{scrreprt}{\RequirePackage{lwarp-patch-komascript}}{}

```

```

11507 \end{warpHTML}

```



## 97 Loading MEMOIR class patches

Load patches to memoir.

```
for HTML output: 11508 \begin{warpHTML}
 11509 \@ifclassloaded{memoir}{\RequirePackage{lwarp-patch-memoir}}{}
 11510 \end{warpHTML}
```

## 98 ut\* class patches

Load patches to uj\* and ut\* classes, as well as ltj\* classes.

```
for HTML output: 11511 \begin{warpHTML}
 11512 \newcommand*{\LWR@patchujtclasses}{
 uj/t does not use \partname
 11513 \def\@partnameformat{}
 11514 \def\@partcntformat##1{%
 11515 \prepartname%
 11516 \csname the##1\endcsname%
 11517 \postpartname%
 11518 \quad%
 11519 }
 11520 \@ifundefined{chapter}{}{
 11521 \def\@chaptcntformat##1{%
 11522 \prechaptername%
 11523 \csname the##1\endcsname%
 11524 \postchaptername%
 11525 \quad%
 11526 }
 11527 }
 Use decimal points instead of centered dots:
 11528 \renewcommand{\thepart}{\@Roman\c@part}
 11529 \@ifundefined{chapter}{
 11530 \renewcommand{\thesection}{\@arabic\c@section}
 11531 }{
 11532 \renewcommand{\thechapter}{\@arabic\c@chapter}
 11533 \renewcommand{\thesection}{\thechapter.\@arabic\c@section}
 11534 }
 11535 \renewcommand{\thesubsection}{\thesection.\@arabic\c@subsection}
 11536 \renewcommand{\thesubsubsection}{%
 11537 \thesubsection.\@arabic\c@subsubsection}
```

```

11538 \renewcommand{\theparagraph}{%
11539 \thesubsubsection.\@arabic\c@paragraph}
11540 \renewcommand{\thesubparagraph}{%
11541 \theparagraph.\@arabic\c@subparagraph}
11542 \@ifundefined{chapter}{
11543 \renewcommand{\thefigure}{\@arabic\c@figure}
11544 \renewcommand{\thetable}{\@arabic\c@table}
11545 }{
11546 \renewcommand{\thefigure}{%
11547 \ifnum\c@chapter>\z@\thechapter.\fi\@arabic\c@figure}
11548 \renewcommand{\thetable}{%
11549 \ifnum\c@chapter>\z@\thechapter.\fi\@arabic\c@table}
11550 }
11551 }
11552
11553 \@ifclassloaded{ujarticle}{\LWR@patchujtclasses}{}
11554 \@ifclassloaded{ujbook}{\LWR@patchujtclasses}{}
11555 \@ifclassloaded{ujreport}{\LWR@patchujtclasses}{}
11556 \@ifclassloaded{utarticle}{\LWR@patchujtclasses}{}
11557 \@ifclassloaded{utbook}{\LWR@patchujtclasses}{}
11558 \@ifclassloaded{utreport}{\LWR@patchujtclasses}{}
11559 \@ifclassloaded{ltjarticle}{\LWR@patchujtclasses}{}
11560 \@ifclassloaded{ltjbook}{\LWR@patchujtclasses}{}
11561 \@ifclassloaded{ltjreport}{\LWR@patchujtclasses}{}
11562 \@ifclassloaded{ltjsarticle}{\LWR@patchujtclasses}{}
11563 \@ifclassloaded{ltjsbook}{\LWR@patchujtclasses}{}
11564 \@ifclassloaded{ltjsreport}{\LWR@patchujtclasses}{}
11565 \@ifclassloaded{ltjskiyou}{\LWR@patchujtclasses}{}
11566 \@ifclassloaded{ltjspf}{\LWR@patchujtclasses}{}
11567 \@ifclassloaded{ltjtarticle}{\LWR@patchujtclasses}{}
11568 \@ifclassloaded{ltjtbook}{\LWR@patchujtclasses}{}
11569 \@ifclassloaded{ltjtreport}{\LWR@patchujtclasses}{}

11570 \end{warpHTML}

```

## 99 CTEX patches

Patches for `ctex` and related classes, which are loaded before `lwarp`.

All CTEX classes and the `ctex` package seem to load `ctexpatch`, so its presence is used to decide whether to have `lwarp` patch CTEX.

**for HTML output:** 11571 `\begin{warpHTML}`

`\AtBeginDocument` in case the user set `FileSectionNames` in the preamble.

```

11572 \AtBeginDocument{
11573 \ifpackageloaded{ctexpatch}{%
11574 \def\@partcntformat#1{%
11575 \LWR@isolate{\CTEX@partname}~%
11576 \CTEX@part@aftername%
11577 }%

```

```

11578
11579 \def\@partnameformat{}
11580
11581 \def\@chapcntformat#1{%
11582 \LWR@isolate{\CTEX@chaptername}~%
11583 \CTEX@chapter@aftername%
11584 }%
11585 }{}
11586 }

11587 \end{warpHTML}

```

## 100 kotexutf patches

Patch for kotexutf, which is loaded before lwarp.

kotexutf's \@setref was conflicting with lwarp's cross references.

**for HTML output:** 11588 \begin{warpHTML}

If kotexutf's version of \@setref is detected, it is reverted to the original.

```

11589 \AtBeginDocument{
11590 \ifpackageloaded{kotexutf}{%
11591 \def\LWR@kotexutf@setref#1#2#3{%
11592 \@setref@dhucs@orig{#1}{#2}{#3}%
11593 \ifx#1\relax\else
11594 \bgroup
11595 \dhucs@make@CJKchar@null
11596 \edef\@temp{\expandafter#2#1}\global\josatoks\expandafter{\@temp}%
11597 \egroup
11598 \fi%
11599 }%
11600
11601 \ifdefequal{\@setref}{\LWR@kotexutf@setref}{
11602 \let\@setref\@setref@dhucs@orig
11603 }{}
11604 }{}
11605 }

11606 \end{warpHTML}

```

File 2 **lwarp-2in1.sty**§ 101 Package **2in1**

Pkg 2in1 2in1 is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{2in1}File 3 **lwarp-2up.sty**§ 102 Package **2up**

Pkg 2up 2up is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{2up}[2010/05/15]

```

2 \def\source#1#2#3{}
3 \def\target#1#2#3{}
4 \def\targetlayout#1{}
5 \newdimen\pageseplength
6 \newdimen\pagesepwidth
7 \newdimen\pagesepoffset
8 \def\twoupemptypage{}
9 \def\twoupclearpage{}
10 \def\twoupeject{}
11 \def\twouparticle{}
12 \def\twoupplain{}
13 \def\twouplegaltarget{}
14 \def\twouplandscape{}
15 \def\TwoupWrites{}

```

File 4 **lwarp-a4.sty**§ 103 Package **a4**

Pkg a4 a4 is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{a4}[2004/04/15]

```

2 \newcommand*\WideMargins{}

```

File 5 **lwarp-a4wide.sty**

§ 104 Package **a4wide**

Pkg a4wide a4wide is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{a4wide}[1994/08/30]

File 6 **lwarp-a5comb.sty**

§ 105 Package **a5comb**

Pkg a5comb a5comb is ignored.


**for HTML output:** 1 \LWR@ProvidesPackageDrop{a5comb}

File 7 **lwarp-abstract.sty**

§ 106 Package **abstract**

*(Emulates or patches code by PETER WILSON.)*

Pkg abstract abstract is supported and patched by lwarp.

 **missing toc** If using the number option with file splits, be sure to place the table of contents before the abstract. The number option causes a section break which may cause a file split, which would put a table of contents out of the home page if it is after the abstract.

**for HTML output:** memoir provides an abstract environment even though it is not an article or report class. Meanwhile, lwarp loads book to emulate memoir, but book does not have an abstract environment, so when the abstract package is loaded for emulation there is no pre-existing abstract to redefine, which would cause an error. Thus, a null abstract is provide here:

```
1 \ProvideDocumentEnvironment{abstract}{}{}{}
```

Accept all options for lwarp-abstract:

```
2 \LWR@ProvidesPackagePass{abstract}[2009/06/08]
```

```
3 \AtBeginDocument{
4 \BeforeBeginEnvironment{abstract}{
5 \LWR@forcenewpage
6 \BlockClass{abstract}
7 }
```

```

8 \AfterEndEnvironment{abstract}{\endBlockClass}
9 }
10
11 \renewcommand{\@bsrunintitle}{%
12 \hspace*{\abstitleskip}%
13 {\abstractnamefont%
14 \InlineClass{abstractrunintitle}{\abstractname}%
15 \@bslabeldelim}%
16 }
17
18 \@ifclassloaded{memoir}
19 {
20 \renewenvironment{abstract}{%
21 % \titlepage
22 \null\vfil
23 \@beginparpenalty\@lowpenalty
24 \if@bsrunin
25 \else
26 \if@bsstyle
27 \abstitlestyle{\BlockClassSingle{abstracttitle}{\abstractname}}
28 \else
29 \ifnumber@bs
30 \num@bs
31 \else
32 \begin{\absnamepos}%
33 \abstractnamefont \BlockClassSingle{abstracttitle}{\abstractname}
34 \endparpenalty\@M
35 \end\absnamepos%
36 %% \vspace{\abstitleskip}%
37 \fi
38 \fi
39 \vspace{\abstitleskip}%
40 \fi
41 \put@bsintoc%
42 \begin{@bstrctlist}\if@bsrunin\@bsrunintitle\fi\abstracttextfont}%
43 {\par\end{@bstrctlist}\vfil\null%\endtitlepage
44 }
45 }{% not memoir
46 \if@titlepage
47 \renewenvironment{abstract}{%
48 % \titlepage
49 \null\vfil
50 \@beginparpenalty\@lowpenalty
51 \if@bsrunin
52 \else
53 \if@bsstyle
54 \abstitlestyle{\BlockClassSingle{abstracttitle}{\abstractname}}
55 \else
56 \ifnumber@bs
57 \num@bs
58 \else
59 \begin{\absnamepos}%
60 \abstractnamefont \BlockClassSingle{abstracttitle}{\abstractname}
61 \endparpenalty\@M
62 \end\absnamepos%

```

---

```

63 %% \vspace{\abstitlekip}%
64 \fi
65 \fi
66 \vspace{\abstitlekip}%
67 \fi
68 \put@bsintoc%
69 \begin{@bstr@ctlist}\if@bsrunin\@bsrunintitle\fi\abstracttextfont}%
70 {\par\end{@bstr@ctlist}\vfil\null%\endtitlepage
71 }
72 \else
73 \renewenvironment{abstract}{%
74 \if@bsrunin
75 \else
76 \if@bsstyle
77 \abstitlestyle{\BlockClassSingle{abstracttitle}{\abstractname}}
78 \else
79 \ifnumber@bs
80 \num@bs
81 \else
82 \begin{\absnamepos}%
83 \abstractnamefont\BlockClassSingle{abstracttitle}{\abstractname}%
84 \end\absnamepos%
85 %% \vspace{\abstitlekip}%
86 \fi
87 \fi
88 \vspace{\abstitlekip}%
89 \fi
90 \put@bsintoc%
91 \begin{@bstr@ctlist}\if@bsrunin\@bsrunintitle\fi\abstracttextfont}%
92 {\par\end{@bstr@ctlist}}
93 \fi
94 }% not memoir

```

---

File 8 **lwarp-academics.sty**

§ 107 Package **academics**

*(Emulates or patches code by DIOGO A. B. FERNANDES.)*

Pkg academics academics is patched for use by lwarp.

If `\aiicon` is used, the name of the icon is used in the `alt` tag. Otherwise, for each of the individual icon macros, a generic `alt` tag is used.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{academics}[2018/06/27]
2 \LetLtxMacro\LWR@orig@symbol\symbol
3
4 \let\LWR@academics@orig@AI\AI
5
6 \newcommand*{\LWR@academics@symbol}[1]{%
7 \begin{lateximage}*(academicon)[academics#1]%
8 \begin{group%

```

```

9 \LWR@academicons@orig@AI%
10 \LWR@orig@symbol{#1}%
11 \endgroup%
12 \end{lateximage}%
13 }
14
15 \renewcommand*{\AI}{%
16 \LetLtxMacro\symbol\LWR@academicons@symbol%
17 }
18
19 \renewcommand*{\aiicon}[1]
20 {%
21 \begin{lateximage}*[(#1 icon)][academicons#1]%
22 \AI\csname aiicon@#1\endcsname%
23 \end{lateximage}%
24 }

```

---

File 9 **lwarp-accsupp.sty**

§ 108 Package **accsupp**

Pkg accsupp accsupp is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{accsupp}[2018/03/28]

```

2 \newcommand*{\BeginAccSupp}[1]{}
3 \newcommand*{\EndAccSupp}[1]{}

```

---

File 10 **lwarp-acro.sty**

§ 109 Package **acro**

*(Emulates or patches code by CLEMENS NIEDERBERGER.)*

Pkg acro acro is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{acro}[2017/01/30]

`\DeclareAcronym` is used in the preamble, where `lwarp` has not yet made the dollar active, so temporarily enable `lwarp` math catcode just for this definition:

```

2 \ExplSyntaxOn
3 \NewDocumentCommand \LWR@DeclareAcronym {mm}
4 {
5 \acro_declare_acronym:nn {#1} {#2}
6 \catcode'\$=3% lwarp
7 }
8 \ExplSyntaxOff
9

```



```

10 \RenewDocumentCommand{\DeclareAcronym}{}{
11 \catcode'\$=\active% lwarp
12 \LWR@DeclareAcronym
13 }

```

Modified to activate the current font:

```

14 \ExplSyntaxOn
15 \cs_gset_protected:Npn \acro_write_short:nn #1#2
16 {
17 \mode_if_horizontal:F { \leavevmode }
18 \group_begin:
19 \bool_if:NTF \l__acro_custom_format_bool
20 { \l__acro_custom_format_tl }
21 { \l__acro_short_format_tl }
22 {\LWR@textcurrentfont{#2}}% lwarp
23 \group_end:
24 }
25
26 \cs_gset_protected:Npn \acro_write_alt:nn #1#2
27 {
28 \mode_if_horizontal:F { \leavevmode }
29 \group_begin:
30 \bool_if:NTF \l__acro_custom_format_bool
31 { \l__acro_custom_format_tl }
32 { \l__acro_alt_format_tl }
33 {\LWR@textcurrentfont{#2}}% lwarp
34 \group_end:
35 }
36
37 \cs_gset_protected:Npn \acro_write_long:nn #1#2
38 {
39 \mode_if_horizontal:F { \leavevmode }
40 \group_begin:
41 \bool_if:NTF \l__acro_custom_long_format_bool
42 { \l__acro_custom_long_format_tl }
43 { \use:n }
44 {
45 \use:x
46 {
47 \exp_not:n {#1}
48 {
49 \bool_if:NTF \l__acro_first_upper_bool
50 { \exp_not:N \l__acro_first_upper_case:n { \exp_not:n {
51 \LWR@textcurrentfont{#2}}% lwarp
52 } } }
53 { \exp_not:n {\LWR@textcurrentfont{#2}} }% lwarp
54 }
55 }
56 }
57 \group_end:
58 }
59 \ExplSyntaxOff

```

File 11 **lwarp-acronym.sty**

§ 110 Package **acronym**

(Emulates or patches code by TOBIAS OETIKER.)

Pkg acronym acronym is patched for use by lwarp.

△ multiply-defined labels \acresetall does not work with cleveref, causing multiply-defined labels. lwarp patches acronym for HTML, but not for print mode.

for HTML output: 1 \LWR@ProvidesPackagePass{acronym}[2015/03/21]

Uses \textit instead of \itshape:

```
2 \renewcommand{\acfia}[1]{%
3 {\textit{\AC@acl{#1}}} (\ifAC@starred\acs*{#1}\else\acs{#1}\fi)}
```

Removes the mbox to allow math inside:

```
4 \renewcommand*\AC@acs[1]{%
5 % \mbox{
6 \expandafter\AC@get\csname fn#1\endcsname\@firstoftwo{#1}}
7 % }
```

Fix for acronym labels in the captions of floats.

```
8 \renewcommand{\@starttoc}[1]{
9 \LWR@html@elementclass{nav}{#1}
10 \LetLtxMacro\@verridelabel\@gobble
11 \LWR@orig@starttoc{#1}
12 \LWR@html@elementclassend{nav}{#1}
13 }
```

Modified for cleveref and lwarp:

```
14 \renewcommand*\AC@und@newl@bel[3]{%
15 \@ifundefined{#1@#3}%
16 {%
17 \global\expandafter\let\csname#2@#3\endcsname\@nnil
18 \global\expandafter\let\csname#2@#3@lwarp\endcsname\@nnil% lwarp
19 \global\expandafter\let\csname#2@#3@cref\endcsname\@nnil% lwarp
20 }%
21 {%
22 \global\expandafter\let\csname#1@#3\endcsname\relax
23 \global\expandafter\let\csname#1@#3@lwarp\endcsname\relax% lwarp
24 \global\expandafter\let\csname#1@#3@cref\endcsname\relax% lwarp
25 }%
26 }
```

File 12 **lwarp-adjmulticol.sty**

§ 111 Package **adjmulticol**

*(Emulates or patches code by BORIS VEYTSMAN.)*

Pkg adjmulticol adjmulticol is emulated.

Emulation similar to multicols is used, with adjusted margins. If the number of columns is specified as 1, it is set so, but if two or greater are used, lwarp allows a variable number of columns up to three.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{adjmulticol}[2012/01/20]

2 \RequirePackage{multicol}

adjmulticols \* {<numcols>} {<left margi>} {<right margin>}

3 \NewDocumentEnvironment{adjmulticols}{s m m}

4 {%

Compute the margins, and limit to positive only:

5 \setlength{\LWR@templengthone}{#3}%

6 \ifdimcomp{\LWR@templengthone}{<}{0pt}{\setlength{\LWR@templengthone}{0pt}}{ }%

7 \setlength{\LWR@templengthtwo}{#4}

8 \ifdimcomp{\LWR@templengthtwo}{<}{0pt}{\setlength{\LWR@templengthtwo}{0pt}}{ }%

If one column is specified, use a <div> of class singlecolumn, else use multicols:

9 \newcommand\*{\LWR@mccolstype}{multicols}%

10 \ifnumcomp{#2}{=}{1}{\renewcommand\*{\LWR@mccolstype}{singlecolumn}}{ }%

Help avoid page overflow:

11 \LWR@forcenewpage%

Create the <div> with the given margin and class:

12 \BlockClass[%

13 \LWR@print@mbbox{margin-left:\LWR@printlength{\LWR@templengthone}} ; %

14 \LWR@print@mbbox{margin-right:\LWR@printlength{\LWR@templengthtwo}}%

15 ]{\LWR@mccolstype}%

16 }

17 {\endBlockClass}

File 13 **lwarp-addlines.sty**§ 112 Package **addlines***(Emulates or patches code by WILL ROBERTSON.)*

Pkg addlines addlines is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{addlines}[2018/12/05]

2 \newcommand\addlines{\@ifstar\addlines@a\addlines@a}
3 \newcommand\addlines@a[1][1]{}
4 \let\addline\addlines
5 \newcommand\removelines{\@ifstar\removelines@a\removelines@a}
6 \newcommand\removelines@a[1][1]{}
7 \let\removeline\removelines
8 \newcommand\squeezepage[1][0]{}

```

File 14 **lwarp-afterpage.sty**§ 113 Package **afterpage***(Emulates or patches code by DAVID CARLISLE.)*

Pkg afterpage Emulated.

**for HTML output:** Discard all options for lwarp-afterpage:

```

1 \LWR@ProvidesPackageDrop{afterpage}[2014/10/28]

2 \newcommand{\afterpage}[1]{#1}

```

File 15 **lwarp-algorithm2e.sty**§ 114 Package **algorithm2e***(Emulates or patches code by CHRISTOPHE FIORIO.)*

Pkg algorithm2e algorithm2e is patched for use by lwarp.

For print output, captions are placed according to package options, but for HTML output captions are placed where used. Therefore, to have captions appear at the top of the algorithms for both print and HTML, place each captions at the top of each algorithm.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{algorithm2e}[2017/07/18]

```

For the list-of entries:

```
2 \renewcommand{\l@algocf}[2]{\hypertocfloat{1}{algocf}{loa}{#1}{#2}}
```

Select the lwarp float style according to the algorithm2e style:

```
3 \newcommand*\LWR@floatstyle@algocf{ruled}
4
5 \ifdefstring{\algocf@style}{boxed}{%
6 \renewcommand*\LWR@floatstyle@algocf}{boxed}
7 }{}
8
9 \ifdefstring{\algocf@style}{boxruled}{%
10 \renewcommand*\LWR@floatstyle@algocf}{boxruled}
11 }{}
12
13 \ifdefstring{\algocf@style}{plain}{%
14 \renewcommand*\LWR@floatstyle@algocf}{plain}
15 }{}
```

Paragraph handling to allow line numbers under certain conditions:

```
16 \newbool{LWR@algocf@dopars}
17 \booltrue{LWR@algocf@dopars}
18
19 \renewcommand{\algocf@everypar}{%
20 \ifbool{LWR@algocf@dopars}{%
21 \ifbool{LWR@doingstartpars}{%
22 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
23 }{%
24 {%
25 \algocf@everypar\n\algocf@everyparhanging%
26 }%
27 }{}%
28 }{}%
29 }
```

lwarp caption handling:

```
30 \renewcommand{\algocf@makecaption}[2]{%
31 \LWR@HTML@caption@begin{algocf}%
32 \LWR@isolate{\algocf@captiontext{#1}{#2}}%
33 \LWR@HTML@caption@end%
34 }
```

Print any caption where it is declared:

```
35 \renewcommand{\algocf@makecaption@plain}[2]{%
36 \LWR@HTML@caption@begin{algocf}%
37 \LWR@isolate{\algocf@captiontext{#1}{#2}}%
38 \LWR@HTML@caption@end%
39 }
40
41 \renewcommand{\algocf@makecaption@boxed}[2]{%
42 \LWR@HTML@caption@begin{algocf}%
```

```

43 \LWR@isolate{\algocf@captiontext{#1}{#2}}%
44 \LWR@HTML@caption@end%
45 }
46
47 \renewcommand{\algocf@makecaption@ruled}[2]{%
48 \LWR@HTML@caption@begin{\algocf}%
49 \LWR@isolate{\algocf@captiontext{#1}{#2}}%
50 \LWR@HTML@caption@end%
51 }

```

Turn off line numbering while making the caption:

```

52 \long\def\algocf@latexcaption#1[#2]#3{% original definition of caption
53 \boolfalse{LWR@algocf@dopars}% lwarp
54 \par%
55 \addcontentsline{\csname ext@#1\endcsname}{#1}%
56 {\protect\numberline{\csname the#1\endcsname}{\ignorespaces \LWR@isolate{#2}}}%
57 \begingroup%
58 \@parboxrestore%
59 \if@minipage%
60 \setminipage%
61 \fi%
62 \normalsize%
63 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par%
64 \endgroup%
65 \booltrue{LWR@algocf@dopars}% lwarp
66 }

```

Line numbers are printed in a `<span>` of class `alg2elinenumber`:

```

67 \renewcommand{\algocf@printnl}[1]{%
68 \InlineClass{alg2elinenumber}{\NLSty{#1}}~%
69 }%

```

While initializing an algorithm environment, locally declare the style of a regular figure to be the same as the algorithm style, in case the figure option was used.

```

70 \preto{\algocf@init}{%
71 \edef\LWR@floatstyle@figure{\LWR@floatstyle@algocf}%
72 }

```

For `lwarp`, the algorithm is not assembled inside a box, since `lateximages` would not work, so the captions are printed where declared.

```

73 \renewcommand{\@algocf@start}{%
74 \let\@mathsemicolon=\; \def\;{\ifmmode\@mathsemicolon\else\@endalgoln\fi}%
75 % \raggedright%
76 \ALFnt{}}%
77 \booltrue{LWR@algocf@dopars}% lwarp
78 }
79
80 \renewcommand{\@algocf@finish}{%
81 \boolfalse{LWR@algocf@dopars}% lwarp
82 \lineskip\normallineskip\setlength{\skiptotal}{\@defaultskiptotal}%

```

```

83 \let\;=\@mathsemicolon%
84 \let\]=\@emathdisplay%
85 }

```

Use an HTML break:

```

86 \renewcommand{\BlankLine}{%
87 \LWR@stoppars%
88 \LWR@htmltagc{br /}%
89 \LWR@startpars%
90 }

```

Simplified for HTML. The paragraph handling must be preserved.

```

91 \renewcommand{\SetKwInOut}[2]{%
92 \algocf@newcommand{#1}[1]{%
93 \ifthenelse{\boolean{algocf@hanginginout}}%
94 {\relax}%
95 {\algocf@seteveryparhanging{\relax}}%
96 \ifthenelse{\boolean{algocf@inoutnumbered}}%
97 {\relax}%
98 {\algocf@seteveryparnl{\relax}}%
99 {%
100 \KwSty{#2\algocf@typo:}%
101 ~##1\par%
102 }%
103 \algocf@linesnumbered% reset the numbering of the lines
104 \ifthenelse{\boolean{algocf@hanginginout}}%
105 {\relax}%
106 {\algocf@reseteveryparhanging}%
107 }%
108 }%
109
110 \renewcommand{\ResetInOut}[1]{%

```

Each of the following creates a <div> of a given class, and turns off line numbering while creating the <div> tags:

```

111 \renewcommand{\algocf@Vline}[1]{%
112 \boolfalse{LWR@algocf@dopars}%
113 \begin{BlockClass}{alg2evline}
114 \booltrue{LWR@algocf@dopars}%
115 #1
116 \boolfalse{LWR@algocf@dopars}%
117 \end{BlockClass}
118 \booltrue{LWR@algocf@dopars}%
119 }

120 \renewcommand{\algocf@Vsline}[1]{%
121 \boolfalse{LWR@algocf@dopars}%
122 \begin{BlockClass}{alg2evsline}
123 \booltrue{LWR@algocf@dopars}%
124 #1
125 \boolfalse{LWR@algocf@dopars}%
126 \end{BlockClass}

```

```

127 \booltrue{LWR@algocf@dopars}%
128 }

129 \renewcommand{\algocf@Noline}[1]{%
130 \boolfalse{LWR@algocf@dopars}%
131 \begin{BlockClass}{alg2enoline}
132 \booltrue{LWR@algocf@dopars}%
133 #1
134 \boolfalse{LWR@algocf@dopars}%
135 \end{BlockClass}
136 \booltrue{LWR@algocf@dopars}%
137 }

```

The [H] environment is converted to a regular float, which in HTML is placed where declared. Reusing the regular float allows the [H] version to reuse the ruled and boxed options.

```

138 \LetLtxMacro\algocf@Here\algocf
139 \LetLtxMacro\endalgocf@Here\endalgocf

```

---

## File 16 **lwarp-algorithmicx.sty**


### § 115 Package **algorithmicx**

*(Emulates or patches code by SZÁSZ JÁNOS.)*

Pkg algorithmicx **algorithmicx** is supported with minor adjustments.

**for HTML output:** 1 \LWR@ProvidesPackagePass{algorithmicx}[2005/04/27]

Inside the algorithmic environment, level indenting is converted to a <span> of the required length, and comments are placed inside a <span> which is floated right.

 **package conflicts** If using \newfloat, trivfloat, and/or algorithmicx together, see section 475.1.

**for HTML output:** 2 \begin{warpHTML}

```

3 \AtBeginEnvironment{algorithmic}{%
4 %
5 \let\origALG@doentity\ALG@doentity%
6 %
7 \renewcommand*\ALG@doentity}{%
8 \origALG@doentity%
9 \LWR@htmltagc{%
10 span style="width:\LWR@printlength{\ALG@thistlm}; display:inline-block;"%
11 }%
12 \ifbool{FormatWP}{%
13 \setlength{\LWR@templengthone}{\the\ALG@thistlm}%
14 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
15 \quad%
16 \addtolength{\LWR@templengthone}{-1em}%
17 }%

```



```

18 }{}%
19 \LWR@htmltagc{/span}%
20 }%
21
22 \let\LWR@origComment\Comment%
23
24 \renewcommand{\Comment}[1]{%
25 \InlineClass{floatright}{\LWR@origComment{#1}}%
26 }%
27 }
28
29 \renewcommand\algorithmiccomment[1]{%
30 \hfill\HTMLUnicode{25B7} #1% white right triangle
31 }%

32 \end{warpHTML}

```

---

File 17 **lwarp-alltt.sty**

§ 116 Package **alltt**

*(Emulates or patches code by JOHANNES BRAAMS.)*

Pkg alltt alltt is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{alltt}[1997/06/16]

2 \AfterEndPreamble{
3 \LWR@traceinfo{Patching alltt.}
4 \AtBeginEnvironment{alltt}{%
5 \LWR@forcenewpage
6 \LWR@atbeginverbatim{3}{alltt}%
7 }
8 \AfterEndEnvironment{alltt}{%
9 \LWR@afterendverbatim{2}%
10 }
11 }

```

---

File 18 **lwarp-amsmath.sty**

§ 117 Package **amsmath**

*(Emulates or patches code by AMERICAN MATHEMATICAL SOCIETY, L<sup>A</sup>T<sub>E</sub>X3 PROJECT.)*

Pkg amsmath amsmath is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{amsmath}[2017/09/02]

```

Patches to allow `\eqref` inside a caption:

```

2 \def\maketag@@@#1{\text{#1}}
3 \def\tagform@#1{\maketag@@@(\ignorespaces#1\unskip)}

```

Patches for  $\mathcal{AMS}$  math `\tag` macro to remember the first tag:

```

4 \ifbool{mathjax}{}% not mathjax
5
6 \LetLtxMacro\LWR@origmake@df@tag@\make@df@tag@@
7 \LetLtxMacro\LWR@origmake@df@tag@@@\make@df@tag@@@
8
9 \renewcommand*\make@df@tag@[1]{%
10 \LWR@remembertag{#1}%
11 \LWR@origmake@df@tag@{#1}%
12 }
13
14 \renewcommand*\make@df@tag@@[1]{%
15 \LWR@remembertag{#1}%
16 \LWR@origmake@df@tag@@{#1}%
17 }
18
19 }% not mathjax

```

The following  $\mathcal{AMS}$  environments are patched in-place:

`\LWR@amsmathenv@before`     $\{(\textit{environment name})\}$

Embeds the environment inside a `lateximage`.

```

20 \newcommand*\LWR@amsmathenv@before[1]{%
21 \begin{BlockClass}{displaymathnumbered}
22 \LWR@newautoanchor%
23 \booltrue{LWR@indisplaymathimage}%
24 \begin{lateximage}[\LWR@amsmathbodynumbered{#1}]
25 \LWR@applyxfakebold%
26 }

```

`\LWR@amsmathenv@before`     $\{(\textit{environment name})\}$

Embeds the environment with `MATHJAX` or a `lateximage`.

```

27 \newcommand*\LWR@amsmathenv@before[1]{%
28 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
29 {
30 \LWR@syncmathjax
31 \boolfalse{LWR@amsmultiline}
32 \ifstrequal{#1}{multiline}{\booltrue{LWR@amsmultiline}}{}
33 \ifstrequal{#1}{multline*}{\booltrue{LWR@amsmultiline}}{}

```

`autonom`'s "+" environments are not supported by `MATHJAX`.

```

34 \LWR@beginhideamsmath
35 }
36 {
37 \LWR@amsmathenv@before{multiline}
38 }
39 }

```

`\LWR@amsmathenv@after`

Embeds the environment inside a `lateximage`.

```
40 \newcommand*\LWR@amsmathenv@after{%
41 \end{lateximage}\end{BlockClass}
42 }
```

`\LWR@amsmathenv@after`     $\{(\textit{environment name})\}$

Embeds the environment with `MATHJAX` or a `lateximage`.

```
43 \newcommand*\LWR@amsmathenv@after[1]{%
44 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
45 {
46 \LWR@endhideamsmath
47 \boolfalse\LWR@amsmultline}
48 \LWR@addmathjax{#1}{\the\envbody}
49 }
50 {\LWR@amsmathenv@after}
51 }
```

Env `multline`

```
52 \BeforeBeginEnvironment{multline}{\LWR@amsmathenv@before{multline}}
53
54 \AfterEndEnvironment{multline}{\LWR@amsmathenv@after{multline}}
```

Env `multline*`

```
55 \BeforeBeginEnvironment{multline*}{\LWR@amsmathenv@before{multline*}}
56
57 \AfterEndEnvironment{multline*}{\LWR@amsmathenv@after{multline*}}
58
```

Env `gather`

```
59 \BeforeBeginEnvironment{gather}{\LWR@amsmathenv@before{gather}}
60
61 \AfterEndEnvironment{gather}{\LWR@amsmathenv@after{gather}}
```

Env `gather*`

```
62 \BeforeBeginEnvironment{gather*}{\LWR@amsmathenv@before{gather*}}
63
64 \AfterEndEnvironment{gather*}{\LWR@amsmathenv@after{gather*}}
```

Env `align`

```
65 \BeforeBeginEnvironment{align}{\LWR@amsmathenv@before{align}}
66
67 \AfterEndEnvironment{align}{\LWR@amsmathenv@after{align}}
```

Env `align*`

```
68 \BeforeBeginEnvironment{align*}{\LWR@amsmathenv@before{align*}}
69
70 \AfterEndEnvironment{align*}{\LWR@amsmathenv@after{align*}}
```

Env `flalign`

```
71 \BeforeBeginEnvironment{flalign}{\LWR@amsmathenv@before{flalign}}
72
73 \AfterEndEnvironment{flalign}{\LWR@amsmathenv@after{flalign}}
```

Env `flalign*`

```
74 \BeforeBeginEnvironment{flalign*}{\LWR@amsmathenv@before{flalign*}}
75
76 \AfterEndEnvironment{flalign*}{\LWR@amsmathenv@after{flalign*}}
```

Env `alignat`

```
77 \BeforeBeginEnvironment{alignat}{\LWR@amsmathenv@before{alignat}}
78
79 \AfterEndEnvironment{alignat}{\LWR@amsmathenv@after{alignat}}
```

Env `alignat*`

```
80 \BeforeBeginEnvironment{alignat*}{\LWR@amsmathenv@before{alignat*}}
81
82 \AfterEndEnvironment{alignat*}{\LWR@amsmathenv@after{alignat*}}
```

File 19 **lwarp-amsthm.sty**

§ 118 Package **amsthm**

*(Emulates or patches code by PUBLICATIONS TECHNICAL GROUP — AMERICAN MATHEMATICAL SOCIETY.)*

The original source code is located in `amsclass.dtx`, and printed in `amsclass.pdf`.

Pkg `amsthm` `amsthm` is patched for use by `lwarp`.

**for HTML output:** `amsthm` must be loaded before `mdframed`:

```
1 \@ifpackageloaded{mdframed}{
2 \PackageError{lwarp}
3 {Package mdframed must be loaded after package amsthm}
4 {%
5 Move \detokenize{\usepackage}{amsthm} before
6 \detokenize{\usepackage}{mdframed}. \MessageBreak
7 Package amsthm may be loaded by something else, \MessageBreak
8 which must also be moved before mdframed.%
```

Table 14: amsthm package — css styling of theorems and proofs

**Theorem:** `<div>` of class `amsthmbody<theoremstyle>`

**Theorem Name:** `<span>` of class `amsthmname<theoremstyle>`

**Theorem Number:** `<span>` of class `amsthmnumber<theoremstyle>`

**Theorem Note:** `<span>` of class `amsthmnote<theoremstyle>`

**Proof:** `<div>` of class `amsthmproof`

**Proof Name:** `<span>` of class `amsthmproofname`

where `<theoremstyle>` is `plain`, `definition`, etc.

```
9 }
10 }
11 {}
```

```
12 \LWR@ProvidesPackagePass{amsthm}[2017/10/31]
```

Storage for the style being used for new theorems:

```
13 \newcommand{\LWR@newtheoremstyle}{plain}
```

Patched to remember the style being used for new theorems:

```
14 \renewcommand{\theoremstyle}[1]{%
15 \ifundefined{th#1}{%
16 \PackageWarning{amsthm}{Unknown theoremstyle ‘#1’}%
17 \thm@style{plain}%
18 \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
19 }{%
20 \thm@style{#1}%
21 \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
22 }%
23 }
```

Patched to remember the style for this theorem type:

```
24 \def\@xnthm#1#2{%
25 \csedef{LWR@thmstyle#2}{\LWR@newtheoremstyle}% lwarp
26 \let\@tempa\relax
27 \@xp\@ifdefinable\csname #2\endcsname{%
28 \global\@xp\let\csname end#2\endcsname\@endtheorem
29 \ifx *#1% unnumbered, need to get one more mandatory arg
30 \edef\@tempa##1{%
31 \gdef\@xp\@nx\csname#2\endcsname{%
32 \@nx\@thm{\@xp\@nx\csname th\the\thm@style\endcsname}%
33 {}{##1}}}%
34 \else % numbered theorem, need to check for optional arg
35 \def\@tempa{\@oparg{\@ynthm{#2}}{}}%
```

```

36 \fi
37 \AtBeginEnvironment{#2}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#2}}}% lwarp
38 }%
39 \@tempa
40 }

```

Patched to enclose with css:

```

41 \newcommand{\LWR@haveamsthmname}{
42 \renewcommand{\thmname}[1]{\InlineClass{amsthmname\LWR@thisthmstyle}{##1}}
43 }
44
45 \newcommand{\LWR@haveamsthmnumber}{
46 \renewcommand{\thmnumber}[1]{\InlineClass{amsthmnumber\LWR@thisthmstyle}{##1}}
47 }
48
49 \newcommand{\LWR@haveamsthmnote}{
50 \renewcommand{\thmnote}[1]{\InlineClass{amsthmnote\LWR@thisthmstyle}{##1}}
51 }
52
53 \LWR@haveamsthmname
54 \LWR@haveamsthmnumber
55 \LWR@haveamsthmnote

```

Patches for css:

```

56 \def\@begintheorem#1#2[#3]{%
57 \item[
58 % \deferred@thm@head{
59 % \the\thm@headfont \thm@indent
60 \@ifempty{#1}{\let\thmname\@gobble}{\LWR@haveamsthmname}% lwarp
61 \@ifempty{#2}{\let\thmnumber\@gobble}{\LWR@haveamsthmnumber}% lwarp
62 \@ifempty{#3}{\let\thmnote\@gobble}{\LWR@haveamsthmnote}% lwarp
63 \thm@swap\swappedhead\thmhead{#1}{#2}{#3}%
64 \the\thm@headpunct~
65 \thmheadnl % possibly a newline.
66 \hskip\thm@headsep
67 %]%
68]
69 \ignorespaces}

```

Patched for css:

```

70 \def\@thm#1#2#3{%
71 \ifhmode\unskip\unskip\par\fi
72 \normalfont
73 \LWR@forcenewpage% lwarp
74 \BlockClass{amsthmbody\LWR@thisthmstyle}% lwarp
75 \trivlist
76 \let\thmheadnl\relax
77 \let\thm@swap\@gobble
78 \thm@notefont{\fontseries\mddefault\upshape}%
79 \thm@headpunct{.}% add period after heading
80 \thm@headsep 5\p@ plus\p@ minus\p@\relax
81 \thm@space@setup

```



```

130 \appto\LWR@restoreorigformatting{%
131 \LetLtxMacro\openbox\LWR@orig@openbox%
132 \LetLtxMacro\blacksquare\LWR@orig@blacksquare%
133 \LetLtxMacro\Box\LWR@orig@Box%
134 }% appto
135 }{}% @ifundefined
136 }% AtBeginDocument

```

Patched for css:

```

137 \renewenvironment{proof}[1][\proofname]{\par
138 \LWR@forcenewpage% lwarp
139 \BlockClass{amsthmproof}% lwarp
140 \pushQED{\qed}%
141 \normalfont \topsep6\p@\@plus6\p@\relax
142 \trivlist
143 \item[
144 \InlineClass{amsthmproofname}{#1\@addpunct{.}}\ignorespaces% changes
145]{%
146 \InlineClass{theoremdemark}{\popQED}\endtrivlist%
147 \endBlockClass% lwarp
148 \@endpefalse
149 }

```

---

File 20 **lwarp-anonchap.sty**

§ 119 Package **anonchap**

*(Emulates or patches code by PETER WILSON.)*

Pkg anonchap anonchap is emulated.

Pkg tocloft If using tocloft with tocbibind, anonchap, fncychap, or other packages which change chapter title formatting, load tocloft with its `titles` option, which tells tocloft to use standard L<sup>A</sup>T<sub>E</sub>X commands to create the titles, allowing other packages to work with it.

⚠ **tocloft & other packages**

The code is shared by tocbibind.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{anonchap}[2009/08/03]

2 \newcommand{\simplechapter}[1][\@empty]{%
3 \def\@chacntformat##1{%
4 #1~\csname the##1\endcsname\simplechapterdelim\quad%
5 }%
6 }
7
8 \newcommand{\restorechapter}{%
9 \let\@chacntformat\@secntformat%
10 }

```



File 21 **lwarp-anysize.sty**

§ 120 Package **anysize**

*(Emulates or patches code by MICHAEL SALZENBERG, THOMAS ESSER.)*

Pkg anysized anysized is emulated.


**for HTML output:** 1 \LWR@ProvidesPackageDrop{anysize}[1994/08/13]  
 2 \def\papersize#1#2{  
 3 \def\marginwidth#1#2#3#4{

File 22 **lwarp-appendix.sty**

§ 121 Package **appendix**

*(Emulates or patches code by PETER WILSON.)*

Pkg appendix appendix is patched for use by lwarp.

 **incorrect toc link** During HTML conversion, the option toc without the option page results in a toc link to whichever section was before the appendices environment. It is recommended to use both toc and also page at the same time.

**for HTML output:** 1 \LWR@ProvidesPackagePass{appendix}[2009/09/02]  
 2 \renewcommand\*\@chap@pppage}{%  
 3 \part\*\appendixpagename  
 4 \if@dotoc@pp  
 5 \addappheadtotoc  
 6 \fi  
 7 }  
 8  
 9 \renewcommand\*\@sec@pppage}{%  
 10 \part\*\appendixpagename  
 11 \if@dotoc@pp  
 12 \addappheadtotoc  
 13 \fi  
 14 }

File 23 **lwarp-ar.sty**

§ 122 Package **ar**

*(Emulates or patches code by AGOSTINO DE MARCO.)*

Pkg ar is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{ar}[2012/01/23]

Measure and print the width of the supplied glyph.

```
2 \newlength{\LWR@ar@width}
3
4 \newcommand*\LWR@ar@printwidth[1]{%
5 \setlength{\LWR@ar@width}{\widthof{#1}}%
6 width:%
7 \LWR@convertto{em}{\the\LWR@ar@width}em%
8 }
```

The HTML version of \AR:

```
9 \newrobustcmd*\LWR@HTML@AR}{%
```

Start a hashed lateximage, additionally hashed by the font series, with a width depending on the given glyph:

```
10 \begin{lateximage}*[AR][\LWR@f@series][\LWR@ar@printwidth{\LWR@print@AR}]%
```

For text mode, set the font series according to the HTML font series:

```
11 \ifmmode\else\csuse{\LWR@orig\LWR@f@series series}\fi%
```

Print the original glyph using the newly set font series:

```
12 \LWR@print@AR%
```

Done.

```
13 \end{lateximage}%
14 }
```

Combine the print and HTML versions:

```
15 \LWR@formatted{AR}
```

```
16 \newrobustcmd*\LWR@HTML@ARb}{%
17 \begin{lateximage}*[AR][b][\LWR@ar@printwidth{\LWR@print@ARb}]%
18 \LWR@print@ARb%
19 \end{lateximage}%
20 }
21 \LWR@formatted{ARb}
```

```
22 \newrobustcmd*\LWR@HTML@ARss}{%
23 \begin{lateximage}*[ARss][\LWR@f@series][\LWR@ar@printwidth{\LWR@print@ARss}]%
24 \ifmmode\else\csuse{\LWR@orig\LWR@f@series series}\fi%
25 \LWR@print@ARss%
26 \end{lateximage}%
27 }
28 \LWR@formatted{ARss}
```

```

29 \newrobustcmd*{\LWR@HTML@ARssb}{%
30 \begin{lateximage}*[AR][ssb][\LWR@ar@printwidth{\LWR@print@ARssb}]%
31 \LWR@print@ARssb%
32 \end{lateximage}%
33 }
34 \LWR@formatted{ARssb}

35 \newrobustcmd*{\LWR@HTML@ARtt}{%
36 \begin{lateximage}*[AR][tt][\LWR@ar@printwidth{\LWR@print@ARtt}]%
37 \LWR@print@ARtt%
38 \end{lateximage}%
39 }
40 \LWR@formatted{ARtt}

```

---

File 24 **lwarp-arabicfront.sty**

§ 123 Package **arabicfront**

Pkg arabicfront arabicfront is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{arabicfront}[2006/09/03]

---

File 25 **lwarp-array.sty**

§ 124 Package **array**

Pkg array array is used as-is for print output, and emulated for HTML.

plarray and plectarray do not affect \firsthline or \lasthline, and so are not affected by the following.

**for HTML output:** Remove the default nullfied macros:

```

1 \let\firsthline\relax
2 \let\lasthline\relax
3
4 \LWR@ProvidesPackagePass{array}[2018/12/30]

5 \newcommand*{\LWR@HTML@firsthline}{\LWR@HTMLhline}%
6 \LWR@expandableformatted{firsthline}
7
8 \newcommand*{\LWR@HTML@lasthline}{\LWR@HTMLhline}%
9 \LWR@expandableformatted{lasthline}

10 \providecommand*{\LWR@HTML@tabularnewline}{\LWR@tabularendofline}
11 \LWR@formatted{tabularnewline}

```

File 26 **lwarp-arydshln.sty**

§ 125 Package **arydshln**

*(Emulates or patches code by HIROSHI NAKASHIMA.)*

Pkg arydshln **arydshln** heavily patches tabular code, so the actual package is not used. **arydshln** is emulated for HTML `tabular`, and reverts to solid rules for `svg math array` and `tabular` in a `lateximage`.

`css` is not able to display a double-dashed border, so a single-dashed rule is displayed as a single-dashed border, and a double-dashed rule is displayed as a thicker single-dashed border.

**for HTML output:** `array` is required to allow `\newcolumn` below.

```
1 \RequirePackage{array}

2 \LWR@ProvidesPackageDrop{arydshln}[2018/09/26]
```

Ignored, but included for source compatibility:

```
3 \newdimen\dashlinedash \dashlinedash4pt %
4 \newdimen\dashlinegap \dashlinegap4pt %
5 \let\hdashlinewidth\dashlinedash
6 \let\hdashlinegap\dashlinegap
7
8 \def\ADLnullwide{}
9 \def\ADLsomewide{}
10 \def\ADLnullwidehline{}
11 \def\ADLsomewidehline{}
12
13 \def\ADLactivate{}
14 \def\ADLinactivate{}
15 \newcommand*\ADLdrawingmode[1]{}
16 \newcommand*\ADLnoshorthanded{}
17 \newcommand*\dashgapcolor[2]{}
18 \newcommand*\nodashgapcolor{}
```

In a `lateximage`, revert to solid vertical rules:

```
19 \appto\LWR@restoreorigformatting{%
20 \newcolumnntype{:}{|}%
21 \newcolumnntype{;}[1]{|}%
22 \LetLtxMacro\hdashline\hline%
23 }
```

Some of these macros are already defined as temporary placeholders in the `lwarp` core, so they must be redefined here.

The emulated defaults also work for an emulated print mode inside a lateximage:

```

24 \def\hdashline{
25 % \adl@hdashline\adl@ihdashline
26 \adl@hdashline\adl@inactivehdl
27 }
28 \def\adl@hdashline#1{\noalign{\ifnum0='}\fi
29 % \ifadl@zwhrule \vskip-\arrayrulewidth
30 % \else
31 % \adl@hline\adl@connect\arrayrulewidth
32 % \hrule \@height \arrayrulewidth% lwarp
33 % \fi
34 \@ifnextchar[%]
35 {#1}%
36 {#1[%
37 % \dashlinedash/\dashlinegap
38 % 1pt/1pt
39 %]}}
40 \def\adl@ihdashline[#1/#2]{\ifnum0='{ \fi}%
41 % \multispan{\adl@columns}\unskip \adl@hcline\z@[#1/#2]%
42 % \noalign{\ifnum0='}\fi
43 % \futurelet\@tempa\adl@xhline}
44 \def\adl@inactivehdl[#1/#2]{
45 % \ifadl@zwhrule \vskip-\arrayrulewidth \fi
46 % \hrule\@height\arrayrulewidth
47 % \futurelet\@tempa\adl@xhline}
48 \def\adl@xhline{\ifx\@tempa\hline \adl@ixhline\fi
49 % \ifx\@tempa\hdashline \adl@ixhline\fi
50 % \ifnum0='{ \fi}}
51 \def\adl@ixhline{\vskip\doublerulesep \adl@hline\relax\doublerulesep}
52 \def\adl@hline#1#2{%
53 % \@tempcnta#2
54 % \global\advance\adl@totalheight\@tempcnta
55 % \xdef\adl@rowsL{\adl@rowsL
56 % (#1/\number\@tempcnta);}
57 % \xdef\adl@rowsR{\adl@rowsR
58 % (#1/\number\@tempcnta);}
59 }
60
61 \def\cdashline#1{\noalign{\ifnum0='}\fi
62 \@ifnextchar[%]
63 % {\adl@cdline[#1]}%
64 % {\adl@cdline[#1][\dashlinedash/\dashlinegap]}
65 % {\adl@inactivecdl[#1]}%
66 % {\adl@inactivecdl[#1][\dashlinedash/\dashlinegap]}
67 }
68
69 \def\adl@inactivecdl[#1-#2][#3]{\ifnum0='{ \fi}\cline{#1-#2}}

```

---

File 27 **lwarp-asymptote.sty**

§ 126 Package **asymptote**

*(Emulates or patches code by ANDY HAMMERLINDL, JOHN BOWMAN, TOM PRINCE.)*

Pkg asymptote asymptote is patched for use by lwarp.

To compile:

```
pdflatex project.tex
asy project-*.asy
pdflatex project.tex
```

```
lwarpmk print
asy project-*.asy
lwarpmk print1
lwarpmk print1
```

```
lwarpmk html
asy project_html-*.asy
lwarpmk html1
lwarpmk html1
lwarpmk limages
```

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{asymptote}[2016/11/26]
2 \BeforeBeginEnvironment{asy}{\begin{lateximage}[(-asymptote-~\packagediagramname)]}
3 \AfterEndEnvironment{asy}{\end{lateximage}}
4
5 \xpatchcmd{\asyinclude}
6 {\begingroup}
7 {\begin{lateximage}[(-asymptote-~\packagediagramname)]}
8 {}
9 {\LWR@patcherror{asymptote}{asyinclude-begingroup}}
10
11 \xpatchcmd{\asyinclude}
12 {\endgroup}
13 {\end{lateximage}}
14 {}
15 {\LWR@patcherror{asymptote}{asyinclude-endgroup}}
```

---

File 28 **lwarp-atbegshi.sty**

§ 127 Package **atbegshi**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg atbegshi Emulated.

**for HTML output:** Discard all options for lwarp-atbegshi:

```

1 \LWR@ProvidesPackageDrop[atbegshi][2011/10/05]

2 \newcommand*\AtBeginShipout}[1]{}
3 \newbox\AtBeginShipoutBox
4 \newcommand*\AtBeginShipoutNext}[1]{}
5 \newcommand*\AtBeginShipoutFirst}[1]{}
6 \newcommand*\AtBeginShipoutDiscard{}
7 \newcommand*\AtBeginShipoutInit{}
8 \newcommand*\AtBeginShipoutAddToBox}[1]{}
9 \newcommand*\AtBeginShipoutAddToBoxForeground}[1]{}
10 \newcommand*\AtBeginShipoutUpperLeft}[1]{}
11 \newcommand*\AtBeginShipoutUpperLeftForeground}[1]{}
12 \newcommand*\AtBeginShipoutOriginalShipout}[1]{}
13 \def\AtBeginShipoutBoxWidth{0pt}
14 \def\AtBeginShipoutBoxHeight{0pt}
15 \def\AtBeginShipoutBoxDepth{0pt}
16

```


---

File 29 **lwarp-attachfile.sty**

§ 128 Package **attachfile**

*(Emulates or patches code by SCOTT PAKIN.)*

Pkg attachfile attachfile is patched for use by lwarp.

 Metadata is ignored for now.

**for HTML output:** 1 \LWR@ProvidesPackagePass[attachfile][2016/09/18]

Encloses each icon:

```

2 \newenvironment*LWR@attachfile@icon
3 {
4 \begin{lateximage}*%
5 [-attachfile-]%
6 [%
7 \detokenize\expandafter{\atfi@icon@icon}-%
8 \detokenize\expandafter{\atfi@color@rgb}%
9]%
10 }
11 {
12 \end{lateximage}
13 }

```

Each icon is enclosed inside a LWR@attachfile@icon environment:

```

14 \xpretocmd{\atfi@acroGraph}{\LWR@attachfile@icon}{}{}

```

```

15 \xapptocmd{\atfi@acroGraph}{\endLWR@attachfile@icon}{}{}
16
17 \xpretocmd{\atfi@acroPaperclip}{\LWR@attachfile@icon}{}{}
18 \xapptocmd{\atfi@acroPaperclip}{\endLWR@attachfile@icon}{}{}
19
20 \xpretocmd{\atfi@acroPushPin}{\LWR@attachfile@icon}{}{}
21 \xapptocmd{\atfi@acroPushPin}{\endLWR@attachfile@icon}{}{}
22
23 \xpretocmd{\atfi@acroTag}{\LWR@attachfile@icon}{}{}
24 \xapptocmd{\atfi@acroTag}{\endLWR@attachfile@icon}{}{}

```

Disable PDF file embedding:

```
25 \DeclareRobustCommand{\atfi@embedfile}[1]{}

```

The displayed output for an `\attachfile` reference:

```

26 \newcommand*{\LWR@attachfile@appearance}{}
27
28 \DeclareRobustCommand{\atfi@set@appearance}[1]{%
29 \def\LWR@attachfile@appearance{#1}%
30 }

```

A file annotation becomes a reference:

```

31 \DeclareRobustCommand{\atfi@insert@file@annot}[1]{%
32 \href{#1}{\LWR@attachfile@appearance}%
33 }

```

File 30 **lwarp-attachfile2.sty**

§ 129 Package **attachfile2**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg attachfile2 **attachfile2** is patched for use by lwarp.



Metadata is ignored for now.

**for HTML output:** 1 \LWR@ProvidesPackagePass{attachfile2}[2016/05/16]

Adds memory of the selected color:

```

2 \def\LWR@attachfiletwo@color{}%
3
4 \define@key{AtFi}{color}{%
5 \def\LWR@attachfiletwo@color{#1}% lwarp
6 \HyColor@AttachfileColor{#1}%
7 \atfi@color@tex\atfi@color@inline\atfi@color@annot
8 {attachfile2}{color}%
9 }

```



Encloses each icon:

```

10 \newenvironment*{LWR@attachfile@icon}
11 {
12 \begin{lateximage}*%
13 [-attachfile-]%
14 [%
15 \detokenize\expandafter{\atfi@icon@icon}-%
16 \detokenize\expandafter{\LWR@attachfiletwo@color}%
17]%
18 }
19 {
20 \end{lateximage}
21 }

```

Each icon is enclosed inside a LWR@attachfile@icon environment:

```

22 \xpretocmd{\atfi@acroGraph}{\LWR@attachfile@icon}{}{}
23 \xapptocmd{\atfi@acroGraph}{\endLWR@attachfile@icon}{}{}
24
25 \xpretocmd{\atfi@acroPaperclip}{\LWR@attachfile@icon}{}{}
26 \xapptocmd{\atfi@acroPaperclip}{\endLWR@attachfile@icon}{}{}
27
28 \xpretocmd{\atfi@acroPushPin}{\LWR@attachfile@icon}{}{}
29 \xapptocmd{\atfi@acroPushPin}{\endLWR@attachfile@icon}{}{}
30
31 \xpretocmd{\atfi@acroTag}{\LWR@attachfile@icon}{}{}
32 \xapptocmd{\atfi@acroTag}{\endLWR@attachfile@icon}{}{}

```

Disable PDF file embedding:

```

33 \DeclareRobustCommand{\atfi@embedfile}[1]{}

```

The displayed output for an \attachfile reference:

```

34 \newcommand*{\LWR@attachfile@appearance}{}
35
36 \def\atfi@set@appearance@icon{%
37 \atfi@set@appearance{\csname atfi@acro\atfi@icon@icon\endcsname}%
38 }
39
40 \DeclareRobustCommand{\atfi@set@appearance}[1]{%
41 \def\LWR@attachfile@appearance{#1}%
42 }

```

A file annotation becomes a reference:

```

43 \DeclareRobustCommand{\atfi@insert@file@annot}[1]{%
44 \href{#1}{\LWR@attachfile@appearance}%
45 }

```

Modified for text color:

```

46 \DeclareRobustCommand{\notextattachfile}[2][[]]{%

```

```

47 \begingroup
48 \atfi@setup{#1}%
49 \ifatfi@print
50 \leavevmode
51 \begingroup
52 \HyColor@UseColor\atfi@color@tex
53 \LWR@textcurrentcolor{#2}% lwarp
54 % \strut
55 \endgroup
56 % \else
57 % \sbox\ltx@zero{#2\strut}%
58 % \makebox[\wd0]{}%
59 \fi
60 \endgroup
61 }

```

Modified to draw the icon:

```

62 \DeclareRobustCommand{\noattachfile}[1][{}]{%
63 \begingroup
64 \atfi@setup{#1}%
65 \atfi@set@appearance@icon
66 \ifatfi@print
67 \LWR@attachfile@appearance% lwarp
68 % \expandafter
69 % \atfi@refxform\csname atfi@appobj\atfi@icon\endcsname
70 % \else
71 % \makebox[\atfi@appearancewidth]{}%
72 \fi
73 \endgroup
74 }

```

---

File 31 **lwarp-authblk.sty**

§ 130 Package **authblk**

*(Emulates or patches code by PATRICK W. DALY.)*

Pkg authblk authblk is patched for HTML.

**package support** lwarp supports the native L<sup>A</sup>T<sub>E</sub>X titling commands, and also supports the packages  
**△ load order** authblk and titling. If both are used, authblk should be loaded before titling.

**\published and \subtitle** If using the titling package, additional titlepage fields for \published and \subtitle may be added by using \AddSubtitlePublished in the preamble. See section 67.8.

*(Emulates or patches code by PATRICK W. DALY.)*

**for HTML output:** Require that authblk be loaded before titling:

```

1 \@ifpackageloaded{titling}{
2 \PackageError{lwarp-authblk}
3 {Package authblk must be loaded before titling}

```

```

4 {Titling appends authblk's author macro, so authblk must be loaded first.}
5 }
6 {}

```

Load authblk:

```

7 \LWR@ProvidesPackagePass{authblk}[2001/02/27]

```

Patch to add a class for the affiliation:

```

8 \LetLtxMacro\LWRAB@affil\affil
9
10 \renewcommand{\affil}[2][{}]{%
11 \LWRAB@affil[#1]{\protect\InlineClass{affiliation}{#2}}
12 }

```

Create an HTML break for an \authorcr:

```


13 \renewcommand*{\authorcr}{\protect\LWR@newlinebr}

```

File 32 **lwarp-autonum.sty**

§ 131 Package **autonum**

Pkg autonum autonum is ignored.

 **numbering** All equations are numbered in HTML output.

MATHJAX does not support the “+” environments.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{autonum}[2015/01/18]
2
3
4
5 \newenvironment{equation+}{\equation}{\endequation}
6
7
8 \newenvironment{gather+}{\gather}{\endgather}
9
10 \BeforeBeginEnvironment{gather+}{\LWR@amsmathenv@@before{gather+}}
11
12 \AfterEndEnvironment{gather+}{\LWR@amsmathenv@@after}
13
14
15 \newenvironment{multline+}{\multline}{\endmultline}
16
17 \BeforeBeginEnvironment{multline+}{\LWR@amsmathenv@@before{multline+}}
18
19 \AfterEndEnvironment{multline+}{\LWR@amsmathenv@@after}
20
21

```

```

22 \newenvironment{flalign+}{\flalign}{\endflalign}
23
24 \BeforeBeginEnvironment{flalign+}{\LWR@amsmathenv@@before{flaline+}}
25
26 \AfterEndEnvironment{flalign+}{\LWR@amsmathenv@@after}
27
28
29 \newenvironment{align+}{\align}{\endalign}
30
31 \BeforeBeginEnvironment{align+}{\LWR@amsmathenv@@before{aline+}}
32
33 \AfterEndEnvironment{align+}{\LWR@amsmathenv@@after}
34
35
36 \newenvironment{alignat+}{\alignat}{\endalignat}
37
38 \BeforeBeginEnvironment{alignat+}{\LWR@amsmathenv@@before{alineat+}}
39
40 \AfterEndEnvironment{alignat+}{\LWR@amsmathenv@@after}
41
42
43 \newenvironment{split+}{\split}{\endsplit}

```

---

File 33 **lwarp-axessibility.sty**

§ 132 Package **axessibility**

Pkg axessibility axessibility is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{axessibility}

2 \newcommand{\wrap}[1]{}

```

---

File 34 **lwarp-axodraw2.sty**

§ 133 Package **axodraw2**

*(Emulates or patches code by JOHN C. COLLINS, J.A.M. VERMASEREN.)*

Pkg axodraw2 axodraw2 is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{axodraw2}[2018/02/15]


2 \BeforeBeginEnvironment{axopicture}{\begin{lateximage}[(-axopicture--\packagediagramname)]}
3
4 \AfterEndEnvironment{axopicture}{\end{lateximage}}

```

File 35 **lwarp-backref.sty**§ 134 Package **backref**

*(Emulates or patches code by DAVID CARLISLE AND SEBASTIAN RAHTZ.)*

Pkg backref backref is patched for use by lwarp.

 **loading** Note that backref must be explicitly loaded, and is not automatically loaded by hyperref when generating HTML output.

**for HTML output:** 1 \LWR@ProvidesPackagePass{backref}[2016/05/21]

Force the hyperref option:

```
2 \def\backref{}\let\backrefxxx\hyper@section@backref
```

File 36 **lwarp-balance.sty**§ 135 Package **balance**

*(Emulates or patches code by PATRICK W. DALY.)*

Pkg balance Emulated.

**for HTML output:** Discard all options for lwarp-balance:

```
1 \LWR@ProvidesPackageDrop{balance}[1999/02/23]
```

```
2 \newcommand*\balance{}
3 \newcommand*\nobalance{}
```

File 37 **lwarp-bbding.sty**§ 136 Package **bbding**

*(Emulates or patches code by KAREL HORAK, PETER MØLLER NEERGAARD.)*

Pkg bbding bbding is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{bbding}[1999/04/15]

```
2 \newcommand*\LWR@bbdingsymbol}[2]{\HTMLUnicode{#2}}
```

```
3
```

```
4 \newcommand{\LWR@HTML@ScissorRightBrokenBottom}{\LWR@bbdingsymbol{000} {2701}}
```

|                                                                          |         |
|--------------------------------------------------------------------------|---------|
| 5 \newcommand{\LWR@HTML@ScissorRight}{\LWR@bbdingsymbol{001}}            | {2702}} |
| 6 \newcommand{\LWR@HTML@ScissorRightBrokenTop}{\LWR@bbdingsymbol{002}}   | {2703}} |
| 7 \newcommand{\LWR@HTML@ScissorLeftBrokenBottom}{\LWR@bbdingsymbol{003}} | {2701}} |
| 8 \newcommand{\LWR@HTML@ScissorLeft}{\LWR@bbdingsymbol{004}}             | {2702}} |
| 9 \newcommand{\LWR@HTML@ScissorLeftBrokenTop}{\LWR@bbdingsymbol{005}}    | {2703}} |
| 10 \newcommand{\LWR@HTML@ScissorHollowRight}{\LWR@bbdingsymbol{006}}     | {2704}} |
| 11 \newcommand{\LWR@HTML@ScissorHollowLeft}{\LWR@bbdingsymbol{007}}      | {2704}} |
| 12 \newcommand{\LWR@HTML@Phone}{\LWR@bbdingsymbol{010}}                  | {260E}} |
| 13 \newcommand{\LWR@HTML@PhoneHandset}{\LWR@bbdingsymbol{011}}           | {2706}} |
| 14 \newcommand{\LWR@HTML@Tape}{\LWR@bbdingsymbol{012}}                   | {2707}} |
| 15 \newcommand{\LWR@HTML@Plane}{\LWR@bbdingsymbol{013}}                  | {2708}} |
| 16 \newcommand{\LWR@HTML@Envelope}{\LWR@bbdingsymbol{014}}               | {2709}} |
| 17 \newcommand{\LWR@HTML@HandCuffRight}{\LWR@bbdingsymbol{015}}          | {261B}} |
| 18 \newcommand{\LWR@HTML@HandCuffLeft}{\LWR@bbdingsymbol{016}}           | {261A}} |
| 19 \newcommand{\LWR@HTML@HandCuffRightUp}{\LWR@bbdingsymbol{017}}        | {261D}} |
| 20 \newcommand{\LWR@HTML@HandCuffLeftUp}{\LWR@bbdingsymbol{020}}         | {261F}} |
| 21 \newcommand{\LWR@HTML@HandRight}{\LWR@bbdingsymbol{021}}              | {261E}} |
| 22 \newcommand{\LWR@HTML@HandLeft}{\LWR@bbdingsymbol{022}}               | {261C}} |
| 23 \newcommand{\LWR@HTML@HandRightUp}{\LWR@bbdingsymbol{023}}            | {261D}} |
| 24 \newcommand{\LWR@HTML@HandLeftUp}{\LWR@bbdingsymbol{024}}             | {261F}} |
| 25 \newcommand{\LWR@HTML@Peace}{\LWR@bbdingsymbol{025}}                  | {270C}} |
| 26 \newcommand{\LWR@HTML@HandPencilLeft}{\LWR@bbdingsymbol{026}}         | {270D}} |
| 27 \newcommand{\LWR@HTML@PencilRight}{\LWR@bbdingsymbol{027}}            | {270F}} |
| 28 \newcommand{\LWR@HTML@PencilLeft}{\LWR@bbdingsymbol{030}}             | {270F}} |
| 29 \newcommand{\LWR@HTML@PencilRightUp}{\LWR@bbdingsymbol{031}}          | {2710}} |
| 30 \newcommand{\LWR@HTML@PencilLeftUp}{\LWR@bbdingsymbol{032}}           | {2710}} |
| 31 \newcommand{\LWR@HTML@PencilRightDown}{\LWR@bbdingsymbol{033}}        | {270E}} |
| 32 \newcommand{\LWR@HTML@PencilLeftDown}{\LWR@bbdingsymbol{034}}         | {270E}} |
| 33 \newcommand{\LWR@HTML@NibRight}{\LWR@bbdingsymbol{035}}               | {2711}} |
| 34 \newcommand{\LWR@HTML@NibLeft}{\LWR@bbdingsymbol{036}}                | {2711}} |
| 35 \newcommand{\LWR@HTML@NibSolidRight}{\LWR@bbdingsymbol{037}}          | {2712}} |
| 36 \newcommand{\LWR@HTML@NibSolidLeft}{\LWR@bbdingsymbol{040}}           | {2712}} |
| 37 \newcommand{\LWR@HTML@Checkmark}{\LWR@bbdingsymbol{041}}              | {2713}} |
| 38 \newcommand{\LWR@HTML@CheckmarkBold}{\LWR@bbdingsymbol{042}}          | {2714}} |
| 39 \newcommand{\LWR@HTML@XSolid}{\LWR@bbdingsymbol{043}}                 | {2715}} |
| 40 \newcommand{\LWR@HTML@XSolidBold}{\LWR@bbdingsymbol{044}}             | {2716}} |
| 41 \newcommand{\LWR@HTML@XSolidBrush}{\LWR@bbdingsymbol{045}}            | {2717}} |
| 42 \newcommand{\LWR@HTML@PlusOutline}{\LWR@bbdingsymbol{046}}            | {2719}} |
| 43 \newcommand{\LWR@HTML@Plus}{\LWR@bbdingsymbol{047}}                   | {271A}} |
| 44 \newcommand{\LWR@HTML@PlusCenterOpen}{\LWR@bbdingsymbol{050}}         | {271C}} |
| 45 \newcommand{\LWR@HTML@PlusThinCenterOpen}{\LWR@bbdingsymbol{051}}     | {271B}} |
| 46 \newcommand{\LWR@HTML@Cross}{\LWR@bbdingsymbol{052}}                  | {271D}} |
| 47 \newcommand{\LWR@HTML@CrossOpenShadow}{\LWR@bbdingsymbol{053}}        | {271E}} |
| 48 \newcommand{\LWR@HTML@CrossOutline}{\LWR@bbdingsymbol{054}}           | {271F}} |
| 49 \newcommand{\LWR@HTML@CrossBoldOutline}{\LWR@bbdingsymbol{055}}       | {271F}} |
| 50 \newcommand{\LWR@HTML@CrossMaltese}{\LWR@bbdingsymbol{056}}           | {2720}} |
| 51 \newcommand{\LWR@HTML@DavidStarSolid}{\LWR@bbdingsymbol{057}}         | {2721}} |
| 52 \newcommand{\LWR@HTML@DavidStar}{\LWR@bbdingsymbol{060}}              | {2721}} |
| 53 \newcommand{\LWR@HTML@FourAsterisk}{\LWR@bbdingsymbol{061}}           | {2722}} |
| 54 \newcommand{\LWR@HTML@JackStar}{\LWR@bbdingsymbol{062}}               | {2723}} |
| 55 \newcommand{\LWR@HTML@JackStarBold}{\LWR@bbdingsymbol{063}}           | {2724}} |
| 56 \newcommand{\LWR@HTML@CrossCLowerTips}{\LWR@bbdingsymbol{064}}        | {2725}} |
| 57 \newcommand{\LWR@HTML@FourStar}{\LWR@bbdingsymbol{065}}               | {2726}} |
| 58 \newcommand{\LWR@HTML@FourStarOpen}{\LWR@bbdingsymbol{066}}           | {2727}} |
| 59 \newcommand{\LWR@HTML@FiveStarLines}{\LWR@bbdingsymbol{067}}          | {2729}} |

|     |                                                                            |         |
|-----|----------------------------------------------------------------------------|---------|
| 60  | \newcommand{\LWR@HTML@FiveStar}{\LWR@bbdingsymbol{070}}                    | {2605}} |
| 61  | \newcommand{\LWR@HTML@FiveStarOpen}{\LWR@bbdingsymbol{071}}                | {2729}} |
| 62  | \newcommand{\LWR@HTML@FiveStarOpenCircled}{\LWR@bbdingsymbol{072}}         | {272A}} |
| 63  | \newcommand{\LWR@HTML@FiveStarCenterOpen}{\LWR@bbdingsymbol{073}}          | {272B}} |
| 64  | \newcommand{\LWR@HTML@FiveStarOpenDotted}{\LWR@bbdingsymbol{074}}          | {272C}} |
| 65  | \newcommand{\LWR@HTML@FiveStarOutline}{\LWR@bbdingsymbol{075}}             | {272D}} |
| 66  | \newcommand{\LWR@HTML@FiveStarOutlineHeavy}{\LWR@bbdingsymbol{076}}        | {272E}} |
| 67  | \newcommand{\LWR@HTML@FiveStarConvex}{\LWR@bbdingsymbol{077}}              | {272F}} |
| 68  | \newcommand{\LWR@HTML@FiveStarShadow}{\LWR@bbdingsymbol{100}}              | {2730}} |
| 69  | \newcommand{\LWR@HTML@AsteriskBold}{\LWR@bbdingsymbol{101}}                | {2731}} |
| 70  | \newcommand{\LWR@HTML@AsteriskCenterOpen}{\LWR@bbdingsymbol{102}}          | {2732}} |
| 71  | \newcommand{\LWR@HTML@AsteriskThin}{\LWR@bbdingsymbol{103}}                | {273B}} |
| 72  | \newcommand{\LWR@HTML@AsteriskThinCenterOpen}{\LWR@bbdingsymbol{104}}      | {273C}} |
| 73  | \newcommand{\LWR@HTML@EightStarTaper}{\LWR@bbdingsymbol{105}}              | {2733}} |
| 74  | \newcommand{\LWR@HTML@EightStarConvex}{\LWR@bbdingsymbol{106}}             | {2735}} |
| 75  | \newcommand{\LWR@HTML@SixStar}{\LWR@bbdingsymbol{107}}                     | {2736}} |
| 76  | \newcommand{\LWR@HTML@EightStar}{\LWR@bbdingsymbol{110}}                   | {2737}} |
| 77  | \newcommand{\LWR@HTML@EightStarBold}{\LWR@bbdingsymbol{111}}               | {2738}} |
| 78  | \newcommand{\LWR@HTML@TwelveStar}{\LWR@bbdingsymbol{112}}                  | {2739}} |
| 79  | \newcommand{\LWR@HTML@SixteenStarLight}{\LWR@bbdingsymbol{113}}            | {273A}} |
| 80  | \newcommand{\LWR@HTML@SixFlowerPetalRemoved}{\LWR@bbdingsymbol{114}}       | {273B}} |
| 81  | \newcommand{\LWR@HTML@SixFlowerOpenCenter}{\LWR@bbdingsymbol{115}}         | {273C}} |
| 82  | \newcommand{\LWR@HTML@Asterisk}{\LWR@bbdingsymbol{116}}                    | {273D}} |
| 83  | \newcommand{\LWR@HTML@SixFlowerAlternate}{\LWR@bbdingsymbol{117}}          | {273E}} |
| 84  | \newcommand{\LWR@HTML@FiveFlowerPetal}{\LWR@bbdingsymbol{120}}             | {273F}} |
| 85  | \newcommand{\LWR@HTML@SixFlowerPetalDotted}{\LWR@bbdingsymbol{121}}        | {2740}} |
| 86  | \newcommand{\LWR@HTML@FiveFlowerOpen}{\LWR@bbdingsymbol{122}}              | {2740}} |
| 87  | \newcommand{\LWR@HTML@EightFlowerPetal}{\LWR@bbdingsymbol{123}}            | {2741}} |
| 88  | \newcommand{\LWR@HTML@SunshineOpenCircled}{\LWR@bbdingsymbol{124}}         | {2742}} |
| 89  | \newcommand{\LWR@HTML@SixFlowerAltPetal}{\LWR@bbdingsymbol{125}}           | {2743}} |
| 90  | \newcommand{\LWR@HTML@FourClowerOpen}{\LWR@bbdingsymbol{126}}              | {273F}} |
| 91  | \newcommand{\LWR@HTML@FourClowerSolid}{\LWR@bbdingsymbol{127}}             | {273F}} |
| 92  | \newcommand{\LWR@HTML@AsteriskRoundedEnds}{\LWR@bbdingsymbol{130}}         | {2749}} |
| 93  | \newcommand{\LWR@HTML@EightFlowerPetalRemoved}{\LWR@bbdingsymbol{131}}     | {274A}} |
| 94  | \newcommand{\LWR@HTML@EightAsterisk}{\LWR@bbdingsymbol{132}}               | {274B}} |
| 95  | \newcommand{\LWR@HTML@SixFlowerRemovedOpenPetal}{\LWR@bbdingsymbol{133}}   | {2740}} |
| 96  | \newcommand{\LWR@HTML@SparkleBold}{\LWR@bbdingsymbol{134}}                 | {2748}} |
| 97  | \newcommand{\LWR@HTML@Sparkle}{\LWR@bbdingsymbol{135}}                     | {2747}} |
| 98  | \newcommand{\LWR@HTML@SnowflakeChevron}{\LWR@bbdingsymbol{136}}            | {2744}} |
| 99  | \newcommand{\LWR@HTML@SnowflakeChevronBold}{\LWR@bbdingsymbol{137}}        | {2746}} |
| 100 | \newcommand{\LWR@HTML@Snowflake}{\LWR@bbdingsymbol{140}}                   | {2744}} |
| 101 | \newcommand{\LWR@HTML@CircleSolid}{\LWR@bbdingsymbol{141}}                 | {25CF}} |
| 102 | \newcommand{\LWR@HTML@Ellipse}{\LWR@bbdingsymbol{142}}                     | {274D}} |
| 103 | \newcommand{\LWR@HTML@EllipseSolid}{\LWR@bbdingsymbol{143}}                | {25CF}} |
| 104 | \newcommand{\LWR@HTML@CircleShadow}{\LWR@bbdingsymbol{144}}                | {274D}} |
| 105 | \newcommand{\LWR@HTML@EllipseShadow}{\LWR@bbdingsymbol{145}}               | {274D}} |
| 106 | \newcommand{\LWR@HTML@Square}{\LWR@bbdingsymbol{146}}                      | {25A1}} |
| 107 | \newcommand{\LWR@HTML@SquareSolid}{\LWR@bbdingsymbol{147}}                 | {25A0}} |
| 108 | \newcommand{\LWR@HTML@SquareShadowBottomRight}{\LWR@bbdingsymbol{150}}     | {2751}} |
| 109 | \newcommand{\LWR@HTML@SquareShadowTopRight}{\LWR@bbdingsymbol{151}}        | {2752}} |
| 110 | \newcommand{\LWR@HTML@SquareShadowTopLeft}{\LWR@bbdingsymbol{152}}         | {2752}} |
| 111 | \newcommand{\LWR@HTML@SquareCastShadowBottomRight}{\LWR@bbdingsymbol{153}} | {2751}} |
| 112 | \newcommand{\LWR@HTML@SquareCastShadowTopRight}{\LWR@bbdingsymbol{154}}    | {2752}} |
| 113 | \newcommand{\LWR@HTML@SquareCastShadowTopLeft}{\LWR@bbdingsymbol{155}}     | {2752}} |
| 114 | \newcommand{\LWR@HTML@TriangleUp}{\LWR@bbdingsymbol{156}}                  | {25B2}} |

```
115 \newcommand{\LWR@HTML@TriangleDown}{\LWR@bbdingsymbol{157}} {25BC}}
116 \newcommand{\LWR@HTML@DiamondSolid}{\LWR@bbdingsymbol{160}} {25C6}}
117 \newcommand{\LWR@HTML@OrnamentDiamondSolid}{\LWR@bbdingsymbol{161}} {2756}}
118 \newcommand{\LWR@HTML@HalfCircleRight}{\LWR@bbdingsymbol{162}} {25D7}}
119 \newcommand{\LWR@HTML@HalfCircleLeft}{\LWR@bbdingsymbol{163}} {25D6}}
120 \newcommand{\LWR@HTML@RectangleThin}{\LWR@bbdingsymbol{164}} {2758}}
121 \newcommand{\LWR@HTML@Rectangle}{\LWR@bbdingsymbol{165}} {2759}}
122 \newcommand{\LWR@HTML@RectangleBold}{\LWR@bbdingsymbol{166}} {275A}}
123 \newcommand{\LWR@HTML@ArrowBoldRightStrobe}{\LWR@bbdingsymbol{167}}
124 \newcommand{\LWR@HTML@ArrowBoldUpRight}{\LWR@bbdingsymbol{170}} {27A6}}
125 \newcommand{\LWR@HTML@ArrowBoldDownRight}{\LWR@bbdingsymbol{171}} {27A5}}
126 \newcommand{\LWR@HTML@ArrowBoldRightShort}{\LWR@bbdingsymbol{172}} {27A7}}
127 \newcommand{\LWR@HTML@ArrowBoldRightCircled}{\LWR@bbdingsymbol{173}} {27B2}}
128
129
130 \LWR@formatted{ScissorRightBrokenBottom}
131 \LWR@formatted{ScissorRight}
132 \LWR@formatted{ScissorRightBrokenTop}
133 \LWR@formatted{ScissorLeftBrokenBottom}
134 \LWR@formatted{ScissorLeft}
135 \LWR@formatted{ScissorLeftBrokenTop}
136 \LWR@formatted{ScissorHollowRight}
137 \LWR@formatted{ScissorHollowLeft}
138 \LWR@formatted{Phone}
139 \LWR@formatted{PhoneHandset}
140 \LWR@formatted{Tape}
141 \LWR@formatted{Plane}
142 \LWR@formatted{Envelope}
143 \LWR@formatted{HandCuffRight}
144 \LWR@formatted{HandCuffLeft}
145 \LWR@formatted{HandCuffRightUp}
146 \LWR@formatted{HandCuffLeftUp}
147 \LWR@formatted{HandRight}
148 \LWR@formatted{HandLeft}
149 \LWR@formatted{HandRightUp}
150 \LWR@formatted{HandLeftUp}
151 \LWR@formatted{Peace}
152 \LWR@formatted{HandPencilLeft}
153 \LWR@formatted{PencilRight}
154 \LWR@formatted{PencilLeft}
155 \LWR@formatted{PencilRightUp}
156 \LWR@formatted{PencilLeftUp}
157 \LWR@formatted{PencilRightDown}
158 \LWR@formatted{PencilLeftDown}
159 \LWR@formatted{NibRight}
160 \LWR@formatted{NibLeft}
161 \LWR@formatted{NibSolidRight}
162 \LWR@formatted{NibSolidLeft}
163 \LWR@formatted{Checkmark}
164 \LWR@formatted{CheckmarkBold}
165 \LWR@formatted{XSolid}
166 \LWR@formatted{XSolidBold}
167 \LWR@formatted{XSolidBrush}
168 \LWR@formatted{PlusOutline}
169 \LWR@formatted{Plus}
```



170 \LWR@formatted{PlusCenterOpen}  
171 \LWR@formatted{PlusThinCenterOpen}  
172 \LWR@formatted{Cross}  
173 \LWR@formatted{CrossOpenShadow}  
174 \LWR@formatted{CrossOutline}  
175 \LWR@formatted{CrossBoldOutline}  
176 \LWR@formatted{CrossMaltese}  
177 \LWR@formatted{DavidStarSolid}  
178 \LWR@formatted{DavidStar}  
179 \LWR@formatted{FourAsterisk}  
180 \LWR@formatted{JackStar}  
181 \LWR@formatted{JackStarBold}  
182 \LWR@formatted{CrossCLowerTips}  
183 \LWR@formatted{FourStar}  
184 \LWR@formatted{FourStarOpen}  
185 \LWR@formatted{FiveStarLines}  
186 \LWR@formatted{FiveStar}  
187 \LWR@formatted{FiveStarOpen}  
188 \LWR@formatted{FiveStarOpenCircled}  
189 \LWR@formatted{FiveStarCenterOpen}  
190 \LWR@formatted{FiveStarOpenDotted}  
191 \LWR@formatted{FiveStarOutline}  
192 \LWR@formatted{FiveStarOutlineHeavy}  
193 \LWR@formatted{FiveStarConvex}  
194 \LWR@formatted{FiveStarShadow}  
195 \LWR@formatted{AsteriskBold}  
196 \LWR@formatted{AsteriskCenterOpen}  
197 \LWR@formatted{AsteriskThin}  
198 \LWR@formatted{AsteriskThinCenterOpen}  
199 \LWR@formatted{EightStarTaper}  
200 \LWR@formatted{EightStarConvex}  
201 \LWR@formatted{SixStar}  
202 \LWR@formatted{EightStar}  
203 \LWR@formatted{EightStarBold}  
204 \LWR@formatted{TwelveStar}  
205 \LWR@formatted{SixteenStarLight}  
206 \LWR@formatted{SixFlowerPetalRemoved}  
207 \LWR@formatted{SixFlowerOpenCenter}  
208 \LWR@formatted{Asterisk}  
209 \LWR@formatted{SixFlowerAltternate}  
210 \LWR@formatted{FiveFlowerPetal}  
211 \LWR@formatted{SixFlowerPetalDotted}  
212 \LWR@formatted{FiveFlowerOpen}  
213 \LWR@formatted{EightFlowerPetal}  
214 \LWR@formatted{SunshineOpenCircled}  
215 \LWR@formatted{SixFlowerAltPetal}  
216 \LWR@formatted{FourCLowerOpen}  
217 \LWR@formatted{FourCLowerSolid}  
218 \LWR@formatted{AsteriskRoundedEnds}  
219 \LWR@formatted{EightFlowerPetalRemoved}  
220 \LWR@formatted{EightAsterisk}  
221 \LWR@formatted{SixFlowerRemovedOpenPetal}  
222 \LWR@formatted{SparkleBold}  
223 \LWR@formatted{Sparkle}  
224 \LWR@formatted{SnowflakeChevron}

```

225 \LWR@formatted{SnowflakeChevronBold}
226 \LWR@formatted{Snowflake}
227 \LWR@formatted{CircleSolid}
228 \LWR@formatted{Ellipse}
229 \LWR@formatted{EllipseSolid}
230 \LWR@formatted{CircleShadow}
231 \LWR@formatted{EllipseShadow}
232 \LWR@formatted{Square}
233 \LWR@formatted{SquareSolid}
234 \LWR@formatted{SquareShadowBottomRight}
235 \LWR@formatted{SquareShadowTopRight}
236 \LWR@formatted{SquareShadowTopLeft}
237 \LWR@formatted{SquareCastShadowBottomRight}
238 \LWR@formatted{SquareCastShadowTopRight}
239 \LWR@formatted{SquareCastShadowTopLeft}
240 \LWR@formatted{TriangleUp}
241 \LWR@formatted{TriangleDown}
242 \LWR@formatted{DiamondSolid}
243 \LWR@formatted{OrnamentDiamondSolid}
244 \LWR@formatted{HalfCircleRight}
245 \LWR@formatted{HalfCircleLeft}
246 \LWR@formatted{RectangleThin}
247 \LWR@formatted{Rectangle}
248 \LWR@formatted{RectangleBold}
249 \LWR@formatted{ArrowBoldRightStrobe}
250 \LWR@formatted{ArrowBoldUpRight}
251 \LWR@formatted{ArrowBoldDownRight}
252 \LWR@formatted{ArrowBoldRightShort}
253 \LWR@formatted{ArrowBoldRightCircled}

```

---

File 38 **lwarp-biblatex.sty**

§ 137 Package **biblatex**

*(Emulates or patches code by PHILIPP LEHMAN.)*

Pkg biblatex When biblatex is used, modifications from newfloat may have to be undone.

**for HTML output:**

1. lwarp uses newfloat.
2. For classes with chapters which newfloat does not know about, such as CTEX-related classes, newfloat may modify \addtocontents.
3. biblatex, though, wants to patch \addtocontents, which causes an error if \addtocontents has been changed.
4. Therefore, \addtocontents is restored to its original here, since biblatex is about to be loaded.
5. This means that the newfloat's chapterlistsgaps option may no longer work.

```

1 \ifdef{\newfloat@addtocontents@ORI}{
2 \let\addtocontents\newfloat@addtocontents@ORI
3 }{}

```

---

```
4 \LWR@ProvidesPackagePass{biblatex}[2018/03/04]
```

---

File 39 **lwarp-bibunits.sty**

§ 138 Package **bibunits**

(Emulates or patches code by THORSTEN HANSEN.)

Pkg bibunits bibunits is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{bibunits}[2004/05/12]

```
2 \def\bu@bibdata{\BaseJobname}
```

---


File 40 **lwarp-bigdelim.sty**

§ 139 Package **bigdelim**

(Emulates or patches code by PIET VAN OOSTRUM, ØYSTEIN BACHE, JERRY LEICHTER.)

Pkg bigdelim bigdelim is used as-is for print or lateximage, and patched for HTML.

The delimiters are displayed in HTML by printing the delimiter, the text, and a thick border across the side of the `\multirow` which indicates the actual height of the delimiter. The delimiter character is given a `<span>` class of `ldelim` or `rdelim`, and the default CSS sets this to `font-size:200%`

 **use `\mrowcell`** `\ldelim` and `\rdelim` use `\multirow`, so `\mrowcell` must be used in the proper number of empty cells in the same column below `\ldelim` or `\rdelim`, but not in cells which are above or below the delimiter:

---

```
\begin{tabular}{lll}
<empty> & a & b \\
\ldelim{\}{3}{.25in}[left] & c & d \\
\mrowcell & e & f \\
\mrowcell & g & h \\
<empty> & i & j \\
\end{tabular}
```

---

```
<-> a b
 {
left { c d
 { e f
 { g h
<-> i j
```

---

**for HTML output:**

First, remove the temporary definitions of `\ldelim` and `\rdelim`, which were previously defined for tabular scanning in case `bigdelim` was not loaded:

```
1 \let\ldelim\relax
2 \let\rdelim\relax
```

Next, load the package's new definitions:

```
3 \LWR@ProvidesPackagePass{bigdelim}[2018/08/03]

\ldelim {{1:delimiter}} {{2:#rows}} {{3:width}} [<4:text>]
\rdelim

4 \NewDocumentCommand{\LWR@HTML@ldelim}{m m m O{}}{%
5 \renewcommand{\LWR@multirowborder}{right}%
6 \multirow{#2}{#3}{#4 \InlineClass{ldelim}{#1}}%
7 }
8
9 \LWR@formatted{ldelim}
10
11 \NewDocumentCommand{\LWR@HTML@rdelim}{m m m O{}}{%
12 \renewcommand{\LWR@multirowborder}{left}%
13 \multirow{#2}{#3}{\InlineClass{rdelim}{#1} #4}%
14 }
15
16 \LWR@formatted{rdelim}
```

---

File 41 **lwarp-bigfoot.sty**

§ 140 Package **bigfoot**

Pkg bigfoot bigfoot is emulated.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{bigfoot}[2015/08/30]

2 \RequirePackage{manyfoot}
3 \RequirePackage{perpage}
4
5 \def\RestyleFootnote#1#2{}
6 \def\FootnoteSpecific#1{}
7 \def\DefineFootnoteStack#1{}
8 \def\PushFootnoteMark#1{}
9 \def\PopFootnoteMark#1{}
10 \def\hfootfraction{0.9}
11 \def\vtypefraction{0.7}
12 \def\FootnoteMinimum{1sp}
13 \def\FootnoteMainMinimum{0pt}
14 \newcount\bigfoottolerance
15 \bigfoottolerance=100
16 \providecommand\footnotecarryratio{2}
```

---

File 42 **lwarp-bigstrut.sty**

§ 141 Package **bigstrut**

*(Emulates or patches code by PIET VAN OOSTRUM, ØYSTEIN BACHE, JERRY LEICHTER.)*

Pkg bigstrut bigstrut is used as-is for print or lateximage, and patched for HTML.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{bigstrut}[2018/08/03]

2 \LetLtxMacro\LWR@origbigstrut\bigstrut
3
4 \renewcommand\bigstrut[1][x]{}
5
6 \appto\LWR@restoreorigformatting{%
7 \LetLtxMacro\bigstrut\LWR@origbigstrut%
8 }
```

---

File 43 **lwarp-bitpattern.sty**

§ 142 Package **bitpattern**

*(Emulates or patches code by JEAN-MARC BOURGUET.)*

Pkg bitpattern bitpattern is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{bitpattern}[2015/12/11]

2 \xpatchcmd{\bitpattern}
3 {\begingroup}
4 {\begin{lateximage}[(-bitpattern-~\packagediagramname)]}
5 {}
6 {\LWR@patcherror{bitpattern}{bitpattern}}
7
8 \xpatchcmd{\bp@Done}
9 {\endgroup}
10 {\end{lateximage}}
11 {}
12 {\LWR@patcherror{bitpattern}{bp@Done}}
```

---

File 44 **lwarp-blowup.sty**

§ 143 Package **blowup**

Pkg blowup blowup is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{blowup}[2018/01/02]
2 \newcommand*\blowUp[1]{}

```

---

File 45 **lwarp-booklet.sty**

§ 144 Package **booklet**

*(Emulates or patches code by PETER WILSON.)*

Pkg booklet **booklet is nullified.**

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{booklet}[2009/09/02]
2 \newdimen\pageseplength
3 \newdimen\pagesepwidth
4 \newdimen\pagesepoffset
5 \newif\ifsidebyside \sidebysidetrue
6 \newif\ifuselandscape \uselandscapefalse
7 \newif\ifprintoption \printoptionfalse
8 \newcommand*\pagespersignature[1]{}
9 \def\magstepminus#1{}
10 \newcommand*\target[3]{}
11 \newcommand*\source[3]{}
12 \newcommand*\setpdftargetpages{}
13 \newcommand*\setdvipstargetpages{}
14 \newcommand*\targettopbottom{}
15 \newcommand*\twoupemptypage{}
16 \newcommand*\twoupclearpage{}
17 \newcommand*\checkforlandscape{}

```

---

File 46 **lwarp-bookmark.sty**

§ 145 Package **bookmark**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg bookmark **bookmark is emulated.**

**for HTML output:** Discard all options for lwarp-bookmark:

```
1 \LWR@ProvidesPackageDrop{bookmark}[2016/05/17]
2 \newcommand*\bookmarksetup[1]{}
3 \newcommand*\bookmarksetupnext[1]{}
4 \newcommand*\bookmark[2][1]{}
5 \newcommand*\bookmarkdefinestyle[2]{}
6 \newcommand*\bookmarkget[1]{}
7 \newcommand\BookmarkAtEnd[1]{}

```

File 47 **lwarp-booktabs.sty**

§ 146 Package **booktabs**

*(Emulates or patches code by SIMON FEAR.)*

Pkg booktabs booktabs is emulated during HTML output, and used as-is during print output and inside an HTML lateximage.

**for HTML output:** First, forget the placeholder macros:

```

1 \LetLtxMacro\toprule\relax
2 \LetLtxMacro\midrule\relax
3 \LetLtxMacro\cmidrule\cline
4 \LetLtxMacro\bottomrule\relax
5 \LetLtxMacro\addlinespace\relax
6 \LetLtxMacro\morecmidrules\relax
7 \LetLtxMacro\specialrule\relax
8
9 \LWR@ProvidesPackagePass{booktabs}[2016/04/27]

10 \DeclareDocumentCommand{\LWR@HTML@toprule}{o d()}%
11 {%
12 \IfValueTF{#1}%
13 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
14 {%
15 \ifbool{FormatWP}%
16 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
17 {\global\booltrue{LWR@doingtbrule}}}%
18 }%
19 \LWR@getmynexttoken}
20
21 \LWR@expandableformatted{toprule}
22
23 \DeclareDocumentCommand{\LWR@HTML@midrule}{o d()}%
24 {%
25 \IfValueTF{#1}%
26 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
27 {%
28 \ifbool{FormatWP}%
29 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
30 {\addtocounter{LWR@hlines}{1}}}%
31 }%
32 \LWR@getmynexttoken}
33
34 \LWR@expandableformatted{midrule}
35
36 \DeclareDocumentCommand{\LWR@HTML@cmidrule}{O{\LWR@cmidrulewidth} d() m}{%
37 \LWR@docmidrule[#1](#2){#3}%
38 \LWR@getmynexttoken%
39 }%
```

```

40
41 \LWR@expandableformatted{cmidrule}
42
43 \DeclareDocumentCommand{\LWR@HTML@bottomrule}{o d()}{%
44 \IfValueTF{#1}%
45 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
46 {%
47 \ifbool{FormatWP}%
48 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
49 {\global\booltrue{LWR@doingtbrule}}}%
50 }%
51 \LWR@getmynexttoken%
52 }%
53
54 \LWR@expandableformatted{bottomrule}
55
56 \DeclareDocumentCommand{\LWR@HTML@addlinespace}{o}{}%
57
58 \LWR@expandableformatted{addlinespace}
59
60 \DeclareDocumentCommand{\LWR@HTML@morecmidrules}{o}{}%
61
62 \LWR@expandableformatted{morecmidrules}
63
64 \DeclareDocumentCommand{\LWR@HTML@specialrule}{m m m d()}%
65 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}\LWR@getmynexttoken}%
66
67 \LWR@expandableformatted{specialrule}

```

---

File 48 **lwarp-bophook.sty**

§ 147 Package **bophook**

Pkg bophook bophook is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{bophook}[2001/03/29]

```

2 \newcommand*{\AtBeginPage}[1]{}
3 \newcommand*{\PageLayout}[1]{}

```

---

File 49 **lwarp-bounddvi.sty**

§ 148 Package **bounddvi**

Pkg bounddvi bounddvi is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{bounddvi}[2016/12/28]



---

File 50 **lwarp-boxedminipage2e.sty**

§ 149 Package **boxedminipage2e**

*(Emulates or patches code by SCOTT PAKIN.)*

Pkg boxedminipage2e boxedminipage2e is emulated.

**for HTML output:** Discard all options for lwarp-boxedminipage2e:

```

1 \LWR@ProvidesPackageDrop{boxedminipage2e}[2015/03/09]

2 \newenvironment{boxedminipage}{%
3 \begin{BlockClass}{framebox}%
4 \minipage%
5 }
6 {
7 \endminipage%
8 \end{BlockClass}
9 }
```

---

File 51 **lwarp-breakurl.sty**

§ 150 Package **breakurl**

*(Emulates or patches code by VILAR CAMARA NETO.)*

Pkg breakurl breakurl is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{breakurl}[2013/04/10]

2 \LetLtxMacro\ Burl\url
3
4 \NewDocumentCommand{\LWR@Burlaltb}{0} +m m{%
5 \LWR@ensuredoingapar%
6 \LWR@subhyperref{#2}%
7 \LWR@subhyperref{#3}%
8 \endgroup% restore catcodes
9 }
10
11 \newrobustcmd*{\Burlalt}{%
12 \begingroup%
13 \catcode'\#=12%
14 \catcode'\%=12%
15 \catcode'\&=12%
16 \catcode'\~=12%
17 \catcode'_ =12%
18 \LWR@Burlaltb%
```

```

19 }
20
21 \LetLtxMacro\urlalt\burlalt

```


---


File 52 **lwarp-breqn.sty**

§ 151 Package **breqn**

*(Emulates or patches code by MICHAEL J. DOWNES, MORTEN HØGHOLM.)*

Pkg breqn breqn is patched for use by lwarp.

 darray darray is not supported.

 MATHJAX MathJax does not support breqn.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{breqn}[2017/01/27]
2 \setkeys{breqn}{spread={5pt}}
3
4 \def\eqnumside{R}
5 % \def\eqnumplace{T}
6
7 \BeforeBeginEnvironment{dmath}{
8 \begin{BlockClass}{displaymathnumbered}
9 \LWR@newautoidanchor%
10 \booltrue{LWR@indisplaymathimage}%
11 \begin{lateximage}[-breqn dmath- \mathimagename]
12 }
13
14 \AfterEndEnvironment{dmath}{
15 \end{lateximage}\end{BlockClass}
16 }
17
18 \BeforeBeginEnvironment{dmath*}{
19 \begin{BlockClass}{displaymath}
20 \LWR@newautoidanchor%
21 \booltrue{LWR@indisplaymathimage}%
22 \begin{lateximage}[-breqn dmath*- \mathimagename]
23 }
24
25 \AfterEndEnvironment{dmath*}{
26 \end{lateximage}\end{BlockClass}
27 }
28
29 \BeforeBeginEnvironment{dseries}{
30 \begin{BlockClass}{displaymathnumbered}
31 \LWR@newautoidanchor%
32 \booltrue{LWR@indisplaymathimage}%
33 \begin{lateximage}[-breqn dseries- \mathimagename]
34 }
35
36 \AfterEndEnvironment{dseries}{

```

```

37 \end{lateximage}\end{BlockClass}
38 }
39
40 \BeforeBeginEnvironment{dseries*}{
41 \begin{BlockClass}{displaymath}
42 \LWR@newautoanchor%
43 \booltrue{LWR@indisplaymathimage}%
44 \begin{lateximage}[-breqn dseries*- \mathimagename]
45 }
46
47 \AfterEndEnvironment{dseries*}{
48 \end{lateximage}\end{BlockClass}
49 }
50
51 \BeforeBeginEnvironment{dgroup}{
52 \begin{BlockClass}{displaymath}
53 \LWR@newautoanchor%
54 \booltrue{LWR@indisplaymathimage}%
55 \begin{lateximage}[-breqn dgroup- \mathimagename]
56 }
57
58 \AfterEndEnvironment{dgroup}{
59 \end{lateximage}\end{BlockClass}
60 }
61
62 \BeforeBeginEnvironment{dgroup*}{
63 \begin{BlockClass}{displaymath}
64 \LWR@newautoanchor%
65 \booltrue{LWR@indisplaymathimage}%
66 \begin{lateximage}[-breqn dgroup*- \mathimagename]
67 }
68
69 \AfterEndEnvironment{dgroup*}{
70 \end{lateximage}\end{BlockClass}
71 }

```

---

File 53 **lwarp-bsheaders.sty**

§ 152 Package **bsheaders**

Pkg bsheaders bsheaders is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{bsheaders}[1997/10/06]

---

File 54 **lwarp-bxpapersize.sty**

§ 153 Package **bxpapersize**

Pkg bxpapersize bxpapersize is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{bxpapersize}[2017/10/08]

2 \providecommand\*\papersizesetup{\bxpapersizesetup}

3 \newcommand\*\bxpapersizesetup[1]{}  


---

File 55 **lwarp-bytefield.sty**

§ 154 Package **bytefield**

*(Emulates or patches code by SCOTT PAKIN.)*

Pkg bytefield **bytefield** is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{bytefield}[2017/09/15]

2 \BeforeBeginEnvironment{bytefield}{\begin{lateximage}[(-bytefield-~\packagediagramname)]}

3

4 \AfterEndEnvironment{bytefield}{\end{lateximage}}  


---

File 56 **lwarp-cancel.sty**

§ 155 Package **cancel**

Pkg cancel **cancel** is used as-is for SVG math, and emulated for HTML text output.

**for HTML output:** 1 \LWR@origRequirePackage{lwarp-xcolor}% for \convertcolorspec

2 \LWR@ProvidesPackagePass{cancel}[2013/04/12]

\cancelto is math-only, so is used as-is.

3 \LetLtxMacro\LWR@origcancel\cancel

4 \LetLtxMacro\LWR@origbcancel\bcancel

5 \LetLtxMacro\LWR@origxcancel\xcancel

6

7 \appto\LWR@restoreorigformatting{%

8 \LetLtxMacro\cancel\LWR@origcancel%

9 \LetLtxMacro\bcancel\LWR@origbcancel%

10 \LetLtxMacro\xcancel\LWR@origxcancel%

11 }  


---

\LWR@cancelcolor {<{text}>} {<{color}>} {<{class}>} {<{colorstyle}>} {<{FormatWPstyle}>}

Add colors if not empty:

12 \newcommand{\LWR@cancelcolor}[5]{%

13 \ifcsemtyp{#2}%

14 {\InlineClass{#5}{#3}{#1}}%

15 {\LWR@htmlspanclass[#5;#4:\LWR@origpound\LWR@tempcolor]{#3}{#1}}%

16 }  


---

```

\cancel {<text>}

17 \DeclareRobustCommand{\cancel}[1]{%
18 \begingroup%
19 \CancelColor%
20 \LWR@findcurrenttextcolor%
21 \color{black}%
22 \LWR@cancelcolor{#1}{LWR@tempcolor}{sout}{text-decoration-color}%
23 {text-decoration:line-through}%
24 \endgroup%
25 }
26
27 \LetLtxMacro\bcancel\cancel
28 \LetLtxMacro\xcancel\cancel

```

---

### File 57 **lwarp-canoniclayout.sty**

#### § 156 Package **canoniclayout**

Pkg canoniclayout canoniclayout is ignored.

**for HTML output:** s1 \LWR@ProvidesPackageDrop{canoniclayout}[2011/11/05]

```

2 \newcommand*\currentfontletters{}
3 \newcommand*\charactersperpage{}

```

---

### File 58 **lwarp-caption.sty**

#### § 157 Package **caption**

*(Emulates or patches code by AXEL SOMMERFELDT.)*

Pkg caption caption is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{caption}[2018/10/05]

```

2 \renewcommand\caption@ibox[3]{%
3 \@testopt{\caption@ibox{#1}{#2}{#3}}{%
4 \wd\@tempboxa%
5 \linewidth% lwarp
6 }%
7 \LWR@traceinfo{caption@ibox: done}%
8 }

9 \long\def\caption@iibox#1#2#3[#4]{%
10 \@testopt{\caption@iibox{#1}{#2}{#3}{#4}}\captionbox@hj@default
11 }

12 \long\def\caption@iibox#1#2#3#4[#5]#6{%

```

```

13 % \setbox\@tempboxa\hbox{#6}%
14 \begingroup
15 #1*% set \caption@position
16 \caption@iftop{%
17 \LWR@traceinfo{caption@iiibox top}%
18 \endgroup
19 \parbox[t]{#4}{%
20 #1\relax
21 \caption@setposition t%
22 % \vbox{\caption#2{#3}}%
23 {\caption#2{#3}}% lwarp
24 % \captionbox@hrule
25 % \csname caption@hj@#5\endcsname
26 % \unhbox\@tempboxa
27 #6% lwarp
28 }%
29 }{%
30 \LWR@traceinfo{caption@iiibox bottom}%
31 \endgroup
32 \parbox[b]{#4}{%
33 #1\relax
34 \caption@setposition b%
35 % \csname caption@hj@#5\endcsname
36 % \unhbox\@tempboxa
37 #6% lwarp
38 % \captionbox@hrule
39 % \vtop{\caption#2{#3}}}%
40 {\caption#2{#3}}% lwarp
41 }%
42 }%
43 \LWR@traceinfo{caption@iiibox: done}%
44 }
45
46 \def\caption@caption{%
47 \caption@iftype
48 {%
49 \caption@checkgrouplevel\@empty\caption
50 \caption@star
51 {\caption@refstepcounter\@capttype}%
52 {\caption@dblarg{\@caption\@capttype}}}%
53 {\caption@Error{\noexpand\caption outside float}%
54 \caption@gobble}%
55 }
56
57 \long\def\caption@@caption#1[#2]#3{%

58 \ifcaption@star \else
59 \caption@prepareanchor{#1}{#2}%
60 \memcaptioninfo{#1}{\csname the#1\endcsname}{#2}{#3}%
61 \@nameuse{nag@hascaptiontrue}%
62 \fi

63 \par
64 \caption@beginex{#1}{#2}{#3}%
65 \caption@setfloatcapt{%

```

```

66 \caption@boxrestore
67 \if@minipage
68 \setminipage
69 \fi
70 \caption@normalsize
71 \ifcaption@star
72 \let\caption@makeanchor\@firstofone
73 \fi
74 \@makecaption{\csname fnum@#1\endcsname}%
75 {\ignorespaces\caption@makeanchor{#3}}%

76 % \par
77 \caption@if@minipage\@minipagetrue\@minipagefalse}%
78 \caption@end%
79 }

```

`\caption@@@make`     $\langle caption\ label\rangle$   $\langle caption\ text\rangle$

```

80 \renewcommand\caption@@@make[2]{%
81 \LWR@startpars% lwarp
82 % \sbox\@tempboxa{#1}%
83 % \ifdim\wd\@tempboxa=\z@
84 % \let\caption@lsep\relax
85 % \fi
86 \caption@ifempty{#2}{%
87 \let\caption@lsep\@empty
88 \let\caption@tfmt\@firstofone
89 }%
90 \setpar{\LWR@closeparagraph\@@par}% lwarp
91 \caption@applyfont
92 \caption@fmt
93 {\ifcaption@star\else
94 \begingroup
95 \captionlabelfont
96 #1%
97 \endgroup
98 \fi}%
99 {\ifcaption@star\else
100 \begingroup
101 \caption@iflf\captionlabelfont
102 \relax\caption@lsep
103 \endgroup
104 \fi}%
105 {\caption@textfont
106 \caption@ifstrut
107 {\vrule\@height\ht\strutbox\@width\z@}%
108 {}%
109 \nobreak\hskip\z@skip % enable hyphenation
110 \caption@tfmt{#2}
111 \LWR@ensuredoingapar% lwarp
112 \caption@ifstrut
113 {\ifhmode\@finalstrut\strutbox\fi}%
114 {}%
115 \par}}

```

```

116 \LWR@stoppars% lwarp
117 }

\caption@make@ {<>} {<>}

118 \renewcommand{\caption@make@}[2]{%
119 \caption@stepthecounter
120 \caption@beginhook
121 \caption@@make{#1}{#2}%
122 \caption@endhook
123 }

124 % \DeclareCaptionBox{none}{#2}
125 \DeclareCaptionBox{parbox}{%
126 #2%
127 }
128 \DeclareCaptionBox{colorbox}{%
129 #2%
130 }

```


---

### File 59 **lwarp-cases.sty**

## § 158 Package **cases**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg cases **cases** is patched for use by **lwarp**.

 **MATHJAX** MathJax does not support **cases**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{cases}[2002/05/02]

2 \BeforeBeginEnvironment{numcases}{
3 \begin{BlockClass}{displaymathnumbered}
4 \LWR@newautoidanchor%
5 \booltrue{LWR@indisplaymathimage}%
6 \begin{lateximage}[-cases- \mathimagename]
7 }
8
9 \AfterEndEnvironment{numcases}{
10 \end{lateximage}\end{BlockClass}
11 }
12
13 \BeforeBeginEnvironment{subnumcases}{
14 \begin{BlockClass}{displaymathnumbered}
15 \LWR@newautoidanchor%
16 \booltrue{LWR@indisplaymathimage}%
17 \begin{lateximage}[-cases- \mathimagename]
18 }
19
20 \AfterEndEnvironment{subnumcases}{
21 \end{lateximage}\end{BlockClass}
22 }

```



File 60 **lwarp-changebar.sty**§ 159 Package **changebar**

Pkg changebar changebar is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{changebar}[2018/03/09]

```

2 \newcommand*\cbstart{}
3 \newcommand*\cbend{}
4 \newenvironment*\changebar{}{}
5 \newcommand*\cbdelete{}
6 \newcommand*\nochnagebars{}
7 \newcommand*\cbcColor[1]{}
8 \newlength\changebarwidth
9 \newlength\deletebarwidth
10 \newlength\changebarsep
11 \newcounter{changebargrey}

```

File 61 **lwarp-changelayout.sty**§ 160 Package **changelayout**

*(Emulates or patches code by AHMED MUSA.)*

Pkg changelayout changelayout is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{changelayout}[2009/10/07]

```

2 \renewrobustcmd\cpl@backtodefaults{}
3
4 \renewrobustcmd\cpl@checkifoddpagelayout{%
5 \cpl@oddpagelayoutfalse%
6 }
7
8 \renewrobustcmd\changepagelayout[1]{%
9 \setkeys[KV]{changelayout}{#1}%
10 }
11
12 \renewrobustcmd\changelayout[1]{\changepagelayout{#1}}
13
14 \renewrobustcmd\adjustpagelayout[1]{%
15 \setkeys[KV@X]{changelayout}{#1}%
16 }
17
18 \renewrobustcmd\adjusttextlayout[1]{\adjustpagelayout{#1}}
19
20 \renewrobustcmd\adjusttextwidth[1]{%

```

```

21 \setkeys[KV]{changelay}{#1}%
22 \begin{BlockClass}[color:\LWR@colorstyle{named}{\cpl@textcolor}]{changelayout}
23 \color{\cpl@textcolor}%
24 \cpl@content
25 \end{BlockClass}
26 }

```

---

File 62 **lwarp-changepage.sty**

§ 161 Package **changepage**

*(Emulates or patches code by PETER WILSON.)*

Pkg changepage **changepage** is emulated.

**for HTML output:** Discard all options for lwarp-changepage:

```

1 \LWR@ProvidesPackageDrop{changepage}[2009/10/20]

2 \newif\ifoddpge
3 \DeclareRobustCommand{\checkoddpge}{\oddpgetrue}
4 \DeclareRobustCommand{\changetext}[5]{}
5 \DeclareRobustCommand{\changege}[9]{}
6
7 \@ifundefined{adjustwidth}{
8 \newenvironment{adjustwidth}[2]{}{}
9 \newenvironment{adjustwidth*}[2]{}{}
10 }{
11 \renewenvironment{adjustwidth}[2]{}{}
12 \renewenvironment{adjustwidth*}[2]{}{}
13 }

14 \DeclareDocumentCommand{\strictpagecheck}{}{}
15 \DeclareDocumentCommand{\easypagecheck}{}{}

```

---

File 63 **lwarp-changes.sty**

§ 162 Package **changes**

*(Emulates or patches code by EKKART KLEINOD.)*

Pkg changes **changes** is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{changes}[2019/01/26]

2 \renewcommand{\ChangesListline}[4]{%
3 \IfSubStr{\Changes@loc@show}{#1}{%
4 \LWR@startpars%
5 #2: #3 \quad

```

```

6 \nameref{autopage-#4}%
7 \LWR@stoppars%
8 }{}%
9 }
10
11 \renewcommand{\Changes@summaryline}[4]{%
12 \IfSubStr{\Changes@loc@show}{#1}{%
13 \ifthenelse{\not\equal{\Changes@loc@style}{compactsummary} \or #2 > 0}%
14 {%
15 #3:~#2#4%
16 }{}%
17 }{}%
18 }
19
20 \xpatchcmd{\listofchanges}
21 {\changesauthorname: \changesanonymousname}}
22 {\LWR@textcurrentcolor{\changesauthorname: \changesanonymousname}}}
23 {}
24 {\LWR@patcherror{changes}{listofchanges A}}
25
26 \xpatchcmd{\listofchanges}
27 {\changesauthorname: \Changes@InID}
28 {\LWR@textcurrentcolor{\changesauthorname: \Changes@InID}}
29 {}
30 {\LWR@patcherror{changes}{listofchanges B}}
31
32 \xpatchcmd{\listofchanges}
33 {(\Changes@InName)}
34 {\LWR@textcurrentcolor{(\Changes@InName)}}
35 {}
36 {\LWR@patcherror{changes}{listofchanges C}}
37
38 \xpatchcmd{\listofchanges}
39 {\parbox{\Changes@summary@width}}
40 {}
41 {}
42 {\LWR@patcherror{changes}{listofchanges D}}
43
44 \xpatchcmd{\Changes@Markup@comment}
45 {%
46 \ifthenelse{\isAnonymous{#2}}%
47 {\textbf{[\arabic{Changes@commentCount#2}]:} }%
48 {\textbf{[#3~\arabic{Changes@commentCount#2}]:} }%
49 #1%
50 }
51 {%
52 \LWR@textcurrentcolor{% lwarp
53 \ifthenelse{\isAnonymous{#2}}%
54 {\textbf{[\arabic{Changes@commentCount#2}]:} }%
55 {\textbf{[#3~\arabic{Changes@commentCount#2}]:} }%
56 #1%
57 }% lwarp
58 }
59 {}
60 {\LWR@patcherror{changes}{\Changes@Markup@comment A}}

```

```

61
62 \xpatchcmd{\Changes@Markup@comment}
63 {%
64 \uwave{%
65 \ifthenelse{\isAnonymous{#2}}%
66 {\textbf{[\arabic{Changes@commentCount#2}]:} }%
67 {\textbf{[#3~\arabic{Changes@commentCount#2}]:} }%
68 #1%
69 }%
70 }
71 {%
72 \LWR@textcurrentcolor{% lwarp
73 \uwave{%
74 \ifthenelse{\isAnonymous{#2}}%
75 {\textbf{[\arabic{Changes@commentCount#2}]:} }%
76 {\textbf{[#3~\arabic{Changes@commentCount#2}]:} }%
77 #1%
78 }%
79 }% lwarp
80 }
81 {}
82 {\LWR@patcherror{changes}{\Changes@Markup@comment B}}
83
84 \xpatchcmd{\Changes@output}
85 {\Changes@Markup@author{\Changes@output@author{#2}{left}}}
86 {\LWR@textcurrentcolor{\Changes@Markup@author{\Changes@output@author{#2}{left}}}}
87 {}
88 {\LWR@patcherror{changes}{Changes@output A}}
89
90 \xpatchcmd{\Changes@output}
91 {%
92 \ifthenelse{\equal{#1}{added}}{\Changes@Markup@added{#3}}{%
93 \ifthenelse{\equal{#1}{deleted}}{\Changes@Markup@deleted{#4}}{%
94 \ifthenelse{\equal{#1}{replaced}}{\Changes@Markup@added{#3}\allowbreak\Changes@Markup@deleted{#4}}{%
95 \ifthenelse{\equal{#1}{highlight}}{\Changes@Markup@highlight{#3}}{%
96 }
97 }%
98 \LWR@textcurrentcolor{%
99 \ifthenelse{\equal{#1}{added}}{\Changes@Markup@added{#3}}{%
100 \ifthenelse{\equal{#1}{deleted}}{\Changes@Markup@deleted{#4}}{%
101 \ifthenelse{\equal{#1}{replaced}}{\Changes@Markup@added{#3}\allowbreak\Changes@Markup@deleted{#4}}{%
102 \ifthenelse{\equal{#1}{highlight}}{\Changes@Markup@highlight{#3}}{%
103 }%
104 }
105 {}
106 {\LWR@patcherror{changes}{Changes@output B}}
107
108 \xpatchcmd{\Changes@output}
109 {\Changes@Markup@author{\Changes@output@author{#2}{right}}}
110 {\LWR@textcurrentcolor{\Changes@Markup@author{\Changes@output@author{#2}{right}}}}
111 {}
112 {\LWR@patcherror{changes}{Changes@output C}}

```

File 64 **lwarp-chappg.sty**

§ 163 Package **chappg**

*(Emulates or patches code by ROBIN FAIRBAIRNS.)*

Pkg chappg chappg is emulated.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{chappg}[2006/05/09]
2 \renewcommand{\pagenumbering}[2][{}]{
3 \providecommand{\chappgsep}{--}
```

File 65 **lwarp-chapterbib.sty**

§ 164 Package **chapterbib**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg chapterbib chapterbib is patched for use by lwarp.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{chapterbib}[2010/09/18]
2 \xdef\@savedjobname{\BaseJobname}
3 \let\@currentipfile\@savedjobname
```

File 66 **lwarp-chemfig.sty**

§ 165 Package **chemfig**

*(Emulates or patches code by CHRISTIAN TELLECHEA.)*

Pkg chemfig chemfig is patched for use by lwarp.

If using `\polymerdelim` to add delimiters to a `\chemfig`, wrap both inside a single `lateximage`:

```
\begin{lateximage}[(-chemfig-~\packagediagramname)]
\chemfig{. . . }
\polymerdelim[. . .]{. . . }
\end{lateximage}
```

The images are not hashed because they depend on external settings which may be changed at any time, and are unlikely to be reused inline anyhow.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{chemfig}
```

```

2 \LetLtxMacro\LWR@chemfig@origchemfig\chemfig
3
4 \DeclareDocumentCommand\chemfig{s O{} O{} m}{%
5 \begin{lateximage}[(-chemfig-~\packagediagramname)]%
6 \IfBooleanTF{#1}{%
7 \LWR@chemfig@origchemfig*[#2][#3]{#4}%
8 }{%
9 \LWR@chemfig@origchemfig[#2][#3]{#4}%
10 }
11 \end{lateximage}%
12 }
13
14 \LetLtxMacro\LWR@chemfig@origCF@lewis@b\CF@lewis@b
15
16 \def\CF@lewis@b#1#2{%
17 \begin{lateximage}[(-chemfig-~\packagediagramname)]%
18 \LWR@chemfig@origCF@lewis@b{#1}{#2}%
19 \end{lateximage}%
20 }
21
22 \preto{\schemestart}{\begin{lateximage}[(-chemfig-~\packagediagramname)]}
23 \appto{\CF@schemestop}{\end{lateximage}}
24
25 \LetLtxMacro\LWR@chemfig@origchemleft\chemleft
26
27 \def\chemleft#1#2\chemright#3{%
28 \begin{lateximage}[(-chemfig-~\packagediagramname)]%
29 \LWR@chemfig@origchemleft#1#2\chemright#3%
30 \end{lateximage}%
31 }
32
33 \LetLtxMacro\LWR@chemfig@origchemup\chemup
34
35 \def\chemup#1#2\chemdown#3{%
36 \begin{lateximage}[(-chemfig-~\packagediagramname)]%
37 \LWR@chemfig@origchemup#1#2\chemdown#3%
38 \end{lateximage}%
39 }

```

---


File 67 **lwarp-chemformula.sty**

§ 166 Package **chemformula**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

Pkg chemformula chemformula is patched for use by lwarp.

The svg images are hashed according to contents and local options. Global options are assumed to be constant document-wide.

 **chemformula with MATHJAX** chemformula works best without MATHJAX. If MATHJAX is used, `\displaymathother` must be used before `array`, and then `\displaymathnormal` may be used after. (The

chemformula package adapts to array, but does not know about MATHJAX, and MATHJAX does not know about chemformula.)

While using MATHJAX, `\displaymathother` may also be used for other forms of display and inline math which contain chemformula expressions.

**for HTML output:** 1 `\LWR@ProvidesPackagePass{chemformula}[2017/03/23]`

2 `\ExplSyntaxOn`

`\ch` Enclose in an inline SVG image or MathJax. The alt tag is the contents of the `\ch` expression. The filename is hashed, and also has additional hashing information based on the local options.

```
3 \RenewDocumentCommand \ch { O{}m }
4 {%
```

To work inside `align` with `\displaymathother`, a simple version must be used to work with chemformula's adaptation to `align`.

```
5 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}% lwarp
6 {
7 \chemformula_ch:nn {#1} {#2}% original
8 }
```

If used as the outer level, must temporarily ensure MATHJAX is disabled:

```
9 {
10 \begingroup%
11 \boolfalse{mathjax}%
```

An inline image is used, adjusted for the baseline:

```
12 \LWR@subsingledollar*{% lwarp
13 \textbackslash}ch{\LWR@HTMLsanitize{#2}\}% alt text
14 }{%
15 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}% add'l hashing
16 }%
17 {%
18 \chemformula_ch:nn {#1} {#2}% original
19 }%
20 \endgroup%
21 }
22 }
```

`\chcpd` Similar to `\ch`.

```
23 \cs_gset_protected:Npn \chemformula_chcpd:nn #1#2
24 {
25 \begingroup%
26 \boolfalse{mathjax}%
27 \LWR@subsingledollar*{% lwarp
28 \textbackslash}chcpd{\LWR@HTMLsanitize{#2}\}%
29 }{%
30 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
31 }{% original
32 \group_begin:
```

```

33 \tl_if_blank:nF {#2}
34 {
35 \keys_set:nn {chemformula} {#1}
36 __chemformula_save_catcodes:
37 __chemformula_sanitiz:Nn
38 \l__chemformula_chemformula_tmpa_tl
39 {#2}
40 __chemformula_input_compound_no_check:NV
41 \l__chemformula_compound_tl
42 \l__chemformula_chemformula_tmpa_tl
43 __chemformula_prepare_output:N \l__chemformula_compound_tl
44 \chemformula_write:V \l__chemformula_compound_tl
45 }
46 \group_end:
47 }
48 \endgroup
49 }

```

`\charrow` If standalone, appears in a regular `lateximage`.

```

50 \RenewDocumentCommand \charrow { m0{}0{} }
51 {
52 \begin{lateximage}[(-chemformula- charrow)]
53 \group_begin:
54 __chemformula_draw_arrow:nnn {#1} {#2} {#3}
55 \group_end:
56 \end{lateximage}
57 }

```

`\chname` If standalone, appears in a regular `lateximage`, hashed according to contents.

```

58 \RenewDocumentCommand \chname { R(){}R(){} }
59 {
60 \begin{lateximage}*[%
61 \textbackslash{}chname(\LWR@HTMLsanitize{#1})(\LWR@HTMLsanitize{#2})
62]%
63 \chemformula_chwritebelow:nn {#1} {#2}
64 \end{lateximage}
65 }

```

`\chlewis` Placed inline, hashed according to contents and options.

```

66 \RenewDocumentCommand \chlewis { O{}mm }
67 {
68 \begingroup%
69 \boolfalse{mathjax}%
70 \LWR@subsingledollar*{\textbackslash{}chlewis\{#2\}\{#3\}}%
71 {
72 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
73 }{
74 \chemformula_lewis:nnn {#1} {#2} {#3}
75 }
76 \endgroup%
77 }

```



lwarp redefines the \$ character, so special handling is required to escape math expressions inside \ch.

This boolean tracks a new kind of escaped math:

```
78 \bool_new:N \l__chemformula_first_last_LWRdollar_bool
```

\chemformula\_input\_escape\_math

Adds additional escaping for the new dollar definition:

```
79 \cs_gset_protected:Npn __chemformula_input_escape_math:n #1
80 {
81 __chemformula_first_last_math:n {#1}
82 \bool_if:NT \l__chemformula_first_last_dollar_bool
83 {
84 \bool_set_true:N \l__chemformula_first_last_math_bool
85 __chemformula_read_escape_dollar:w #1 \q_nil
86 }
87 \bool_if:NT \l__chemformula_first_last_mathbraces_bool
88 {
89 \bool_set_true:N \l__chemformula_first_last_math_bool
90 __chemformula_read_escape_mathbraces:w #1 \q_nil
91 }
```

Added by lwarp:

```
92 \bool_if:NT \l__chemformula_first_last_LWRdollar_bool% lwarp
93 {
94 \bool_set_true:N \l__chemformula_first_last_math_bool% lwarp
95 __chemformula_read_escape_LWRdollar:w #1 \q_nil% lwarp
96 }
97 }
```

\chemformula\_read\_escape\_LWRdollar

The following parses the contents inside the new dollars.

lwarp keeps the dollar as its original math shift until the document starts. While chemmacros is being patched, the dollar must temporarily be set to its new meaning during the following definition.

```
98 \begingroup
99 \catcode'\$=\active
100
101 \cs_new_protected:Npn __chemformula_read_escape_LWRdollar:w $#1$ \q_nil
102 {
103 __chemformula_read_escape_math:n {#1}
104 }
105
106 \endgroup
```

\chemformula\_bool\_set\_if\_first\_last

The following looks at the first and last tokens for delimiters to escape math inside `\ch`. The original definition is modified to look for the control sequences which are used by the new meaning of `$`.

```

107 \cs_new_protected:Npn __chemformula_bool_cs_set_if_first_last:NnNN #1#2#3#4
108 {
109 \int_zero:N \l__chemformula_tmpa_int
110 \int_zero:N \l__chemformula_tmpb_int
111 \int_set:Nn \l__chemformula_tmpa_int { \tl_count:n {#2} }
112 \tl_map_inline:nn {#2}
113 {
114 \int_incr:N \l__chemformula_tmpb_int
115 \int_compare:nT { \l__chemformula_tmpb_int = 1 }
116 {

```

At the start, the `cs_` version compares control sequences:

```

117 \ifdefstrequal{##1}{#3}% lwarp
118 {
119 \bool_set_true:N #1
120 }% lwarp
121 {}
122 }

```

At the end, compare more control sequences:

```

123 \int_compare:nT { \l__chemformula_tmpb_int = \l__chemformula_tmpa_int }
124 {
125 \ifdefstrequal{##1}{#4}
126 {}
127 {
128 \bool_set_false:N #1
129 }
130 }
131 }
132 }

```

`\chemformula_first_last_math`

Modified to check for the new meaning of `$` at first/last:

```

133 \cs_gset_protected:Npn __chemformula_first_last_math:n #1
134 {
135 \bool_set_false:N \l__chemformula_first_last_math_bool
136 \bool_set_false:N \l__chemformula_first_last_dollar_bool
137 \bool_set_false:N \l__chemformula_first_last_LWRdollar_bool% lwarp
138 \bool_set_false:N \l__chemformula_first_last_mathbraces_bool
139 __chemformula_bool_set_if_first_last:Nnnn
140 \l__chemformula_first_last_dollar_bool
141 {#1}
142 { $ } { $ }
143 \bool_if:NF \l__chemformula_first_last_dollar_bool
144 {
145 __chemformula_bool_set_if_first_last:Nnnn
146 \l__chemformula_first_last_mathbraces_bool
147 {#1}
148 { \ () { \ } }

```

Added by lwarp:

```

149 \bool_if:NF \l__chemformula_first_last_mathbraces_bool% lwarp
150 {
151 __chemformula_bool_cs_set_if_first_last:NnNN
152 \l__chemformula_first_last_LWRdollar_bool
153 {#1}
154 { \LWR@newsingledollar } { \LWR@newsingledollar }
155 }% lwarp
156 }
157 }

158 \ExplSyntaxOff

```


---


File 68 **lwarp-chemgreek.sty**

§ 167 Package **chemgreek**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

Pkg chemgreek chemgreek is patched for use by lwarp.

 **Greek symbols package selection** To use text-mode symbols, use packages `textalpha` or `textgreek`. Using the other packages supported by `chemgreek` will result in math-mode greek characters, which will result in svg images being used. These images will be hashed.

 **X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X, Lua<sup>A</sup>T<sub>E</sub>X** If using X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X or Lua<sup>A</sup>T<sub>E</sub>X, select the fontspec mapping:

```
\selectchemgreekmapping{fontspec}
```

**for HTML output:** 1 \LWR@ProvidesPackagePass{chemgreek}[2016/02/10]

```

2 \ExplSyntaxOn
3
4 \cs_gset_protected:Npn \chemgreek_text:n #1
5 { { \text {#1} } }
6
7 \appto\LWR@restoreorigformatting{%
8 \cs_set_protected:Npn \chemgreek_text:n #1%
9 { \ensuremath { \text {#1} } }%
10 }
11
12 \ExplSyntaxOff

```

---

File 69 **lwarp-chemmacros.sty**

§ 168 Package **chemmacros**


(Emulates or patches code by CLEMENS NIEDERBERGER.)

Pkg chemmacros chemmacros is patched for use by lwarp.


**for HTML output:** 1 \LWR@ProvidesPackagePass{chemmacros}[2017/08/28]

SVG file hashing assumes that the relevant options are constant for the entire document.

### § 168.1 **Changes to the user's document**

 **\makepolymerdelims** When using `\makepolymerdelims`, enclose the entire expression inside a `polymerdelims` environment, such as (from the chemmacros manual):

```
\begin{polymerdelims}
\chemfig{-[@{op,.75}]CH_2-CH(-[6]Cl)-[@{cl,0.25}]}
\makepolymerdelims{5pt}[27pt]{op}{cl}
\end{polymerdelims}
```

 **redox reactions** Redox reactions must be enclosed inside a `redoxreaction` environment. For print output, extra space must be included above and/or below the result, so they are declared as arguments to the environment, instead of being manually entered as per the chemmacros manual. For HTML output, the extra space is ignored and a `lateximage` is used instead.

```
\begin{redoxreaction}{7mm}{7mm}
\OX{a,Na} \rightarrow \OX{b,Na}\pch\redox(a,b){oxidation}
\end{redoxreaction}
```

### § 168.2 **Code**

### § 168.3 **Loading modules**

Patching chemmacros modules must be done `\AtBeginDocument`, since modules are invoked by the user in the preamble, and each patch is only done if the module is loaded.

```
2 \ExplSyntaxOn
3
4 \newcommand{\@ifchemmacrosmoduleloaded}[1]{%
5 \@ifl@aded{\c__chemmacros_module_extension_tl}{\c__chemmacros_module_prefix_tl.#1}%
6 }
7
8 \ExplSyntaxOff
```

## § 168.4 New environments

`\makepolymerdelims` and redox reactions must be enclosed in a `lateximage` during HTML output. These environments are provided here in HTML mode, and in the `lwarp` core in print mode, as a high-level semantic syntax which automatically embeds the contents in a `lateximage` with an appropriate `alt` tag.

Env `polymerdelims`

```
9 \DeclareDocumentEnvironment{polymerdelims}{}
10 {\begin{lateximage}[(-chemmacros- polymer)]}
11 {\end{lateximage}}
```

Env `redoxreaction` `{\langle space above \rangle}` `{\langle space below \rangle}`

For HTML output, the above and below space is ignored, and a `lateximage` is used instead. For the print output version, see section 87.

```
12 \DeclareDocumentEnvironment{redoxreaction}{m m}
13 {\begin{lateximage}[(-chemmacros- redoxreaction)]}
14 {\end{lateximage}}
```

```
15 \ExplSyntaxOn
```

## § 168.5 Acid-base

```
16 \AtBeginDocument{
17 \ifchemmacrosmoduleloaded{acid-base}{
18 \PackageInfo{lwarp}{Patching~chemmacros~module~acid-base}
19
20 \cs_gset_protected:Npn \chemmacros_p:n #1
21 {
22 \begingroup
23 \boolfalse{mathjax}
24 \LWR@subsingledollar*{
25 \textbackslash}p{\LWR@HTMLsanitize{#1}\}
26 }{
27 chemmacrosp\protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
28 }{
29 \group_begin:
30 \mbox
31 {
32 \chemmacros_p_style:n {p}
33 \ensuremath {#1}
34 }
35 \group_end:
36 }
37 \endgroup
38 }
39
40 \RenewDocumentCommand \pH {} {
41 \begingroup
42 \boolfalse{mathjax}
43 \LWR@subsingledollar*{\textbackslash}pH}{chemmacros}{
44 \chemmacros_p:n { \chemmacros_chemformula:n {H} }
```

```

45 }
46 \endgroup
47 }
48
49 \RenewDocumentCommand \pOH {} {
50 \begingroup
51 \boolfalse{mathjax}
52 \LWR@subsingledollar*{\textbackslash}pOH}{chemmacros}{
53 \chemmacros_p:n { \chemmacros_chemformula:n {OH} }
54 }
55 \endgroup
56 }
57
58 \RenewDocumentCommand \pKa {O{}}
59 {
60 \begingroup
61 \boolfalse{mathjax}
62 \LWR@subsingledollar*{\textbackslash}pKa{[]#1[]}{chemmacros #1}{
63 \chemmacros_p:n
64 {
65 \Ka \ifblank {#1} {}
66 { {} \c_math_subscript_token { \chemmacros_bold:n {#1} } }
67 }
68 }
69 \endgroup
70 }
71
72 \RenewDocumentCommand \pKb {O{}}
73 {
74 \begingroup
75 \boolfalse{mathjax}
76 \LWR@subsingledollar*{\textbackslash}pKb{[]#1[]}{chemmacros #1}{
77 \chemmacros_p:n
78 {
79 \Kb \ifblank {#1} {}
80 { {} \c_math_subscript_token { \chemmacros_bold:n {#1} } }
81 }
82 }
83 \endgroup
84 }
85
86 \LetLtxMacro\LWR@chemmacros@origKa\Ka
87 \renewcommand*{\Ka}{%
88 \begingroup
89 \boolfalse{mathjax}
90 \LWR@subsingledollar*{\textbackslash}Ka}{chemmacros}{%
91 \LWR@chemmacros@origKa%
92 }%
93 \endgroup
94 }
95
96 \LetLtxMacro\LWR@chemmacros@origKb\Kb
97 \renewcommand*{\Kb}{%
98 \begingroup
99 \boolfalse{mathjax}

```

```

100 \LWR@subsingledollar*{\textbackslash}Kb}{chemmacros}{%
101 \LWR@chemmacros@origKb%
102 }%
103 \endgroup
104 }
105
106 \LetLtxMacro\LWR@chemmacros@origKw\Kw
107 \renewcommand*{\Kw}{%
108 \begingroup
109 \boolfalse{mathjax}
110 \LWR@subsingledollar*{\textbackslash}Kw}{chemmacros}{
111 \LWR@chemmacros@origKw
112 }
113 \endgroup
114 }
115
116 }{}% \@ifchemmacrosmoduleloaded
117 }% AtBeginDocument

```

## § 168.6 Charges

```

118 \AtBeginDocument{
119 \@ifchemmacrosmoduleloaded{charges}{
120 \PackageInfo{lwarp}{Patching~chemmacros~module~charges}
121 }
122 \cs_gset_protected:Npn \fplus {
123 \begingroup
124 \boolfalse{mathjax}
125 \LWR@subsingledollar*{\textbackslash}fplus}{chemmacros}
126 { \LWR@origensuredmath{\chemformula_fplus:} }
127 \endgroup
128 }
129 \cs_gset_protected:Npn \fminus {
130 \begingroup
131 \boolfalse{mathjax}
132 \LWR@subsingledollar*{\textbackslash}fminus}{chemmacros}
133 { \LWR@origensuredmath{\chemformula_fminus:} }
134 \endgroup
135 }
136
137 }{}% \@ifchemmacrosmoduleloaded
138 }% AtBeginDocument

```

## § 168.7 Nomenclature

```

139 \AtBeginDocument{
140 \@ifchemmacrosmoduleloaded{nomenclature}{
141 \PackageInfo{lwarp}{Patching~chemmacros~module~nomenclature}
142 }
143 \cs_gset_protected:Npn \chemmacros_charge:n #1
144 {
145 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}
146 {\chemmacros_chemformula:n { }^{#1} }}
147 {
148 \ifmmode

```

```

149 {\chemmacros_chemformula:n { }^{#1} }}
150 \else
151 { \textsuperscript{\ensuremath{#1}} }
152 \fi
153 }
154 }
155
156
157 \LetLtxMacro\LWR@chemmacros@origchemprime\chemprime
158
159 \protected\def\chemprime { \HTMLUnicode{2032} }
160
161 \appto\LWR@restoreorigformatting{%
162 \LetLtxMacro\chemprime\LWR@chemmacros@origchemprime%
163 }

164 \ChemCompatibilityFrom{5.8}
165 \cs_gset_protected:Npn __chemmacros_cip:n #1
166 {
167 \tl_set:Nn \l__chemmacros_tmpa_tl {#1}
168 \int_step_inline:nnnn {0} {1} {9}
169 {
170 \tl_replace_all:Nnn \l__chemmacros_tmpa_tl
171 {##1}
172 { { \l__chemmacros_cip_number_tl ##1} }
173 }
174 {
175 \l__chemmacros_cip_inner_tl
176 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
177 \l__chemmacros_tmpa_tl
178 }}% lwarp
179 }
180 }
181 \EndChemCompatibility

182 \RenewDocumentCommand \Sconf { O{S} } {
183 \begin{lateximage}[\textbackslash{}Sconf{[#1]}]}
184 \chemmacros_sconf:n {#1}
185 \end{lateximage}
186 }
187
188 \RenewDocumentCommand \Rconf { O{R} } {
189 \begin{lateximage}[\textbackslash{}Rconf{[#1]}]}
190 \chemmacros_rconf:n {#1}
191 \end{lateximage}
192 }

193 \cs_gset_protected:Npn \chemmacros_hapto:n #1
194 {
195 \begingroup
196 \boolfalse{mathjax}
197 \LWR@subsingledollar*\textbackslash{}hapto\{#1\}\{chemmacros}{
198 \chemmacros_coordination_symbol:nnnn
199 { \l__chemmacros_coord_use_hyphen_bool }
200 {
201 \chemmacros_if_compatibility:nnTF {>} {5.7}

```



```

202 { \c_true_bool }
203 { \c_false_bool }
204 }
205 { \chemeta }
206 {#1}
207 }
208 \endgroup
209 }
210
211 \cs_gset_protected:Npn \chemmacros_dento:n #1
212 {
213 \begingroup
214 \boolfalse{mathjax}
215 \LWR@subsingledollar*{\textbackslash}dento\{#1\}\{chemmacros}\{
216 \chemmacros_coordination_symbol:nnnn
217 { \l__chemmacros_coord_use_hyphen_bool }
218 {
219 \chemmacros_if_compatibility:nnTF {>} {5.7}
220 { \c_true_bool }
221 { \c_false_bool }
222 }
223 { \chemkappa }
224 {#1}
225 }
226 \endgroup
227 }
228
229 \cs_gset_protected:Npn \chemmacros_bridge:n #1
230 {
231 \begingroup
232 \boolfalse{mathjax}
233 \LWR@subsingledollar*{\textbackslash}bridge\{#1\}\{chemmacros}\{
234 \chemmacros_coordination_symbol:nnnn
235 { \l__chemmacros_coord_use_hyphen_bool }
236 { \l__chemmacros_bridge_super_bool }
237 { \chemmu }
238 {#1}
239 }
240 \endgroup
241 }
242 }{\}% \ifchemmacrosmoduleloaded
243 }{\}% AtBeginDocument

```

## § 168.8 Particles

```

244 \AtBeginDocument{
245 \ifchemmacrosmoduleloaded{particles}{
246 \PackageInfo{lwarp}{Patching~chemmacros~module~particles}
247 }
248 \cs_gset_protected:Npn \chemmacros_declare_nucleophile:Nn #1#2
249 {
250 \cs_set_protected:cpn {__chemmacros_ \chemmacros_remove_backslash:N #1:}
251 {
252 \bool_if:NTF \l__chemmacros_nucleophile_elpair_bool
253 {

```

```

254 \chemmacros_elpair:n { #2 }
255 \chemmacros_if_compatibility:nnT {>=} {5.3}
256 { \skip_horizontal:N \l__chemmacros_nucleophile_dim }
257 \chemmacros_chemformula:n { #1 }
258 }
259 { \chemmacros_chemformula:n { #2 } }
260 }
261 \DeclareDocumentCommand #1 {o}
262 {%
263 \begin{lateximage}%
264 \group_begin:%
265 \IfNoValueF {##1}%
266 { \chemmacros_set_keys:nn {particles} {##1} }%
267 \use:c {__chemmacros_ \chemmacros_remove_backslash:N #1:}%
268 \group_end:%
269 \end{lateximage}%
270 }
271 }
272
273 \RenewChemNucleophile \Nuc {Nu}
274 \RenewChemNucleophile \ba {ba}
275
276 }{}% \ifchemmacrosmoduleloaded
277 }% AtBeginDocument

```

## § 168.9 Phases

```

278 \AtBeginDocument{
279 \ifchemmacrosmoduleloaded{phases}{
280 \PackageInfo{lwarp}{Patching~chemmacros~module~phases}
281
282 \cs_undefine:N \chemmacros_phase:n
283 \cs_new_protected:Npn \chemmacros_phase:n #1
284 {
285 \chemmacros_leave_vmode:
286 \bool_if:NTF \l__chemmacros_phases_sub_bool
287 {
288 \ifnumequal{\value{LWR@lateximagedepth}}{0}
289 {
290 \textsubscript{ (#1) }
291 }
292 {
293 \chemformula_subscript:n { (#1) }
294 }
295 }
296 {
297 \skip_horizontal:N \l__chemmacros_phases_space_dim
298 \chemmacros_text:n { (#1) }
299 }
300 }
301
302 }{}% \ifchemmacrosmoduleloaded
303 }% AtBeginDocument

```

§ 168.10 **Mechanisms**

```

304 \AtBeginDocument{
305 \@ifchemmacrosmoduleloaded{mechanisms}{
306 \PackageInfo{lwarp}{Patching~chemmacros~module~mechanisms}
307
308 \chemmacros_define_keys:nn {textmechanisms}
309 {
310 type .choice: ,
311 type / .code:n =
312 {
313 __chemmacros_set_mechanisms:nnn { S }
314 {
315 \textsubscript{N}
316 }
317 { }
318 } ,
319 type / 1 .code:n =
320 {
321 __chemmacros_set_mechanisms:nnn { S }
322 {
323 \textsubscript{N}
324 1
325 }
326 { }
327 } ,
328 type / 2 .code:n =
329 {
330 __chemmacros_set_mechanisms:nnn { S }
331 {
332 \textsubscript{N}
333 2
334 }
335 { }
336 } ,
337 type / se .code:n =
338 {
339 __chemmacros_set_mechanisms:nnn { S }
340 {
341 \textsubscript{E}
342 }
343 { }
344 } ,
345 type / 1e .code:n =
346 {
347 __chemmacros_set_mechanisms:nnn { S }
348 {
349 \textsubscript{E}
350 1
351 }
352 { }
353 } ,
354 type / 2e .code:n =
355 {
356 __chemmacros_set_mechanisms:nnn { S }
357 {

```

```

358 \textsubscript{E}
359 2
360 }
361 { }
362 },
363 type / ar .code:n =
364 {
365 __chemmacros_set_mechanisms:nnn { S }
366 {
367 \textsubscript{E}
368 }
369 { Ar - }
370 },
371 type / e .code:n =
372 { __chemmacros_set_mechanisms:nnn { E } { } { } },
373 type / e1 .code:n =
374 { __chemmacros_set_mechanisms:nnn { E } { 1 } { } },
375 type / e2 .code:n =
376 { __chemmacros_set_mechanisms:nnn { E } { 2 } { } },
377 type / cb .code:n =
378 {
379 __chemmacros_set_mechanisms:nnn { E }
380 {
381 1
382 \textsubscript{cb}
383 }
384 { }
385 },
386 type .default:n =
387 }
388
389 \cs_gset_protected:Npn \chemmacros_mechanisms:n #1
390 {
391 \tl_if_blank:nTF {#1}
392 { \chemmacros_set_keys:nn {textmechanisms} { type } }
393 { \chemmacros_set_keys:nn {textmechanisms} { type = #1 } }
394 \mbox
395 {
396 \tl_use:N \l__chemmacros_mechanisms_ar_tl
397 \tl_use:N \l__chemmacros_mechanisms_type_tl
398 \tl_use:N \l__chemmacros_mechanisms_mol_tl
399 }
400 }
401
402 \appto\LWR@restoreorigformatting{%
403 \cs_set_protected:Npn \chemmacros_mechanisms:n #1%
404 {%
405 \tl_if_blank:nTF {#1}%
406 { \chemmacros_set_keys:nn {mechanisms} { type } }%
407 { \chemmacros_set_keys:nn {mechanisms} { type = #1 } }%
408 \mbox%
409 {%
410 \tl_use:N \l__chemmacros_mechanisms_ar_tl%
411 \tl_use:N \l__chemmacros_mechanisms_type_tl%
412 \tl_use:N \l__chemmacros_mechanisms_mol_tl%

```

```

413 }%
414 }%
415 }
416
417 }{}% \@ifchemmacrosmoduleloaded
418 }% AtBeginDocument

```

### § 168.11 Newman

```

419 \AtBeginDocument{
420 \@ifchemmacrosmoduleloaded{newman}{
421 \PackageInfo{lwarp}{Patching~chemmacros~module~newman}
422
423 \RenewDocumentCommand \newman {od()}m%
424 {
425 \IfValueTF{#2}
426 {\begin{lateximage}[\textbackslash}newman{#2}\{#3\}}
427 {\begin{lateximage}[\textbackslash}newman\{#3\}}
428 \group_begin:
429 \IfNoValueF {#1} { \chemmacros_set_keys:nn {newman} {#1} }
430 \IfNoValueTF {#2}
431 { \chemmacros_newman:nn { } {#3} }
432 { \chemmacros_newman:nn {#2} {#3} }
433 \group_end:
434 \end{lateximage}
435 }%
436
437 }{}% \@ifchemmacrosmoduleloaded
438 }% AtBeginDocument

```

### § 168.12 Orbital

```

439 \AtBeginDocument{
440 \@ifchemmacrosmoduleloaded{orbital}{
441 \PackageInfo{lwarp}{Patching~chemmacros~module~orbital}
442
443 \RenewDocumentCommand \orbital {om}
444 {
445 \IfValueTF{#1}
446 {
447 \begin{lateximage}[%
448 \textbackslash}orbital{[]\LWR@HTMLSanitize{#1}{}#\{#2\}}
449][][margin-left: 1em ; margin-right: 1em]
450 }
451 {
452 \begin{lateximage}[%
453 \textbackslash}orbital\{#2\}%
454][][margin-left: 1em ; margin-right: 1em]
455 }
456 \group_begin:
457 \chemmacros_set_keys:nn {orbital/type} {#2}
458 \IfNoValueTF {#1}
459 { \chemmacros_orbital:n { } }
460 { \chemmacros_orbital:n {#1} }
461 \group_end:

```

```

462 \end{lateximage}
463 }
464
465 }{}% \@ifchemmacrosmoduleloaded
466 }% AtBeginDocument

```

### § 168.13 Reactions

```

\chemmacros_declare_reaction_env {<chem>} {<math>} {<args number>} {<argument list ({#2}{#3}...)}

467 \AtBeginDocument{
468 \@ifchemmacrosmoduleloaded{reactions}{
469 \PackageInfo{lwarp}{Patching~chemmacros~module~reactions}
470
471 \cs_gset_protected:Npn \chemmacros_declare_reaction_env:nnnn #1#2#3#4
472 {
473 \exp_args:Nnx \DeclareDocumentEnvironment {#1} { 0} {\prg_replicate:nn {#3+0} {m} }
474 {
475 \boolfalse{mathjax}% lwarp
476 \chemmacros_add_reaction_description:n {##1}
477 __chemmacros_begin_reaction:
478 \chemmacros_reaction_read:nnw {#2} {#4}
479 }
480 {
481 __chemmacros_end_reaction:
482 }
483 }
484 \cs_generate_variant:Nn \chemmacros_declare_reaction_env:nnnn {nV}
485
486 \RenewChemReaction {reaction} {equation}
487 \RenewChemReaction {reaction*} {equation*}
488 \RenewChemReaction {reactions} {align}
489 \RenewChemReaction {reactions*} {align*}
490
491 }{}% \@ifchemmacrosmoduleloaded
492 }% AtBeginDocument

```

### § 168.14 Redox

```

493 \AtBeginDocument{
494 \@ifchemmacrosmoduleloaded{redox}{
495 \PackageInfo{lwarp}{Patching~chemmacros~module~redox}
496
497 \NewDocumentCommand \LWR@chemmacros@ox { s m >{\SplitArgument{1}{,}}m }
498 {
499 \IfBooleanTF {#1}
500 { \chemmacros_ox:nnnn {#1} {#2} #3 }
501 { \chemmacros_ox:nnnn { } {#2} #3 }
502 }
503
504 \RenewDocumentCommand \ox { s 0{ } m }
505 {
506 \begingroup
507 \boolfalse{mathjax}
508 \IfBooleanTF {#1}

```

```

509 {
510 \LWR@subsingledollar*{% yes hash
511 \textbackslash{}ox*\{\LWR@HTMLsanitize{#3}\}% alt
512 }{%
513 star \protect\LWR@HTMLsanitize{\detokenize\expandafter{#2}}%
514 }{%
515 \LWR@chemmacros@ox* {#2} {#3}% contents
516 }%
517 }
518 {
519 \LWR@subsingledollar*{% yes hash
520 \textbackslash{}ox*\{\LWR@HTMLsanitize{#3}\}% alt
521 }{%
522 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#2}}%
523 }{%
524 \LWR@chemmacros@ox {#2} {#3}% contents
525 }%
526 }
527 \endgroup
528 }
529
530 }{}% \@ifchemmacrosmoduleloaded
531 }% AtBeginDocument

```

### § 168.15 **Scheme**

Fix for chemmacros as of v5.8b, when using newfloat and babel:

```

532 \AtBeginDocument{
533 \@ifchemmacrosmoduleloaded{scheme}{
534 \PackageInfo{lwarp}{Patching~chemmacros~module~scheme}
535
536 \ifdefstring{\schemename}{los}{
537 \SetupFloatingEnvironment{scheme}{
538 name = \chemmacros_translate:n {scheme-name}
539 }
540 }{}
541
542 }{}% \@ifchemmacrosmoduleloaded
543 }% AtBeginDocument

```

### § 168.16 **Spectroscopy**

```

544 \AtBeginDocument{
545 \@ifchemmacrosmoduleloaded{spectroscopy}{
546 \PackageInfo{lwarp}{Patching~chemmacros~module~spectroscopy}
547
548 \ChemCompatibilityTo{5.8}
549 \cs_gset_protected:Npn __chemmacros_nmr_base:nn #1#2
550 {
551 \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
552 {
553 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl { \{ }
554 \tl_put_right:Nn \g__chemmacros_nmr_element_coupled_tl { \} }
555 }

```

```

556 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl {#2}
557 % \chemmacros_chemformula:n { ^{#1} }
558 #1
559 \bool_if:NTF \l__chemmacros_nmr_parse_bool
560 { \chemformula_ch:nV {} } \g__chemmacros_nmr_element_coupled_tl }
561 { \chemmacros_chemformula:V \g__chemmacros_nmr_element_coupled_tl }
562 \tl_use:N \l__chemmacros_nmr_element_method_connector_tl
563 \tl_use:N \l__chemmacros_nmr_method_tl
564 }
565 \EndChemCompatibility
566 \ChemCompatibilityFrom{5.8}
567 \cs_gset_protected:Npn __chemmacros_nmr_base:nn #1#2
568 {
569 \group_begin:
570 \tl_use:N \l__chemmacros_nmr_base_format_tl
571 \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
572 {
573 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl { \{ }
574 \tl_put_right:Nn \g__chemmacros_nmr_element_coupled_tl { \} }
575 }
576 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl {#2}
577 % \chemmacros_chemformula:n { ^{#1} }
578 #1
579 \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
580 {
581 \bool_if:NTF \l__chemmacros_nmr_parse_bool
582 { \chemformula_ch:nV {} } \g__chemmacros_nmr_element_coupled_tl }
583 { \chemmacros_chemformula:V \g__chemmacros_nmr_element_coupled_tl }
584 }
585 \tl_use:N \l__chemmacros_nmr_element_method_connector_tl
586 \tl_use:N \l__chemmacros_nmr_method_tl
587 \group_end:
588 }
589 \EndChemCompatibility
590
591
592 \cs_gset_protected:Npn \chemmacros_nmr_position:n #1
593 {
594 \chemmacros_chemformula:x
595 {
596 \exp_not:V \g__chemmacros_nmr_element_tl
597 \bool_if:NF \l__chemmacros_nmr_position_side_bool
598 {
599 \tl_if_eq:NnTF \l__chemmacros_nmr_position_tl {^}% lwarp
600 { \textsuperscript{\exp_not:n { {#1} }} }% lwarp
601 { \textsubscript{\exp_not:n { {#1} }} }% lwarp
602 % \exp_not:V \l__chemmacros_nmr_position_tl
603 % \exp_not:n { {#1} }
604 }
605 }
606 \bool_if:NT \l__chemmacros_nmr_position_side_bool
607 {
608 \tl_use:N \l__chemmacros_nmr_position_tl
609 __chemmacros_nmr_position:n {#1}
610 }

```



```

611 }
612
613 \cs_gset_protected:Npn __chemmacros_nmr_coupling:w (#1;#2)
614 {
615 \tl_set:Nn \l__chemmacros_nmr_coupling_bonds_tl
616 {
617 \l__chemmacros_nmr_coupling_bonds_pre_tl
618 #1
619 \l__chemmacros_nmr_coupling_bonds_post_tl
620 }
621 \bool_if:NTF \l__chemmacros_nmr_coupling_nuclei_sub_bool
622 {
623 \tl_set:Nn \l__chemmacros_nmr_coupling_nuclei_tl
624 {
625 % \c_math_subscript_token
626 \textsubscript% lwarp
627 {
628 \l__chemmacros_nmr_coupling_nuclei_pre_tl
629 \chemmacros_chemformula:n {#2}
630 \l__chemmacros_nmr_coupling_nuclei_post_tl
631 }
632 }
633 }
634 {
635 \tl_set:Nn \l__chemmacros_nmr_coupling_nuclei_tl
636 {
637 \l__chemmacros_nmr_coupling_nuclei_pre_tl
638 \chemmacros_chemformula:n {#2}
639 \l__chemmacros_nmr_coupling_nuclei_post_tl
640 }
641 }
642 __chemmacros_nmr_coupling_aux_i:w
643 }
644
645 \AfterEndPreamble{% After \AtBeginDocument
646 % \NMR{<num>,<elem>}<num>,<unit>}[<solvent>] ALL arguments are optional
647 % \NMR* same but without ": δ" at end
648 \cs_gset_protected:Npn \chemmacros_nmr:nnnn #1#2#3#4
649 {
650 \bool_if:NT \l__chemmacros_nmr_list_bool { \item \scan_stop: }
651 \group_begin:
652 \chemmacros_leave_vmode:
653 \bool_set_false:N \l__chemmacros_nmr_frequency_bool
654 \bool_set_false:N \l__chemmacros_nmr_solvent_bool
655 \tl_if_empty:nF {#3}
656 { \bool_set_true:N \l__chemmacros_nmr_frequency_bool }
657 \tl_if_empty:nF {#4}
658 { \bool_set_true:N \l__chemmacros_nmr_solvent_bool }
659 \bool_if:nT
660 {
661 \l__chemmacros_nmr_frequency_bool
662 ||
663 \l__chemmacros_nmr_solvent_bool
664 }
665 { \bool_set_true:N \l__chemmacros_nmr_delimiters_bool }

```

```

666 \bool_if:nT
667 {
668 \l__chemmacros_nmr_frequency_bool
669 &&
670 \l__chemmacros_nmr_solvent_bool
671 }
672 { \bool_set_true:N \l__chemmacros_nmr_comma_bool }
673 \tl_if_empty:nTF {#2}
674 {
675 __chemmacros_nmr_nucleus:VV
676 \l__chemmacros_nmr_isotope_default_tl
677 \l__chemmacros_nmr_element_default_tl
678 }
679 { __chemmacros_nmr_nucleus:w #2 \q_stop }
680 \mode_if_math:TF
681 {
682 \text
683 {
684 \group_begin:
685 \tl_use:N \l__chemmacros_nmr_format_tl
686 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
687 __chemmacros_nmr_base:VV
688 \g__chemmacros_nmr_isotope_tl
689 \g__chemmacros_nmr_element_tl
690 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
691 { ~ (}
692 \bool_if:NT \l__chemmacros_nmr_frequency_bool
693 { __chemmacros_nmr_frequency:n {#3} }
694 \bool_if:NT \l__chemmacros_nmr_comma_bool
695 { , ~ }
696 \bool_if:NT \l__chemmacros_nmr_solvent_bool
697 { \chemmacros_chemformula:n {#4} }
698 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
699 {) }
700 \tl_if_blank:nT {#1} {::~}
701 }}% lwarp
702 \group_end:
703 }
704 \tl_if_blank:nT {#1}
705 {
706 \delta
707 \text { \l__chemmacros_nmr_delta_tl }
708 \bool_if:NT \l__chemmacros_nmr_use_equal_bool {=}
709 }
710 }
711 {
712 \group_begin:
713 \tl_use:N \l__chemmacros_nmr_format_tl
714 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
715 __chemmacros_nmr_base:VV
716 \g__chemmacros_nmr_isotope_tl
717 \g__chemmacros_nmr_element_tl
718 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
719 {~(}
720 \bool_if:NT \l__chemmacros_nmr_frequency_bool

```

```

721 { __chemmacros_nmr_frequency:n {#3} }
722 \bool_if:NT \l__chemmacros_nmr_comma_bool
723 {,~}
724 \bool_if:NT \l__chemmacros_nmr_solvent_bool
725 {
726 \bool_if:NTF \l__chemmacros_nmr_parse_bool

727 % { \chemformula_ch:nn { } {#4} }% original
728 {\ch{#4}}% lwarp
729 {#4}
730 }
731 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
732 {}}
733]}% lwarp
734 \tl_if_blank:nT {#1} {:}
735 \group_end:
736 \tl_if_blank:nT {#1}
737 {
738 \tl_use:N \c_space_tl
739 \c_math_toggle_token
740 \delta
741 \c_math_toggle_token
742 \l__chemmacros_nmr_delta_tl
743 \bool_if:NT \l__chemmacros_nmr_use_equal_bool {~=}
744 }
745 }
746 \group_end:
747 }
748]% AfterEndPreamble
749
750
751 \RenewDocumentCommand \chemmacros_data:w { smo }
752 {
753 \bool_if:NT \l__chemmacros_nmr_list_bool { \item }
754 {
755 % \tl_use:N \l__chemmacros_nmr_format_tl #2
756 \tl_use:N \l__chemmacros_nmr_format_tl
757 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
758 #2
759 \IfNoValueF {#3} { ~ (#3) }
760 \IfBooleanT {#1} { \bool_if:NT \l__chemmacros_nmr_use_equal_bool { : } }
761 }}% lwarp
762 }
763 \IfBooleanF {#1} { \bool_if:NT \l__chemmacros_nmr_use_equal_bool { ~ = } }
764 }
765
766 }{}% \@ifchemmacrosmoduleloaded
767]% AtBeginDocument

```

## § 168.17 Thermodynamics

```

768 \AtBeginDocument{
769 \@ifchemmacrosmoduleloaded{thermodynamics}{
770 \PackageInfo{lwarp}{Patching~chemmacros~module~thermodynamics}
771

```

```

772 \cs_gset_protected:Npn \chemmacros_state:nn #1#2
773 {
774 \group_begin:
775 \boolfalse{mathjax}
776 \chemmacros_set_keys:nn {thermodynamics} {#1}
777 \LWR@subsingledollar*{% yes hashing
778 \textbackslash{}state\{\LWR@HTMLsanitize{#2}\}% alt
779 }{%
780 chemmacros_state% add'l hashing
781 #1% options
782 LSP \tl_use:N \l__chemmacros_state_sp_left_tl% super/subscripts
783 LSB \tl_use:N \l__chemmacros_state_sb_left_tl
784 RSP \tl_use:N \l__chemmacros_state_sp_right_tl
785 RSB \tl_use:N \l__chemmacros_state_sb_right_tl
786 }
787 {
788 \LWR@origensuredmath{
789 \chemmacros_text:V \l__chemmacros_state_pre_tl
790 \c_math_superscript_token
791 { \chemmacros_text:V \l__chemmacros_state_sp_left_tl }

```

Only add the subscripts if they are being used. This avoids causing an incorrect depth, as the empty subscript will be measured by T<sub>E</sub>X but cropped out by *pdfcrop*.

```

792 \tl_if_empty:NTF \l__chemmacros_state_sb_left_tl
793 {}
794 {
795 \c_math_subscript_token
796 { \chemmacros_text:V \l__chemmacros_state_sb_left_tl }
797 }
798 #2
799 \c_math_superscript_token
800 { \chemmacros_text:V \l__chemmacros_state_sp_right_tl }
801 \tl_if_empty:NTF \l__chemmacros_state_sb_right_tl
802 {}
803 {
804 \c_math_subscript_token
805 { \chemmacros_text:V \l__chemmacros_state_sb_right_tl }
806 }
807 \chemmacros_text:V \l__chemmacros_state_post_tl
808 }
809 }
810 \group_end:
811 }
812 \cs_generate_variant:Nn \chemmacros_state:nn { nV }
813
814 \cs_gset_protected:Npn \chemmacros_declare_state:Nn #1#2
815 {
816 \chemmacros_define_keys:xn
817 {thermodynamics/\chemmacros_remove_backslash:N #1}
818 {
819 pre .meta:nn = {chemmacros/thermodynamics} { pre = ##1 } ,
820 post .meta:nn = {chemmacros/thermodynamics} { post = ##1 } ,
821 superscript-left .meta:nn = {chemmacros/thermodynamics} { superscript-left = ##1 } ,
822 superscript-right .meta:nn = {chemmacros/thermodynamics} { superscript-right = ##1 } ,

```

```

823 superscript .meta:n = { superscript-right = ##1 } ,
824 subscript-left .meta:nn = {chemmacros/thermodynamics} { subscript-left = ##1 } ,
825 subscript-right .meta:nn = {chemmacros/thermodynamics} { subscript-right = ##1 } ,
826 subscript .meta:n = { subscript-left = ##1 } ,
827 subscript-pos .choices:nn =
828 { left , right }
829 { \tl_set_eq:NN \l__chemmacros_state_sb_pos_tl \l_keys_choice_tl } ,
830 symbol .tl_set:N = \l__chemmacros_state_symbol_tl ,
831 unit .tl_set:N = \l__chemmacros_state_unit_tl
832 }
833 \DeclareDocumentCommand #1 { sO{}D(){}m }
834 {
835 \group_begin:
836 \chemmacros_set_keys:xn
837 {thermodynamics/\chemmacros_remove_backslash:N #1}
838 {#2}
839 \tl_if_blank:nF {##3}
840 {
841 \chemmacros_set_keys:nx {thermodynamics}
842 { subscript-\l__chemmacros_state_sb_pos_tl = \exp_not:n {##3} }
843 }
844 \chemmacros_state:nV {##2} \l__chemmacros_state_symbol_tl
845 \chemmacros_set_keys_groups:nnn {thermodynamics} {variables} {##2}
846 \IfBooleanF {##1} { = ~ \SI {##4} { \l__chemmacros_state_unit_tl } }
847 \group_end:
848 }
849 }

```

The pre-existing macros are redefined with the new definition:

```

850 \RenewChemState \enthalpy { symbol = H , unit = \kilo\joule\per\mole }
851 \RenewChemState \entropy { symbol = S , unit = \joule\per\kelvin\per\mole , pre = }
852 \RenewChemState \gibbs { symbol = G , unit = \kilo\joule\per\mole }
853
854 }{}% \@ifchemmacrosmoduleloaded
855 }% AtBeginDocument

856 \ExplSyntaxOff

```

---

File 70 **lwarp-chemnum.sty**

§ 169 Package **chemnum**

*(Emulates or patches code by CLEMENS NIEDERBERGER.)*

Pkg chemnum chemnum is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{chemnum}[2016/04/14]
2 \ExplSyntaxOn
3
4 \cs_gset_protected:Npn \chemnum_compound_write:n #1
5 {

```

```

6 \chemnum_get_compound_property:nn {#1} {pre-main-label-code}
7 \group_begin:
8 \bool_if:NTF \l__chemnum_compound_local_bool
9 { \l__chemnum_local_label_format_tl }
10 { \chemnum_get_compound_property:nn {#1} {label-format} }
11 {
12 \LWR@textcurrentfont{
13 \chemnum_get_compound_property:nn {#1} {counter-representation}
14 }
15 }
16 \group_end:
17 \chemnum_get_compound_property:nn {#1} {post-main-label-code}
18 }
19
20 \cs_gset_protected:Npn \chemnum_subcompound_write:nn #1#2
21 {
22 \group_begin:
23 \bool_if:NTF \l__chemnum_compound_local_bool
24 { \l__chemnum_local_label_format_tl }
25 { \chemnum_get_compound_property:nn {#1} {label-format} }
26 {
27 \LWR@textcurrentfont{
28 \chemnum_get_subcompound_property:nnn {#1} {#2}
29 {counter-representation}
30 }
31 }
32 \group_end:
33 }
34
35 \ExplSyntaxOff

```

---

File 71 **lwarp-chkfloat.sty**

§ 170 Package **chkfloat**

Pkg chkfloat chkfloat is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{chkfloat}[2012/08/19]

---

File 72 **lwarp-chngpage.sty**

§ 171 Package **chngpage**

*(Emulates or patches code by PETER WILSON.)*

Pkg chngpage chngpage is emulated.

**for HTML output:** Discard all options for lwarp-chngpage:

1 \LWR@ProvidesPackageDrop{chngpage}[2009/10/20]

---

```
2 \LWR@origRequirePackage{lwarp-changepage}
```

---

File 73 **lwarp-cite.sty**

§ 172 Package **cite**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg cite cite is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{cite}[2015/02/27]

For the [super] option, the \kern must be removed:

```
2 \def\LWRCT@biblabel#1{\@citess{#1}\kern-\labelsep\,}
3
4 \ifdefstrequal{\@biblabel}{\LWRCT@biblabel}
5 {
6 \def\@biblabel#1{\@citess{#1}}
7 }{}
```

For the [super] option, \textsuperscript is used instead of math superscript:

```
8 \def\@citess#1{#1}
9
10 \DeclareDocumentCommand\citepunct{}{\, \, \relax}
```

---

File 74 **lwarp-CJK.sty**

§ 173 Package **CJK**

Pkg CJK CJK does not work with lwarp unless called from ctex.

**for HTML output:** 1 \@ifpackageloaded{xeCJK}{}{  
2 \LWR@loadnever{CJK}{ctex, xeCJK}  
3 }  
4  
5 \LWR@ProvidesPackagePass{CJK}[2015/04/18]

---

File 75 **lwarp-CJKutf8.sty**

§ 174 Package **CJKutf8**

Pkg CJKutf8 CJKutf8 does not work with lwarp unless called from ctex.

**for HTML output:** 1 \@ifpackageloaded{xeCJK}{}{  
2 \LWR@loadnever{CJKutf8}{ctex, xeCJK}

---

```

3 }
4
5 \LWR@ProvidesPackagePass{CJKutf8}[2015/04/18]

```

---

File 76 **lwarp-clrdblpg.sty**

§ 175 Package **clrdblpg**

Pkg clrdblpg clrdblpg is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{clrdblpg}[2018/04/21]

---

File 77 **lwarp-cmdtrack.sty**

§ 176 Package **cmdtrack**

Pkg cmdtrack cmdtrack is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{cmdtrack}[2012/12/18]

2 \newcommand{\untrack}[1]{}

---

File 78 **lwarp-color.sty**

§ 177 Package **color**

Pkg color Allowed but ignored. xcolor is then required as well.

color is superceded by xcolor, and lwarp requires several of the features of xcolor. When color is requested, xcolor is loaded as well.


**for HTML output:** 1 \LWR@ProvidesPackageDrop{color}[2016/07/10]  
2 \RequirePackage{xcolor}

---

File 79 **lwarp-colortbl.sty**

§ 178 Package **colortbl**

Pkg colortbl colortbl is used as-is for print output, and emulated for HTML.

 **row/cell color** Only use \rowcolor and \cellcolor at the start of a row, in that order. colortbl ignores the overhang arguments.



**for HTML output:** A placeholder definition is forgotten first:

```
1 \let\rowcolor\relax
2
3 \LWR@ProvidesPackagePass{colortbl}[2018/12/12]
```

The following \LWR@HTML versions are used inside an HTML tabular.

`\columncolor` [*model*] {*color*} [*left overhang*] [*right overhang*]

\LWR@getmynexttoken is not used here because \columncolor is not used inside the data area of the tabular.

```
4 \NewDocumentCommand{\LWR@HTML@columncolor}{O{named} m o o}{%
5 \convertcolorspec{#1}{#2}{HTML}\LWR@columnHTMLcolor%
6 \LWR@addtabularcellcolor%
7 }
8
9 \AtBeginDocument{\LWR@formatted{columncolor}}
```

\LWR@getmynexttoken is used for \rowcolor because it is used inside the data area of the tabular.

`\rowcolor` [*model*] {*color*} [*left overhang*] [*right overhang*]

```
10 \NewDocumentCommand{\LWR@HTML@rowcolor}{O{named} m o o}{%
11 \convertcolorspec{#1}{#2}{HTML}\LWR@rowHTMLcolor%
12 \LWR@getmynexttoken%
13 }
14
15 \AtBeginDocument{\LWR@expandableformatted{rowcolor}}
```

`\cellcolor` [*model*] {*color*} [*left overhang*] [*right overhang*]

```
16 \NewDocumentCommand{\LWR@HTML@cellcolor}{O{named} m o o}{%
17 \convertcolorspec{#1}{#2}{HTML}\LWR@cellHTMLcolor%
18 \LWR@addtabularcellcolor%
19 }
20
21 \AtBeginDocument{\LWR@formatted{cellcolor}}
```

`\arrayrulecolor` [*model*] {*color*}

The HTML version for use outside a tabular. Inside a tabular, \LWR@HTML@arrayrulecolornexttoken is used instead.

```
22 \newcommand{\LWR@HTML@arrayrulecolor}[2][named]{%
23 \convertcolorspec{#1}{#2}{HTML}\LWR@ruleHTMLcolor%
24 }
25
26 \AtBeginDocument{\LWR@expandableformatted{arrayrulecolor}}
```

[*model*] {*color*}

\LWR@arrayrulecolornexttoken The HTML version for use inside a tabular.

```

27 \newcommand{\LWR@HTML@arrayrulecolornexttoken}[2][named]{%
28 \convertcolorspec{#1}{#2}{HTML}\LWR@ruleHTMLcolor%
29 \LWR@getmynexttoken%
30 }
31
32 \AtBeginDocument{\LWR@expandableformatted{arrayrulecolornexttoken}}

```

`\doublerulesepcolor` [*model*] {*color*}

The version for use outside a tabular.

```

33 \newcommand{\LWR@HTML@doublerulesepcolor}[2][named]{%
34
35 \AtBeginDocument{\LWR@expandableformatted{doublerulesepcolor}}

```

[*model*] {*color*}

The version for use inside a tabular.

```

36 \newcommand{\LWR@HTML@doublerulesepcolornexttoken}[2][named]{\LWR@getmynexttoken}
37
38 \AtBeginDocument{\LWR@expandableformatted{doublerulesepcolornexttoken}}

```

---

## File 80 **lwarp-continue.sty**

### § 179 Package **continue**

Pkg continue continue is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{continue}[2018/12/09]

```

2 \newcommand*{\flagcont}{}
3 \newcommand*{\flagend}{}
4 \newcommand*{\flagword}{}
5 \newcommand*{\preflagword}{}
6 \newcommand*{\postflagword}{}
7 \newlength\contsep
8 \newlength\contdrop

```

---

## File 81 **lwarp-copyrightbox.sty**

### § 180 Package **copyrightbox**

(Emulates or patches code by THOMAS FISCHER, IVES VAN DER FLAAS.)

Pkg copyrightbox copyrightbox is emulated for use by lwarp.

The entire copyright box is placed inside a <div> of class copyrightbox.

The contents are placed inside a <div> of class copyrightboxcontents.

The copyright notice is placed inside a <div> of class copyrightboxnote.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{copyrightbox}[2011/11/27]

2 \newcommand{\copyrightbox}[3][r]{%
3 \begin{BlockClass}[
4 display: inline-flex;
5 flex-direction: column ;
6]{copyrightbox}
7 \begin{BlockClass}{copyrightboxcontents}
8 #2
9 \end{BlockClass}
10 \begin{BlockClass}{copyrightboxnote}
11 #3
12 \end{BlockClass}
13 \end{BlockClass}
14 }
15
16 \newcommand{\CRB@setcopyrightfont}{}
17 \newcommand{\CRB@setcopyrightparagraphstyle}{}

```

## File 82 **lwarp-crop.sty**

### § 181 Package **crop**

*(Emulates or patches code by MELCHIOR FRANZ.)*

Pkg crop Emulated.

**for HTML output:** Discard all options for lwarp-crop:

```

1 \LWR@ProvidesPackageDrop{crop}[2003/05/20]

2 \newcommand*{\crop}[1]{}
3 \newcommand*{\cropdef}[6]{}


```

## File 83 **lwarp-ctable.sty**

### § 182 Package **ctable**

*(Emulates or patches code by WYBO DEKKER.)*

Pkg ctable ctable is patched for use by lwarp.

 **Misplaced alignment tab character &** Use `\StartDefiningTabulars` before one or more `\ctables`, and `\StopDefiningTabulars` after. These change the meaning of the ampersand & character.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{ctable}[2015/10/17]

```

The following is in the original:

```

2 \newcommand{\LWR@HTML@ctable}[4][[]]{%
3 \let\@CTtaborfig \@dfltCTtaborfig
4 \let\@CTalign \@dfltCTalign
5 \let\@CTsideways \@dfltCTsideways
6 \let\@CTcontinued \empty
7 \let\@CTpos \@dfltCTpos
8 \let\@CTcaption \empty
9 \let\@CTcap \undefined
10 \let\@CTlabel \empty
11 \let\@CTbotcap \@dfltCTbotcap
12 \let\@CTstarred \@dfltCTstarred
13 \let\@CTsuper \@dfltCTsuper
14 \let\@CTnotespar \@dfltCTnotespar
15 \let\@CTdoinside \@dfltCTdoinside
16 \let\@CTbgopacity \@dfltCTbgopacity
17 \@CTframerule \@dfltCTframerule
18 \@CTcaptionskip \@dfltCTcaptionskip
19 \@CTframesep \@dfltCTframesep
20 \@CTwidth \@dfltCTwidth
21 \@CTmaxwidth \@dfltCTmaxwidth
22 \@CTmincapwidth \@dfltCTmincapwidth
23 \@CTfooterwidth \@dfltCTfooterwidth
24 \def\@CTfgactual {@dfltCTframefg}%
25 \def\@CTbgactual {@dfltCTframebg}%
26 \def\@CTbeg {\begin{\@CTsideways\@CTtaborfig\@CTstarred}}%
27 \def\@CTbegin {\@CTbeg}%
28 \def\@CTend {\end{\@CTsideways\@CTtaborfig\@CTstarred}}%
29 \setkeys{CT}{#1}%
30 \ifx\@CTcap\undefined\let\@CTcap\@CTcaption\fi
31 \ifx\@CTcap\empty
32 \if@CTcaptionloaded\else
33 \PackageWarningNoLine{ctable}{\MessageBreak
34 An empty cap= option prevents lot/loc entry only\MessageBreak
35 if the caption package is loaded!}
36 \fi
37 \fi
38 \if@CTinmemoir\else
39 \ifx\@CTbotcap\undefined
40 \PackageError{ctable}{\MessageBreak
41 You can, currently, use the sidecap option only with\MessageBreak
42 memoir documents. Use topcap or botcap only}
43 \fi
44 \fi
45 \ifdim\@CTwidth=0pt\else
46 \ifdim\@CTmaxwidth=0pt\else
47 \PackageError{ctable}{\MessageBreak
48 You may not use the width and maxwidth options together\MessageBreak
49 Use either width or maxwidth}
50 \fi
51 \fi
52 \ifx\@CTpos\empty
53 \ifx\@CTsideways\empty\else
54 \PackageError{ctable}{\MessageBreak

```

```

55 You may not use the pos and sideways options together\MessageBreak
56 Rotated tables and figures are always typeset on a separate page}
57 \fi
58 \fi
59 \ifx\@CTcaption\empty
60 \ifx\@CTlabel\empty\else
61 \PackageError{ctable}{\MessageBreak
62 You may not label a captionless table\MessageBreak
63 Such a label can't be referenced}
64 \fi
65 \fi

```

Some of the original, regarding computing the width of \CT@t, is removed here.

```

66 \@CTbegin
67 \ifx\@CTcontinued\empty\else\addtocounter{\@CT@borfig}{-1}\fi
68 \@CTalign

```

lwarp's patches begin here:

```

69 \begin{center}
70 \setlength{\fboxrule}{\@CTframerule}
71 \setlength{\fboxsep}{\@CTframesep}
72 \LWR@forceminwidth{\fboxrule}% lwarp
73 \convertcolorspec{named}{\@CTbgactual}{HTML}\LWR@tempcolor% lwarp
74 \begin{BlockClass}% lwarp
75 border:
76 \LWR@printlength{\LWR@atleastonept}
77 solid
78 \LWR@colorstyle{named}{\@CTfgactual} ; %
79 padding:\LWR@printlength{\fboxsep} ; %
80 \ifdefstring{\LWR@tempcolor}{FFFFFF}{}%
81 background: \LWR@colorstyle{named}{\@CTbgactual} ; %
82 }%
83]{fminipage}% lwarp
84 \ifx\@CTbotcap\@CTfalse\@CTcaption\vskip\@CTcaptionskip\fi
85 \ifx\@CTbotcap\undefined%
86 \begin{sidecaption}[\@CTcap]{\@CTcaption}[\@CTlabel]
87 \fi
88 \@CTdoinside
89 \begin{tabularx}{\linewidth}{#2}% lwarp
90 #4%
91 \end{tabularx}% lwarp
92 \def\@CTfootnotes{#3}%
93 \ifx#3\empty\else{% append footnotes, if any
94 \begin{BlockClass}{tnotes}% lwarp
95 #3
96 \end{BlockClass}% lwarp
97 }
98 \fi
99 \ifx\@CTbotcap\undefined\end{sidecaption}\fi
100 \ifx\@CTbotcap\@CTtrue\vskip\@CTcaptionskip\@CTcaption\fi
101 \end{BlockClass}
102 \end{center}
103 \@CTend

```

```
104 }
105 \LWR@formatted{ctable}
```

Required to properly detect the toprule:

```
106 \LetLtxMacro\FL\toprule
```

Table notes are redefined for HTML:

```
107 \newcommand{\LWR@HTML@tmark}[1][a]{%
108 \textsuperscript{\textrm{\textit{#1}}}}
109 }
110 \LWR@formatted{tmark}
111
112 \newcommand{\LWR@HTML@tnote}[2][a]{%
113 \tmark[#1]\,#2\par
114 }
115 \LWR@formatted{tnote}
```

#### File 84 **lwarp-cuted.sty**

### § 183 Package **cuted**

*(Emulates or patches code by SIGITAS TOLUŠIS.)*

Pkg cuted cuted is emulated.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{cuted}[2012/10/04]

2 \newenvironment{strip}{}{}
3 \newskip\stripsep
4 \def\oldcolsbreak#1{}
```

#### File 85 **lwarp-cutwin.sty**

### § 184 Package **cutwin**

*(Emulates or patches code by PETER WILSON AND ALAN HOENIG.)*

Pkg cutwin Emulated.

**for HTML output:** Discard all options for lwarp-cutwin:

```
1 \LWR@ProvidesPackageDrop{cutwin}[2010/09/29]

2 \newcommand*\opencutleft{}
3 \newcommand*\opencutright{}
4 \newcommand*\opencutcenter{}
5 \newcommand*\cutfuzz{}
```

```

6
7 \newenvironment{cutout}[4]
8 {\marginpar{\windowpagestuff}}
9 {}
10
11 \newcommand*{\windowpagestuff}{}
12
13 \newcommand*{\pageinwindow}{%
14 % \begin{minipage}{.3\linewidth}
15 \windowpagestuff
16 % \end{minipage}
17 }
18
19 \newenvironment{shapedcutout}[3]
20 {\marginpar{\picinwindow}}
21 {}
22
23 \newcommand*{\putstuffinpic}{}
24
25 \newcommand*{\picinwindow}{%
26 \begin{picture}(0,0)
27 \putstuffinpic
28 \end{picture}}

```

---

File 86 **lwarp-dblfloatfix.sty**

§ 185 Package **dblfloatfix**

Pkg dbfloatfix dbfloatfix is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{dblfloatfix}[2012/12/31]

---

File 87 **lwarp-dblfnote.sty**

§ 186 Package **dblfnote**

*(Emulates or patches code by HIROSHI NAKASHIMA.)*

Pkg dblfnote dblfnote is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{dblfnote}[1999/07/14]

```

2 \newcounter{DFNsloppiness}
3 \newdimen\DFNcolumnsep
4 \newdimen\DFNcolumnwidth
5 \def\DFNallowcbreak{}
6 \def\DFNinhibitcbreak{}
7 \def\DFNtrysingle{}
8 \def\DFNalwaysdouble{}
9 \def\DFNruleboth{}

```

---

```
10 \def\DFNruleleft{}
```

---

File 88 **lwarp-dcolumn.sty**

§ 187 Package **dcolumn**

Pkg dcolumn dcolumn is emulated by the lwarp core.

```
1 \LWR@ProvidesPackageDrop{dcolumn}[2014/10/28]
```

---

File 89 **lwarp-diagbox.sty**

§ 188 Package **diagbox**

*(Emulates or patches code by LEO LIU.)*

Pkg diagbox diagbox is patched for use by lwarp.

**for HTML output:** `1 \LWR@ProvidesPackagePass{diagbox}[2016/12/28]`

To restore print-mode inside a lateximage:

```
2 \LetLtxMacro\LWR@origdiagbox@double\diagbox@double
3 \LetLtxMacro\LWR@origdiagbox@triple\diagbox@triple
4
5 \appto\LWR@restoreorigformatting{%
6 \LetLtxMacro\diagbox@double\LWR@origdiagbox@double%
7 \LetLtxMacro\diagbox@triple\LWR@origdiagbox@triple%
8 }
```

```
\LWR@diagbox@AB {\langle E/W \rangle} {\langle A \rangle} {\langle E/W \rangle} {\langle B \rangle}
```

```
9 \newcommand{\LWR@diagbox@AB}[4]{
10 \begingroup%
11 \LetLtxMacro\\newline%
12 \BlockClassSingle{diagbox#1}{#2}%
13 \BlockClassSingle{diagbox#3}{#4}%
14 \endgroup%
15 \LWR@stoppars%
16 }
```

```
\LWR@diagboxNW {\langle A \rangle} {\langle B \rangle}
```

```
17 \newcommand{\LWR@diagboxNW}[2]{%
18 \LWR@diagbox@AB{E}{#2}{W}{#1}%
19 }
```

Likewise for NE, SW, SE:



```

20 \newcommand{\LWR@diagboxNE}[2]{%
21 \LWR@diagbox@AB{W}{#1}{E}{#2}%
22 }
23
24 \let\LWR@diagboxSW\LWR@diagboxNE
25 \let\LWR@diagboxSE\LWR@diagboxNW

```

`\diagbox@double`     $\langle keys \rangle \langle A \rangle \langle B \rangle$

```

26 \def\diagbox@double#1#2#3{%
27 \setkeys{diagbox}{dir=NW,#1}%
28 \@nameuse{LWR@diagbox\diagbox@dir}{#2}{#3}%
29 }

```

`\LWR@diagboxTNW`     $\langle title \rangle \langle A \rangle \langle B \rangle$

```

30 \newcommand{\LWR@diagboxTNW}[3]{%
31 \BlockClassSingle{diagboxtitleN}{#1}
32 \LWR@diagboxNW{#2}{#3}
33 }

```

Likewise for NE, SW, SE:

```

34 \newcommand{\LWR@diagboxTNE}[3]{%
35 \BlockClassSingle{diagboxtitleN}{#1}
36 \LWR@diagboxNE{#2}{#3}
37 }
38
39 \newcommand{\LWR@diagboxTSW}[3]{%
40 \LWR@diagboxSW{#2}{#3}
41 \BlockClassSingle{diagboxtitleS}{#1}
42 \LWR@stoppars%
43 }
44
45 \newcommand{\LWR@diagboxTSE}[3]{%
46 \LWR@diagboxSE{#2}{#3}
47 \BlockClassSingle{diagboxtitleS}{#1}
48 \LWR@stoppars%
49 }

```

`\diagbox@triple`     $\langle keys \rangle \langle A \rangle \langle T \rangle \langle B \rangle$

```

50 \def\diagbox@triple#1#2#3#4{%
51 \setkeys{diagbox}{dir=NW,#1}%
52 \@nameuse{LWR@diagboxT\diagbox@dir}{#3}{#2}{#4}%
53 }

```

---

File 90    **lwarp-dingbat.sty**

§ 189    Package    **dingbat**

*(Emulates or patches code by SCOTT PAKIN.)*

Pkg dingbat dingbat is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{dingbat}[2001/04/27]
2 \newcommand*{\LWR@dingbatsymbol}[1]{\HTMLUnicode{#1}}
3
4 \newcommand{\LWR@HTML@rightpointright}{\LWR@dingbatsymbol{261E}}
5 \newcommand{\LWR@HTML@leftpointright}{\LWR@dingbatsymbol{261E}}
6 \newcommand{\LWR@HTML@leftthumbsdown}{\LWR@dingbatsymbol{1F44E}}
7 \newcommand{\LWR@HTML@leftthumbsup}{\LWR@dingbatsymbol{1F44D}}
8 \newcommand{\LWR@HTML@rightpointleft}{\LWR@dingbatsymbol{261C}}
9 \newcommand{\LWR@HTML@rightthumbsdown}{\LWR@dingbatsymbol{1F44E}}
10 \newcommand{\LWR@HTML@rightthumbsup}{\LWR@dingbatsymbol{1F44D}}
11 \newcommand{\LWR@HTML@squarewithdots}{\LWR@dingbatsymbol{25C7}}
12 \newcommand{\LWR@HTML@filledsquarewithdots}{\LWR@dingbatsymbol{25C6}}
13 \newcommand{\LWR@HTML@Sborder}{\LWR@dingbatsymbol{271A}}
14 \newcommand{\LWR@HTML@Zborder}{\LWR@dingbatsymbol{274B}}
15 \newcommand{\LWR@HTML@largepencil}{\LWR@dingbatsymbol{270E}}
16 \newcommand{\LWR@HTML@anchor}{\LWR@dingbatsymbol{2693}}
17 \newcommand{\LWR@HTML@carriagereturn}{\LWR@dingbatsymbol{23CE}}
18 \newcommand{\LWR@HTML@checkmark}{\LWR@dingbatsymbol{2713}}
19 \newcommand{\LWR@HTML@eye}{\LWR@dingbatsymbol{1F441}}
20 \newcommand{\LWR@HTML@satellitedish}{\LWR@dingbatsymbol{1F4E1}}
21 \newcommand{\LWR@HTML@smallpencil}{\LWR@dingbatsymbol{270E}}
22
23 \LWR@formatted{rightpointright}
24 \LWR@formatted{leftpointright}
25 \LWR@formatted{leftthumbsdown}
26 \LWR@formatted{leftthumbsup}
27 \LWR@formatted{rightpointleft}
28 \LWR@formatted{rightthumbsdown}
29 \LWR@formatted{rightthumbsup}
30 \LWR@formatted{squarewithdots}
31 \LWR@formatted{filledsquarewithdots}
32 \LWR@formatted{Sborder}
33 \LWR@formatted{Zborder}
34 \LWR@formatted{largepencil}
35 \LWR@formatted{anchor}
36 \LWR@formatted{carriagereturn}
37 \LWR@formatted{checkmark}
38 \LWR@formatted{eye}
39 \LWR@formatted{satellitedish}
40 \LWR@formatted{smallpencil}

```

---

File 91 **lwarp-dprogress.sty**

§ 190 Package **dprogress**

Pkg dprogress dprogress is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{dprogress}[2008/02/21]

```

File 92 **lwarp-draftcopy.sty**§ 191 Package **draftcopy**

Pkg draftcopy draftcopy is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{draftcopy}[2002/02/25]

```

2 \newcommand{\draftcopyVersion}[1]{}
3 \newcommand{\draftcopySetGrey}[1]{}
4 \newcommand{\draftcopySetScale}[1]{}
5 \newcommand{\draftcopySetScaleFactor}[1]{}
6 \newcommand{\draftcopyFirstPage}[1]{}
7 \newcommand{\draftcopyLastPage}[1]{}
8 \newcommand{\draftcopyName}[2]{}
9 \newcommand{\draftcopyPageTransform}[1]{}
10 \newcommand{\draftcopyBottomTransform}[1]{}
11 \newcommand{\draftcopyPageX}[1]{}
12 \newcommand{\draftcopyPageY}[1]{}
13 \newcommand{\draftcopyBottomX}[1]{}
14 \newcommand{\draftcopyBottomY}[1]{}

```

File 93 **lwarp-draftfigure.sty**§ 192 Package **draftfigure**

Pkg draftfigure draftfigure is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{draftfigure}[2017/07/19]

```

2 \RequirePackage{xkeyval}

3 \define@key{draftfigure}{code}{}
4 \define@key{draftfigure}{noframe}[true]{}
5 \define@key{draftfigure}{filename}[true]{}
6 \define@key{draftfigure}{content}[]{}
7 \define@key{draftfigure}{style}[normal]{}
8 \define@key{draftfigure}{position}[left]{}
9 \define@key{draftfigure}{size}[normal]{}
10 \newcommand\setdf[1]{\setkeys{draftfigure}{#1}}

```

File 94 **lwarp-draftwatermark.sty**§ 193 Package **draftwatermark**

*(Emulates or patches code by SERGIO CALLEGARI.)*

Pkg draftwatermark **draftwatermark** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{draftwatermark}[2015/02/19]

2 \newcommand{\SetWatermarkAngle}[1]{}
3 \newcommand{\SetWatermarkColor}[1]{}
4 \newcommand{\SetWatermarkLightness}[1]{}
5 \newcommand{\SetWatermarkFontSize}[1]{}
6 \newcommand{\SetWatermarkScale}[1]{}
7 \newcommand{\SetWatermarkHorCenter}[1]{}
8 \newcommand{\SetWatermarkVertCenter}[1]{}
9 \newcommand{\SetWatermarkText}[1]{}

```

---

File 95 **lwarp-easy-todo.sty**

§ 194 Package **easy-todo**

*(Emulates or patches code by JUAN RADA-VILELA.)*

Pkg easy-todo **easy-todo** is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{easy-todo}[2014/01/01]

```

`\listoftodos` Modified to correct buggy use of `\flushright`.

```

2 \let\LWR@origlistoftodos\listoftodos
3
4 \renewcommand{\listoftodos}{%
5 \begingroup
6 \renewcommand{\flushright}{}
7 \LWR@origlistoftodos
8 \endgroup
9 }

```

`\todoui` Modified to use `\textcolor` instead of `\color`.

```

10 \renewcommand{\todoui}[2]{%
11 \ifthenelse{\equal{\@todoobeyfinal}{true}}{%
12 {%
13 \ifoptionfinal{\todoenable{false}}{\todoenable{true}}%
14 }%
15 }%
16 \ifthenelse{\equal{\@todoenable}{true}}{%
17 {%
18 \refstepcounter{todos}%
19 \noindent{%
20 \todocolor%
21 \LWR@textcurrentcolor{%
22 \normalfont\scriptsize{\bfseries{\thetodos.#1}}%
23 }%
24 }%
25 \addcontentsline{lod}{todos}{\protect{\thetodos. }\LWR@isolate{#2}}%

```

```

26 }%
27 {}%
28 }

```

---

File 96 **lwarp-ebook.sty**

§ 195 Package **ebook**

*(Emulates or patches code by JØRGEN STEENSGAARD.)*

Pkg ebook ebook is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{ebook}

2 \setcounter{secnumdepth}{0}
3 \setcounter{tocdepth}{2}
4
5 \providecommand{\pagefill}[1][0.001mm]{\noindent}
6
7 \providecommand{\ebook}{
8 \setcounter{secnumdepth}{0}
9 \setcounter{tocdepth}{2}
10 }

```

---

File 97 **lwarp-ed.sty**

§ 196 Package **ed**

*(Emulates or patches code by MICHAEL KOHLHASE.)*

Pkg ed ed is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{ed}[2012/01/29]

```

Bugs:

1. `todolist` fails with the `hide` option, as does `\edexplanation`.
2. `\edstubURI` is actually `\edstuURI`.

```

2 \RequirePackage{xcolor}
3
4 \renewenvironment{edstub}[2][The following blue text]
5 {%
6 \def\@test{#1}%
7 \begin{center}%
8 \huge%
9 \textcolor{red}{%
10 #1 is only a provisional stub\\Large

```

```

11 the Office document
12 \ifx\ed@stubURI\@empty{#2}\else\href{\ed@stubURI}{#2}\fi\
13 contains more text\which will be merged for the final document%
14 }%
15 \end{center}%
16 \BlockClass[color:blue]{edstub}%
17 }
18 {\endBlockClass}

```

---

File 98 **lwarp-ellipsis.sty**

§ 197 Package **ellipsis**

*(Emulates or patches code by PETER J. HESLIN.)*

Pkg ellipsis ellipsis is emulated.

```

1 \LWR@ProvidesPackageDrop{ellipsis}[2004/09/28]
2
3 \newcommand{\ellipsisgap}{0.1em}
4
5 \newcommand*{\midwordellipsis}{\,\textellipsis\,}

```

---

File 99 **lwarp-embrac.sty**

§ 198 Package **embrac**

*(Emulates or patches code by CLEMENS NIEDERBERGER.)*

Pkg embrac embrac is nullfied for HTML and used as-is for print.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{embrac}[2017/07/04]
2
3 \LetLtxMacro\LWR@orig@HTML@emph\LWR@HTML@emph
4 \RenewDocumentCommand{\LWR@HTML@emph}{s m}{\LWR@orig@HTML@emph{#2}}
5
6 \LetLtxMacro\LWR@orig@HTML@textit\LWR@HTML@textit
7 \RenewDocumentCommand{\LWR@HTML@textit}{s m}{\LWR@orig@HTML@textit{#2}}
8
9 \LetLtxMacro\LWR@orig@HTML@textsl\LWR@HTML@textsl
10 \RenewDocumentCommand{\LWR@HTML@textsl}{s m}{\LWR@orig@HTML@textsl{#2}}
11
12 \ifxetexorluatex
13 \LetLtxMacro\LWR@orig@HTML@textsi\LWR@HTML@textsi
14 \RenewDocumentCommand{\LWR@HTML@textsi}{s m}{%
15 \LWR@orig@HTML@textsi{#2}}
16 \fi
17 \AtBeginDocument{
18 \LWR@formatted{emph}

```

```

19 \LWR@formatted{textit}
20 \LWR@formatted{textsl}
21 \ifxetexorluatex
22 \LWR@formatted{textsi}
23 \fi
24 }
25
26 \newcommand{\LWR@HTML@EmbracOff}{}
27 \LWR@formatted{EmbracOff}
28
29 \newcommand{\LWR@HTML@EmbracOn}{}
30 \LWR@formatted{EmbracOn}

```

---

File 100 **lwarp-emptypage.sty**

§ 199 Package **emptypage**

Pkg emptypage emptypage is ignored.

**for HTML output:** Discard all options for lwarp-emptypage:

```
1 \LWR@ProvidesPackageDrop{emptypage}[2010/05/30]
```

---

File 101 **lwarp-endfloat.sty**

§ 200 Package **endfloat**

Pkg endfloat endfloat is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{endfloat}[2018/03/24]

```

2 \newcommand\figureplace{}
3 \newcommand\tableplace{}
4 \newcommand\floatplace[1]{}
5 \newcounter{posttable}
6 \newcounter{postfigure}
7 \newcommand*\theposttbl{}
8 \newcommand*\thepostfig{}
9 \newcommand{\AtBeginFigures}[1]{}
10 \newcommand{\AtBeginTables}[1]{}
11 \newcommand{\AtBeginDelayedFloats}[1]{}
12 \newcommand*\processdelayedfloats{}
13 \newcommand*\efloatseparator{}
14 \def\efloattype{}
15 \providecommand\efloatheading[1]{}
16 \providecommand\efloatpreamble{}
17 \providecommand\efloatpostamble{}

```

---

File 102 **lwarp-endheads.sty**

§ 201 Package **endheads**

Pkg endheads endheads is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{endheads}[2017/04/06]

2 \newcommand{\changesinglepageabbrev}[1]{}
3 \newcommand{\changemultiplepageabbrev}[1]{}
4 \newcommand{\changenotesname}[1]{}
5 \newcommand{\changenotesheader}[1]{}
6 \newcommand{\changenotescontentsname}[1]{}
7 \newcommand{\changechapternotesline}[1]{}
8 \newcommand{\checknoteheaders}{}
9 \newif\ifnotesincontentson \notesincontentsonfalse
10 \newcommand{\notesincontents}{\notesincontentsontrue}
11 \newif\ifendnoteheaderson \endnoteheadersonfalse
12 \newcommand{\setupendnoteheaders}{%
13 \endnoteheadersontrue%
14 }
15 \newif\iftitleinnotes \titleinnotesttrue
16 \newcommand{\styleforchapternotebegin}{}
17 \newcommand{\styleforchapternoteend}{}
18 \newcommand{\setstyleforchapternotebegin}[1]{%
19 \renewcommand{\styleforchapternotebegin}{#1}%
20 }
21 \newcommand{\setstyleforchapternoteend}[1]{%
22 \renewcommand{\styleforchapternoteend}{#1}%
23 }
24 \newcommand{\resetendnotes}{}
25 \newif\ifnotesbychapteron \notesbychapteronfalse
26 \newcommand{\notesbychapter}{\notesbychapterontrue}

```

---

File 103 **lwarp-endnotes.sty**

§ 202 Package **endnotes**

*(Emulates or patches code by JOHN LAVAGNINO.)*

Pkg endnotes Used as-is.

[table of contents](#) To place the endnotes in the TOC, use:

```

\usepackage{endnotes}
\appto\enoteheading{\addcontentsline{toc}{section}{\notesname}}
\renewcommand*{\notesname}{Endnotes} % optional

```



**HTML page** To additionally have the endnotes on their own HTML page, if FileDepth allows:

```
\ForceHTMLPage
\theendnotes
```

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{endnotes}

2 \def\noteformat{%
3 % \rightskip\z@ \leftskip\z@ \parindent=1.8em
4 \leavevmode
5 % \llap{
6 \makeenmark
7 % }
8 }
9
10 \def\@makeenmark{\hbox{\LWR@htmlspan{sup}}{\normalfont\theenmark}}
11 \def\makeenmark{\@makeenmark}
```

File 104 **lwarp-enumerate.sty**

§ 203 Package **enumerate**

Pkg enumerate enumerate is supported with no changes.

This package is only required because it was used in the past to drop and then emulate the package. It cannot be removed because an older version which dropped the package may still remain, for example in a local vs. distribution directory, but it is now supported directly by lwarp and thus must no longer be dropped.

**for HTML output:** 1 \LWR@ProvidesPackagePass{enumerate}[2015/07/23]

File 105 **lwarp-enumitem.sty**

§ 204 Package **enumitem**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg enumitem enumitem is supported with minor adjustments.

**for HTML output:** 1 \LWR@ProvidesPackagePass{enumitem}[2018/11/30]

**for HTML output:** 2 \begin{warpHTML}

```
\newlist {<name>} {<type>} {<maxdepth>}
\renewlist {<name>} {<type>} {<maxdepth>}
```

For enumitem lists, new lists must have the start and end actions assigned to the new environment. Renewed lists already have their actions assigned, and thus need no changes.

```

3 \let\LWR@enumitem@orignewlist\newlist
4
5 \renewcommand*{\newlist}[3]{%
6 \LWR@enumitem@orignewlist{#1}{#2}{#3}%
7 \AtBeginEnvironment{#1}{\@nameuse{LWR@#2start}}%
8 \AtEndEnvironment{#1}{\@nameuse{LWR@#2end}}%
9 }
10
11 \def\DrawEnumitemLabel{}

12 \end{warpHTML}

```

File 106 **lwarp-epigraph.sty**

§ 205 Package **epigraph**

*(Emulates or patches code by PETER WILSON.)*

Pkg epigraph epigraph is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{epigraph}[2009/09/02]

2 \DeclareDocumentCommand{\qitem}{m m}
3 {
4 \begin{BlockClass}{qitem}
5 #1
6 \ifbool{FormatWP}
7 {\begin{BlockClass}[border-top:1px solid gray]{epigraphsource}}
8 {\begin{BlockClass}{epigraphsource}}
9 #2
10 \end{BlockClass}
11 \end{BlockClass}
12 }

13 \DeclareDocumentCommand{\epigraph}{m m}
14 {
15 \begin{LWR@BlockClassWP}{\LWR@print@mbbox{text-align:right}}{\epigraph}
16 \qitem{#1}{#2}
17 \end{LWR@BlockClassWP}
18 }
19
20 \DeclareDocumentEnvironment{epigraphs}{}
21 {\LWR@BlockClassWP{\LWR@print@mbbox{text-align:right}}{\epigraph}}
22 {\endLWR@BlockClassWP}

```

Use css to format epigraphs.

The following are null commands for source compatibility:

```

23 \newenvironment*{flushepinormal}{}{}

```

```

24 \@ifclassloaded{memoir}{
25 \setlength{\epigraphwidth}{.5\linewidth}
26 \renewcommand{\textflush}{flushleft}
27 \renewcommand{\epigraphhead}[2][0]{#2}
28 \renewcommand{\dropchapter}[1]{}
29 \renewcommand*\undodrop{}
30 }{% not memoir
31 \newlength{\epigraphwidth}
32 \setlength{\epigraphwidth}{.5\linewidth}
33 \newcommand{\textflush}{flushleft}
34 \newcommand{\epigraphflush}{flushright}
35 \newcommand{\sourceflush}{flushright}
36 \newcommand*\epigraphsize{\small}
37 \newlength{\epigraphrule}
38 \newlength{\beforeepigraphskip}
39 \newlength{\afterepigraphskip}
40 \newcommand{\epigraphhead}[2][0]{#2}
41 \newcommand{\dropchapter}[1]{}
42 \newcommand*\undodrop{}
43 }% not memoir
44
45 \let\cleartoevenpage\relax% also in nextpage
46 \newcommand{\cleartoevenpage}[1]{}


```

---

File 107 **lwarp-epsfig.sty**

§ 206 Package **epsfig**

Pkg epsfig epsfig is emulated for use by lwarp.

 Only the L<sup>A</sup>T<sub>E</sub>X2e syntax is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{epsfig}[2017/06/25]

A few additional keys to capture the filename:

```

2 \RequirePackage{graphics}
3
4 \define@key{igraph}{file}{%
5 \xdef\LWR@epsfig@filename{#1}%
6 }
7
8 \define@key{igraph}{figure}{%
9 \xdef\LWR@epsfig@filename{#1}%
10 }
11
12 \define@key{igraph}{prolog}{}
13
14 \define@key{igraph}{silent}[]{}

```

The captured filename is used as the argument to `\includegraphics`:

```

15 \newcommand{\epsfig}[1]{\includegraphics[#1]{\LWR@epsfig@filename}}
16
17 \newcommand{\psfig}[1]{\includegraphics[#1]{\LWR@epsfig@filename}}

```

---

File 108 **lwarp-epstopdf.sty**

§ 207 Package **epstopdf**

Pkg epstopdf Previous versions of lwarp had a nullified version, but now **epstopdf-base** is supported. lwarp-epstopdf becomes a placeholder to overwrite previous versions.

See package epstopdf-base for details.

**for HTML output:** 1 \LWR@ProvidesPackagePass{epstopdf}[2016/05/15]

---

File 109 **lwarp-epstopdf-base.sty**

§ 208 Package **epstopdf-base**

Pkg epstopdf-base

 **convert to .svg**

Images with an .eps extension will be converted to .pdf. The HTML output uses the .svg version, so use

Enter ⇒ **lwarpmk pdftosvg <listofPDFfiles>**

to generate .svg versions.

**for HTML output:** 1 \LWR@ProvidesPackagePass{epstopdf-base}[2016/05/15]

Redefine to remember the image filename, replacing .pdf with .svg. Use the epstopdf print version inside a lateximage.

```

2 \newcommand*{\LWR@HTML@ETE@OrgGin@setfile}[3]{%
3 \edef\LWR@tempone{#3}%
4 \StrSubstitute{\LWR@tempone}{.pdf}{.svg}[\LWR@tempone]%
5 \StrSubstitute{\LWR@tempone}{.PDF}{.SVG}[\LWR@tempone]%
6 \xdef\LWR@parsedfilename{\LWR@tempone}%
7 }
8
9 \LWR@formatted{ETE@OrgGin@setfile}

```

\includegraphics in HTML mode redefines \Gin@setfile to be \LWR@HTML@Gin@setfile, which is now redirected to epstopdf's version:

```

10 \renewcommand*{\LWR@HTML@Gin@setfile}[3]{%
11 \ETE@Gin@setfile{#1}{#2}{#3}%
12 }

```

Allow .eps images to be found if a suffix is not provided:

```

13 \AtBeginDocument{
14 \DeclareGraphicsExtensions{%
15 .eps, .EPS, .svg, .SVG, .gif, .GIF, .png, .PNG, .jpg, .JPG, .jpeg, .JPEG%
16 }
17 \DeclareGraphicsRule{.svg}{svg}{.svg}{}
18 \DeclareGraphicsRule{.SVG}{svg}{.SVG}{}
19 }

```

Likewise when inside a lateximage:

```

20 \appto\LWR@restoreorigformatting{%
21 \DeclareGraphicsExtensions{%
22 .eps, .EPS, .pdf, .PDF, .gif, .GIF, .png, .PNG, .jpg, .JPG, .jpeg, .JPEG%
23 }%
24 }

```

File 110 **lwarp-eqlist.sty**

§ 209 Package **eqlist**

Pkg eqlist eqlist is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{eqlist}[2002/08/15]

2 \newenvironment{eqlist}[1][{}]{\description}{\enddescription}
3 \newenvironment{eqlist*}[1][{}]{\description}{\enddescription}
4 \newenvironment{Eqlist}[2][{}]{\description}{\enddescription}
5 \newenvironment{Eqlist*}[2][{}]{\description}{\enddescription}
6 \newcommand*\longitem[1][{}]{\item[#1]}
7 \newcommand*\eqlistinit{}
8 \newcommand*\eqliststarinit{}
9 \newcommand*\eqlistinitpar{}
10 \def\eqlistlabel#1{#1}
11 \newcommand{\eqlistauto}[1]{}
12 \newcommand{\eqlistnoauto}{}

```

File 111 **lwarp-eqparbox.sty**

§ 210 Package **eqparbox**

*(Emulates or patches code by SCOTT PAKIN.)*

Pkg eqparbox eqparbox is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{eqparbox}[2017/09/03]

2 \NewDocumentCommand{\LWR@HTML@eqparbox}{O{t} O{} O{t} m +m}{%

```

```

3 {%
4 \minipagefullwidth%
5 \parbox[#1][#2][#3]{\linewidth}{#5}%
6 }%
7 }
8 \LWR@formatted{eqparbox}
9
10 \NewDocumentCommand{\LWR@HTML@eqmakebox}{o o m}{%
11 \makebox[#2][#3]%
12 }
13 \LWR@formatted{eqmakebox}
14
15 \NewDocumentCommand{\LWR@HTML@eqframebox}{o o m}{%
16 \framebox[#2][#3]%
17 }
18 \LWR@formatted{eqframebox}
19
20 \NewDocumentEnvironment{LWR@HTML@eqminipage}{O{t} O{ } O{t} m}
21 {%
22 \begingroup%
23 \minipagefullwidth%
24 \minipage[#1][#2][#3]{\linewidth}%
25 }%
26 {%
27 \endminipage%
28 \endgroup%
29 }
30
31 \newcommand*\LWR@HTML@eqboxwidth}[1]{.25\linewidth}
32 \LWR@formatted{eqboxwidth}
33
34 \newcommand*\LWR@HTML@eqsetminwidth}[2]{}
35 \newcommand*\LWR@HTML@eqsetmaxwidth}[2]{}
36
37 \newcommand*\LWR@HTML@eqsetminwidthto}[2]{}
38 \newcommand*\LWR@HTML@eqsetmaxwidthto}[2]{}

```

---

File 112 **lwarp-errata.sty**

§ 211 Package **errata**

*(Emulates or patches code by MICHAEL KOHLHASE.)*

Pkg errata errata is patched for use by lwarp.

This is for v0.3 of errata. A newer version of errata with more features is under development, at which time the lwarp version will have to be updated.

**for HTML output:** Macros are being defined with the math dollar, so enable the HTML version during package loading:

```
1 \StartDefiningMath
```

Now load the package:

```
2 \LWR@ProvidesPackagePass{errata}[2006/11/12]
```

Patches for dynamic inline math:

```
3 \xpatchcmd{\erratumAdd}
4 {$_a^{\arabic{erratum}}$}
5 % {\inlinemathother$_a^{\arabic{erratum}}$\inlinemathnormal}
6 {\textsubscript{a}\textsuperscript{\arabic{erratum}}}
7 {}
8 {\LWR@patcherror{erratum}{erratumAdd}}
9
10 \xpatchcmd{\erratumDelete}
11 {$_d^{\arabic{erratum}}$}
12 % {\inlinemathother$_d^{\arabic{erratum}}$\inlinemathnormal}
13 {\textsubscript{d}\textsuperscript{\arabic{erratum}}}
14 {}
15 {\LWR@patcherror{erratum}{erratumDelete}}
16
17 \xpatchcmd{\erratumReplace}
18 {$_r^{\arabic{erratum}}$}
19 % {\inlinemathother$_r^{\arabic{erratum}}$\inlinemathnormal}
20 {\textsubscript{r}\textsuperscript{\arabic{erratum}}}
21 {}
22 {\LWR@patcherror{erratum}{erratumReplace}}
23
24 \xpatchcmd{\erratum}
25 {$_a$}
26 % {\inlinemathother$_a$\inlinemathnormal}
27 {\textsubscript{a}}
28 {}
29 {\LWR@patcherror{erratum}{erratumDelete}}
30
31 \xpatchcmd{\erratum}
32 {$_d^{\@thefnmark}$}
33 % {\inlinemathother$_d^{\@thefnmark}}$\inlinemathnormal}
34 {\textsubscript{d}\@thefnmark}
35 {}
36 {\LWR@patcherror{erratum}{eDelete}}
37
38 \xpatchcmd{\erratum}
39 {$_r^{\@thefnmark}$}
40 % {\inlinemathother$_r^{\@thefnmark}}$\inlinemathnormal}
41 {\textsubscript{r}\@thefnmark}
42 {}
43 {\LWR@patcherror{erratum}{eReplace}}
```

Finish the current page's errata before closing and reloading the list:

```
44 \preto\PrintErrata{\LWR@orignewpage}
```

No longer defining math macros with the HTML \$:

```
45 \StopDefiningMath
```

File 113 **lwarp-eso-pic.sty**

§ 212 Package **eso-pic**

*(Emulates or patches code by ROLF NIEPRASCHK.)*

Pkg eso-pic eso-pic is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{eso-pic}[2018/04/12]

2 \newcommand*\LenToUnit{}
3 \newcommand{\AtPageUpperLeft}[1]{}
4 \newcommand{\AtPageLowerLeft}[1]{}
5 \newcommand{\AtPageCenter}[1]{}
6 \newcommand{\AtStockLowerLeft}[1]{}
7 \newcommand{\AtStockUpperLeft}[1]{}
8 \newcommand{\AtStockCenter}[1]{}
9 \newcommand{\AtTextUpperLeft}[1]{}
10 \newcommand{\AtTextLowerLeft}[1]{}
11 \newcommand{\AtTextCenter}[1]{}
12 \NewDocumentCommand{\AddToShipoutPictureBG}{s +m}{}

13 \newcommand{\AddToShipoutPicture}{\AddToShipoutPictureBG}
14 \NewDocumentCommand{\AddToShipoutPictureFG}{s +m}{}
15 \newcommand*\ClearShipoutPictureBG{}
16 \newcommand*\ClearShipoutPicture{}
17 \newcommand*\ClearShipoutPictureFG{}
18 \newcommand{\gridSetup}[6][[]]{}

```

File 114 **lwarp-eurosym.sty**

§ 213 Package **eurosym**

*(Emulates or patches code by HENRIK THEILING.)*

Pkg eurosym eurosym is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{eurosym}[1998/08/06]

2 \renewrobustcmd\officialeuro{\HTMLentity{euro}}
3 \let\geneuro\officialeuro
4 \let\geneuronarrow\officialeuro
5 \let\geneurowide\officialeuro
6 \let\euro\officialeuro
7 \renewrobustcmd\eurobars{}
8 \renewrobustcmd\eurobarsnarrow{}
9 \renewrobustcmd\eurobarswide{}

```



---

File 115 **lwarp-everypage.sty**

§ 214 Package **everypage**

*(Emulates or patches code by SERGIO CALLEGARI.)*

Pkg everypage everypage is emulated.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{everypage}[2007/06/20]
2 \newcommand*\AddEverypageHook[1]{}
3 \newcommand*\AddThispageHook[1]{}

```

---

File 116 **lwarp-everyshi.sty**

§ 215 Package **everyshi**

*(Emulates or patches code by MARTIN SCHRÖDER.)*

Pkg everyshi Emulated.

**for HTML output:** Discard all options for lwarp-everyshi:

```
1 \LWR@ProvidesPackageDrop{everyshi}[2001/05/15]
2 \newcommand*\EveryShipout[1]{}
3 \newcommand*\AtNextShipout[1]{}

```

---

File 117 **lwarp-extramarks.sty**

§ 216 Package **extramarks**

*(Emulates or patches code by PIET VAN OOSTRUM.)*

Pkg extramarks extramarks is emulated.

**for HTML output:** Discard all options for lwarp-extramarks:

```
1 \LWR@ProvidesPackageDrop{extramarks}[2019/01/31]
2 \newcommand*\extramarks[2]{}
3 \newcommand*\firstleftxmark{}
4 \newcommand*\lastleftxmark{}
5 \newcommand*\firstrightxmark{}
6 \newcommand*\lastrightxmark{}
7 \newcommand*\firstxmark{}

```

```

8 \newcommand*\lastxmark{}
9 \newcommand*\topxmark{}
10 \newcommand*\topleftxmark{}
11 \newcommand*\toprightxmark{}
12 \newcommand*\firstleftmark{}
13 \newcommand*\lastrightmark{}
14 \newcommand*\firstrightmark{}
15 \newcommand*\lastleftmark{}

```

File 118 **lwarp-fancybox.sty**

§ 217 Package **fancybox**

*(Emulates or patches code by TIMOTHY VAN ZANDT.)*

Pkg fancybox fancybox is supported with some patches.

[framed equation example](#) fancybox's documentation has an example FramedEqn environment which combines math, \Sbox, a minipage, and an \fbox. This combination requires that the entire environment be enclosed inside a lateximage, which is done by adding \lateximage at the very start of FramedEqn's beginning code, and \endlateximage at the very end of the ending code. Unfortunately, the HTML alt attribute is not used here.

```

\newenvironmentFramedEqn
{
\lateximage% NEW
\setlength{\fboxsep}{15pt}
... }{...
\[\fbox{\TheSbox}\]
\endlateximage% NEW
}

```

[framing alternatives](#) \fbox works with fancybox. Also see lwarp's \fboxBlock macro and fminipage environment for alternatives to \fbox for framing environments.

[framed table example](#) The fancybox documentation's example framed table using an \fbox containing a tabular does not work with lwarp, but the FramedTable environment does work if \fbox is replaced by \fboxBlock. This method loses HTML formatting. A better method is to enclose the table's contents inside a fminipage environment. The caption may be placed either inside or outside the fminipage:

```

\begin{table}
\begin{fminipage}{\linewidth}
\begin{tabular}{lr}
...
\end{tabular}
\end{fminipage}
\end{table}

```

 **framed verbatim** lwarp does not support the verbatim environment inside a span, box, or fancybox's

`\Sbox`, but a verbatim may be placed inside a `fminipage`. The `fancybox` documentation's example `FramedVerb` may be defined as:

```
\newenvironment{FramedVerb}[1] % width
{
 \VerbatimEnvironment
 \fminipage{#1}
 \beginVerbatim
}{
 \endVerbatim
 \endfminipage
}
```

`framed \VerbBox` `fancybox`'s `\VerbBox` may be used inside `\fbox`.

`indented alignment` `\LVerbatim`, `\LVerbatimInput`, and `\LUseVerbatim` indent with horizontal space which may not line up exactly with what *pdftotext* detects. Some lines may be off slightly in their left edge.

`fancybox, fancyvrb` If using `fancybox` or `fancyvrb` with `\VerbatimFootnotes`, and using footnotes in a sectioning command or display math, use `\footnotemark` and `\footnotetext`:

⚠ `\VerbatimFootnotes`  
⚠ sectioning or displaymath

```
\subsection[Subsection Name]
 {Subsection Name\protect\footnotemark}
 \footnotetext{A footnote with \verb+verbatim+.
```

and likewise for equations or display math.

At present there is a bug such that paragraph closing tags are not present in footnotes when `\VerbatimFootnotes` are selected. The browser usually compensates.

```
1 \LWR@ProvidesPackagePass{fancybox}[2010/05/15]
```

After the preamble is loaded, after any patches to `Verbatim`:

```
2 \AfterEndPreamble{
3 \LWR@traceinfo{Patching fancybox.}
```

`\VerbatimFootnotes` Patched to use the new version.

```
4 \def\VerbatimFootnotes{%
5 \let\@footnotetext\V@footnotetext%
6 \let\LWR@footnotetext\V@footnotetext% lwarp
7 }
```

`\V@footnotetext` Patches in a subset of `lwarp`'s `\LWR@footnotetext` to the `fancyvrb` version of `\V@footnotetext`.

```
8 \def\V@footnotetext{%
9 \LWR@traceinfo{V@footnotetext}%
10 \global\setbox\LWR@footnotebox=\vbox\bgroup%
```

Add to any current footnotes:

```
11 \unvbox\LWR@footnotebox%
```

Remember the footnote number for \ref:

```
12 \protected@edef\@currentlabel{%
13 \csname p@footnote\endcsname\@thefnmark%
14 }% @currentlabel
```

Use HTML superscripts in the footnote even inside a lateximage:

```
15 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%
```

Use paragraph tags if in a tabular data cell or a lateximage:

```
16 \ifthenelse{%
17 \boolean{LWR@doingstartpars} \AND%
18 \cnttest{\value{LWR@lateximagedepth}}{=} {0}%
19 }%
20 {}%
21 {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline}%
```

Append the footnote to the list:

```
22 \@makefntext{%
23 \bgroup%
24 \aftergroup{\V@@@footnotetext}%
25 \ignorespaces%
26 }%
```

```
27 }% AfterEndPreamble
```

```
28 \renewcommand*\@shadowbox}[1]{%
29 \ifbool{FormatWP}%
30 {\InlineClass[border:1px solid black]{shadowbox}{#1}}%
31 {\InlineClass{shadowbox}{#1}}%
32 }
33
34 \renewcommand*\@doublebox}[1]{%
35 \ifbool{FormatWP}%
36 {\InlineClass[border:1px double black]{doublebox}{#1}}%
37 {\InlineClass{doublebox}{#1}}%
38 }
39
40 \renewcommand*\@ovalbox}[2]{%
41 \ifbool{FormatWP}%
42 {\InlineClass[border:1px solid black; border-radius:1ex]{ovalbox}{#2}}%
43 {%
44 \ifthenelse{\isequivalentto{#1}{\thinlines}}%
45 {\InlineClass{ovalbox}{#2}}%
46 {\InlineClass{Ovalbox}{#2}}%
47 }%
48 }
```

Convert minipages, parboxes, and lists into linear text using the LWR@nestspan environment:

```
49 \let\LWR@origSbox\Sbox
```

```

50
51 \def\lbox{\LWR@origSbox\LWR@nestspan}
52
53
54 \let\LWR@origendSbox\endSbox
55
56 \def\endSbox{\endLWR@nestspan\LWR@origendSbox}

```

Beqnarray is adapted for MATHJAX or enclosed inside a lateximage:

```

57 \RenewEnviron{Beqnarray}
58 {\LWR@eqnarrayfactor}
59
60 \csgpreto{Beqnarray*}{\boolfalse{LWR@numbereqnarray}}

```

\GenericCaption is enclosed in an HTML block:

```

61 \renewcommand{\GenericCaption}[1]{%
62 \LWR@figcaption%
63 \LWR@isolate{#1}%
64 \endLWR@figcaption%
65 }

```

Btrivlist is enclosed in an HTML block. This is a tabular, and does not use \item.

```

\trivlist {\lcr} [{\tcb}]

66 \RenewDocumentEnvironment{Btrivlist}{m o}
67 {%
68 \begin{BlockClass}{Btrivlist}%
69 \tabular{#1}%
70 }
71 {%
72 \endtabular%
73 \end{BlockClass}%
74 }

```

Btrivlist is also neutralized when used inside a span:

```

75 \AtBeginEnvironment{LWR@nestspan}{%
76 \RenewDocumentEnvironment{Btrivlist}{m o}{\}%
77 }

```

lwarp's handling of \item is patched to accept fancybox's optional arguments:

```

78 \let\LWRFB@origitemizeitem\LWR@itemizeitem
79 \let\LWRFB@origdescitem\LWR@descitem
80
81 \RenewDocumentCommand{\LWR@itemizeitem}{d(o)}{%
82 \IfValueTF{#2}{%
83 \LWRFB@origitemizeitem[#2]%
84 }{%
85 \LWRFB@origitemizeitem%

```

```

86 }%
87 }
88
89 \RenewDocumentCommand{\LWR@descitem}{d()}{%
90 \IfValueTF{#2}{%
91 \LWRFB@origdescitem[#2]~%
92 }{%
93 \LWRFB@origdescitem%
94 }%
95 }

96 \RenewDocumentCommand{\LWR@nestspanitem}{d()}{%
97 \if@newlist\else{\LWR@htmltagc{br /}}\fi%
98 \LWR@origitem%
99 }

```

The various boxed lists become regular lists:

```

100 \renewenvironment{Bitemize}[1][\begin{itemize}]{\end{itemize}}
101 \renewenvironment{Benumerate}[1][\begin{enumerate}]{\end{enumerate}}
102 \renewenvironment{Bdescription}[1][\begin{description}]{\end{description}}

```

\boxput simply prints one then the other argument, side-by-side instead of above and behind:

```

103 \RenewDocumentCommand{\boxput}{s d() m m}{%
104 \IfBooleanTF{#1}{#3\quad#4}{#4\quad#3}%
105 }

```

Neutralized commands:

```

106 \RenewDocumentCommand{\fancyput}{s d() m}{%
107 \RenewDocumentCommand{\thisfancyput}{s d() m}{%
108
109 \RenewDocumentCommand{\fancypage}{m m}{%
110 \RenewDocumentCommand{\thisfancypage}{m m}{%
111
112 \def\LandScape#1{}
113 \def\endLandScape{}
114 \def\@Landscape#1#2#3{}
115 \def\endLandscape{}

```

Low-level patches for UseVerbatim and friends:

```

116 \let\LWRFB@UseVerbatim\UseVerbatim
117 \renewcommand*{\UseVerbatim}[1]{%
118 \LWR@atbeginverbatim{3}{Verbatim}%
119 \LWRFB@UseVerbatim{#1}%
120 \LWR@afterendverbatim{.5}%
121 }
122
123 \let\LWRFB@LUseVerbatim\LUseVerbatim

```

```

124
125 \renewcommand*\LUseVerbatim[1]{%
126 \LWR@atbeginverbatim{3}{LVerbatim}%
127 \noindent%
128 \LWRFB@LUseVerbatim{#1}%
129 \LWR@afterendverbatim{.5}%
130 }
131
132 \def\@BUseVerbatim[#1]#2{%
133 \LWR@atbeginverbatim{3}{BVerbatim}%
134 \LWRFB@UseVerbatim{#2}%
135 \LWR@afterendverbatim{.5}%
136 }

```

---

File 119 **lwarp-fancyhdr.sty**

§ 218 Package **fancyhdr**

*(Emulates or patches code by PIET VAN OOSTRUM.)*

Pkg fancyhdr fancyhdr is nullified.

**for HTML output:** Discard all options for lwarp-fancyhdr:

```

1 \LWR@ProvidesPackageDrop{fancyhdr}[2019/01/31]

2 \newcommand*\fancyhead[2][]{ }
3 \newcommand*\fancyfoot[2][]{ }
4 \newcommand*\fancyhf[2][]{ }
5 \newcommand*\fancypagestyle[2]{ }
6 \newcommand*\lhead[2][]{ }
7 \newcommand*\chead[2][]{ }
8 \newcommand*\rhead[2][]{ }
9 \newcommand*\lfoot[2][]{ }
10 \newcommand*\cfoot[2][]{ }
11 \newcommand*\rfoot[2][]{ }
12 \newcommand*\headrulewidth{ }
13 \newcommand*\footrulewidth{ }
14 \newcommand*\headrule{ }
15 \newcommand*\footrule{ }
16 \newlength\headwidth
17 \newcommand*\fancyheadoffset[2][]{ }
18 \newcommand*\fancyfootoffset[2][]{ }
19 \newcommand*\fancyhfoffset[2][]{ }
20 \newcommand*\iffloatpage[2]{#2}
21 \newcommand*\ifftopfloat[2]{#2}
22 \newcommand*\iffbotfloat[2]{#2}
23 \newcommand*\iffootnote[2]{#2}

```

File 120 **lwarp-fancyref.sty**

§ 219 Package **fancyref**

Pkg fancyref fancyref is emulated.

**for HTML output:** 1 \LWR@ProvidesPackagePass{fancyref}[1999/02/03]

To remove the margin option, if \fancyrefhook is anything other than the paren option, then force it to the default instead. (Comparing to the margin option was not possible since lwarp has revised the meaning of \mbox so the comparison failed.)

```
2 \newcommand*\LWRfref@parenfancyrefhook[1]{(#1)}
3
4 \ifdefstrequal{\fancyrefhook}{\LWRfref@parenfancyrefhook}
5 {}{
6 \renewcommand*\fancyrefhook[1]{#1}%
7 }
```

Modified to ignore the page number and varioref.

```
8 \renewcommand*\@f@ref[4]{%
9 \@ifundefined{#1r@#2@#3}{%
10 \PackageError{fancyref}{%
11 \backslashchar#1ref\space format ‘#2’
12 undefined\MessageBreak
13 for label type ‘#3’}%
14 }{%
15 The format ‘#2’ was not defined for the label type
16 ‘#3’\MessageBreak
17 and the \backslashchar#1ref\space command. Perhaps
18 you have only misspelled its name.\MessageBreak
19 Otherwise you will have to define it with
20 \protect\new#1refformat\MessageBreak
21 prior to using it.%
22 }%
23 }{%
24 \fancyrefhook{%
25 \@nameuse{#1r@#2@#3}%
26 {\ref{#3\fancyrefargdelim#4}}%
27 {\pageref{#3\fancyrefargdelim#4}}% original
28 {\@fancyref@page@ref{#3\fancyrefargdelim#4}}% original
29 }% lwarp
30 }% lwarp
31 }%
32 }%
33 }%
```



---

File 121 **lwarp-fancytabs.sty**

§ 220 Package **fancytabs**

Pkg fancytabs fancytabs is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fancytabs}[2016/03/29]

```

2 \newcommand{\fancytab}[3][RIGHT]{ }
3 \newcommand{\fancytabsStyle}[1]{ }
4 \newcommand{\fancytabsHeight}[1]{ }
5 \newcommand{\fancytabsWidth}[1]{ }
6 \newcommand{\fancytabsCount}[1]{ }
7 \newcommand{\fancytabsLeftColor}[1]{ }
8 \newcommand{\fancytabsRightColor}[1]{ }
9 \newcommand{\fancytabsTop}[1]{ }
10 \newcommand{\fancytabsTextVPos}[1]{ }
11 \newcommand{\fancytabsTextHPos}[1]{ }
12 \newcommand{\fancytabsGap}[1]{ }
13 \newcommand{\fancytabsFloor}[1]{ }
14 \newcommand{\fancytabsRotate}[1]{ }

```

---


File 122 **lwarp-fancyvrb.sty**


§ 221 Package **fancyvrb**

*(Emulates or patches code by TIMOTHY VAN ZANDT.)*

Pkg fancyvrb fancyvrb is supported with some patches.

**fancybox, fancyvrb** If using fancybox or fancyvrb with \VerbatimFootnotes, and using footnotes in a sectioning command or display math, use \footnotemark and \footnotetext:

 **\VerbatimFootnotes**

 **sectioning or displaymath**

```

\subsection[Subsection Name]
 {Subsection Name\protect\footnotemark}
\footnotetext{A footnote with \verb+verbatim+.}

```

and likewise for equations or display math.

At present there is a bug such that paragraph closing tags are not present in footnotes when \VerbatimFootnotes are selected. The browser usually compensates.

```

1 \RequirePackage{xcolor}% for \convertcolorspec
2
3 \LWR@ProvidesPackagePass{fancyvrb}[2008/02/07]

```

Initial default patch for fancyvrb:

```
4 \fvset{frame=none}%
```

After the preamble is loaded, after any patches to Verbatim:

```
5 \AfterEndPreamble{
6 \LWR@traceinfo{Patching fancyvrb.}
```

`\VerbatimFootnotes` Patched to use the new version.

```
7 \def\VerbatimFootnotes{%
8 \let\@footnotetext\@footnotetext%
9 \let\footnote\@footnote%
10 \let\LWR@footnotetext\@footnotetext% lwarp
11 }
```

`\V@footnotetext` Patches in a subset of lwarp's `\LWR@footnotetext` to the fancyvrb version of `\V@footnotetext`.

```
12 \def\V@footnotetext{%
13 \LWR@traceinfo{V@footnotetext}%
14 \global\setbox\LWR@footnotebox=\vbox\bgroup%
```

Add to any current footnotes:

```
15 \unvbox\LWR@footnotebox%
```

Remember the footnote number for `\ref`:

```
16 \protected@edef\@currentlabel{%
17 \csname p@footnote\endcsname\@thefnmark%
18 }% @currentlabel
```

Use HTML superscripts in the footnote even inside a `lateximage`:

```
19 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%
```

Use paragraph tags if in a tabular data cell or a `lateximage`:

```
20 \ifthenelse{%
21 \boolean{LWR@doingstartpars} \AND%
22 \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
23 }%
24 {}%
25 {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@originewline}%
```

Append the footnote to the list:

```
26 \@makefntext{%
27 \bgroup%
28 \aftergroup{\V@footnotetext}%
29 \ignorespaces%
30 }%
```

```
31 \preto\FVB@Verbatim{\LWR@forcenewpage}
32 \preto\FVB@LVerbatim{\LWR@forcenewpage}
33 % \preto\FVB@BVerbatim{\LWR@forcenewpage}% Fails, so done below.
```

Simplified to remove PDF formatting:

```

34 \def\FV@BeginListFrame@Single{%
35 \FV@SingleFrameLine{\z@}%
36 }
37
38 \def\FV@endListFrame@Single{%
39 \FV@SingleFrameLine{\@ne}%
40 }
41
42 \def\FV@BeginListFrame@Lines{%
43 \FV@SingleFrameLine{\z@}%
44 }
45
46 \def\FV@endListFrame@Lines{%
47 \FV@SingleFrameLine{\@ne}%
48 }
49
50 \renewcommand*\FV@SingleFrameSep{}
```

Adds HTML formatting:

```

51 \def\FV@BUseVerbatim#1{%
52 \LWR@atbeginverbatim[\LWR@FVstyle]{0}{verbatim}%
53 \FV@BVerbatimBegin#1\FV@BVerbatimEnd%
54 \LWR@afterendverbatim{0}%
55 }
```

`\LWR@FVstyle` Holds the style of the verbatim.

```

56 \newcommand*\LWR@FVstyle{}
```

The following patches to Verbatim are executed at the start and end of the environment, depending on the choice of frame. Original code is from the fancyvrb package.

```

57 \newcommand*\LWR@fvstartnone{%
58 \LWR@traceinfo{fvstartnone}%
59 \hbox to\z@{
60 \LWR@atbeginverbatim[\LWR@FVstyle]{0}{verbatim}%
61 % }%
62 }
63
64 \newcommand*\LWR@fvendnone{%
65 \LWR@traceinfo{fvendnone}%
66 \hbox to\z@{
67 \LWR@afterendverbatim{0}%
68 % }%
69 }
70
71 \newcommand*\LWR@fvstartsingle{%
72 \LWR@traceinfo{fvstartsingle}%
73 \LWR@fvstartnone%
74 \FV@BeginListFrame@Single%
75 }
```

```

76
77 \newcommand*{\LWR@fvendsingle}{%
78 \LWR@traceinfo{fvendsingle}%
79 \FV@EndListFrame@Single%
80 \LWR@fvendnone%
81 }
82
83 \newcommand*{\LWR@fvstartline}{%
84 \LWR@traceinfo{fvstartline}%
85 \LWR@fvstartnone%
86 % \setlength{\LWR@templengthone}{\baselineskip}%
87 \FV@BeginListFrame@Lines%
88 % \setlength{\baselineskip}{\LWR@templengthone}%
89 % \setlength{\baselineskip}{5pt}%
90 }
91
92 \newcommand*{\LWR@fvendline}{%
93 \LWR@traceinfo{fvendline}%
94 \FV@EndListFrame@Lines%
95 \LWR@fvendnone%
96 }

```

The following patches select the start/left/right/end behaviors depending on frame. Original code is from the fancyvrb package.

```

97 \newcommand*{\LWR@FVfindbordercolor}{%
98 \FancyVerbRuleColor%
99 \LWR@findcurrenttextcolor%
100 \color{black}%
101 }
102
103 % border width of \FV@FrameRule
104 \newcommand*{\LWR@FVborderstyle}[1]{%
105 padding#1: \strip@pt\dimexpr \FV@FrameSep\relax\relax pt ; %
106 \LWR@FVfindbordercolor %
107 border#1: \strip@pt\dimexpr \FV@FrameRule\relax\relax pt %
108 solid \LWR@origpound\LWR@tempcolor ; %
109 }
110
111 \def\FV@Frame@none{%
112 \renewcommand*{\LWR@FVstyle}{\LWR@currenttextcolorstyle}%
113 \let\FV@BeginListFrame\LWR@fvstartnone%
114 \let\FV@LeftListFrame\relax%
115 \let\FV@RightListFrame\relax%
116 \let\FV@EndListFrame\LWR@fvendnone}
117
118 \FV@Frame@none% default values
119
120 \def\FV@Frame@single{%
121 \renewcommand*{\LWR@FVstyle}{\LWR@currenttextcolorstyle\LWR@FVborderstyle{}}%
122 \let\FV@BeginListFrame\LWR@fvstartsingle%
123 \let\FV@LeftListFrame\FV@LeftListFrame@Single%
124 \let\FV@RightListFrame\FV@RightListFrame@Single%
125 \let\FV@EndListFrame\LWR@fvendsingle}
126

```

```

127 \def\FV@Frame@lines{%
128 \renewcommand*{\LWR@FVstyle}{%
129 \LWR@currenttextcolorstyle\LWR@FVborderstyle{-top}\LWR@FVborderstyle{-bottom}%
130 }%
131 \let\FV@BeginListFrame\LWR@fvstartline%
132 \let\FV@LeftListFrame\relax%
133 \let\FV@RightListFrame\relax%
134 \let\FV@endListFrame\LWR@fvendline}
135
136 \def\FV@Frame@topline{%
137 \renewcommand*{\LWR@FVstyle}{\LWR@currenttextcolorstyle\LWR@FVborderstyle{-top}}%
138 \let\FV@BeginListFrame\LWR@fvstartline%
139 \let\FV@LeftListFrame\relax%
140 \let\FV@RightListFrame\relax%
141 \let\FV@endListFrame\LWR@fvendnone}
142
143 \def\FV@Frame@bottomline{%
144 \renewcommand*{\LWR@FVstyle}{\LWR@currenttextcolorstyle\LWR@FVborderstyle{-bottom}}%
145 \let\FV@BeginListFrame\LWR@fvstartnone%
146 \let\FV@LeftListFrame\relax%
147 \let\FV@RightListFrame\relax%
148 \let\FV@endListFrame\LWR@fvendline}
149
150 \def\FV@Frame@leftline{%
151 \renewcommand*{\LWR@FVstyle}{\LWR@currenttextcolorstyle\LWR@FVborderstyle{-left}}%
152 % To define the \FV@FrameFillLine macro (from \FV@BeginListFrame)
153 \ifx\FancyVerbFillColor\relax%
154 \let\FV@FrameFillLine\relax%
155 \else%
156 \@tempdima\FV@FrameRule\relax%
157 \multiply\@tempdima-\tw@%
158 \edef\FV@FrameFillLine{%
159 \noexpand\FancyVerbFillColor{\vrule\@width\number\@tempdima sp}%
160 \kern-\number\@tempdima sp}}%
161 \fi%
162 \let\FV@BeginListFrame\LWR@fvstartnone%
163 \let\FV@LeftListFrame\FV@LeftListFrame@Single%
164 \let\FV@RightListFrame\relax%
165 \let\FV@endListFrame\LWR@fvendnone}

```

Adds the optional label to the top and bottom edges. Original code is from the fancyvrb package.

```

166 \def\FV@SingleFrameLine#1{%
167 % \hbox to\z@{%
168 % \kern\leftmargin
169 \ifnum#1=\z@\relax
170 \let\FV@Label\FV@LabelBegin
171 \else
172 \let\FV@Label\FV@LabelEnd
173 \fi
174 \ifx\FV@Label\relax
175 % \FancyVerbRuleColor{\vrule \@width\linewidth \@height\FV@FrameRule}%
176 \else
177 \ifnum#1=\z@

```

```

178 % \setbox\z@\hbox{\strut\enspace\FV@LabelBegin\enspace\strut}%
179 \ifx\FV@LabelPositionTopLine\relax
180 \else
181 \LWR@FVfindbordercolor
182 \LWR@htmltagc{%
183 div class="fancyvrblabel" % extra space
184 style="color: \LWR@origpound\LWR@tempcolor"%
185 }
186 \LWR@print@textrm{\FV@LabelBegin}% \textrm preserves emdash
187 \LWR@htmltagc{/div}
188 \fi
189 \else
190 % \setbox\z@\hbox{\strut\enspace\FV@LabelEnd\enspace\strut}%
191 \ifx\FV@LabelPositionBottomLine\relax
192 \else
193 \LWR@FVfindbordercolor
194
195 \LWR@htmltagc{%
196 div class="fancyvrblabel" % extra space
197 style="color: \LWR@origpound\LWR@tempcolor"%
198 }
199 \LWR@print@textrm{\FV@LabelEnd}
200 \LWR@htmltagc{/div}
201 \fi
202 \fi
203 \fi
204 % \hss
205 % }
206 }

```

Processes each line, adding optional line numbers. Original code is from the fancyvrb package.

```

207 \def\FV@ListProcessLine#1{%
208 \hbox to \hsize{%
209 \kern\leftmargin
210 \hbox to \VerbatimHTMLwidth {%
211 \ifcvoid{FV@LeftListNumber}{}{\kern 2.5em}%
212 \FV@LeftListNumber%
213 % \FV@LeftListFrame
214 \FancyVerbFormatLine{#1}%
215 \hss%
216 % \FV@RightListFrame
217 \FV@RightListNumber%
218 }%
219 \hss% required to avoid underfull hboxes
220 }
221 }

```

Env BVerbatim

```

222 \AtBeginEnvironment{BVerbatim}
223 {%
224 \LWR@forcenewpage% instead of \preto
225 \LWR@atbeginverbatim{0}{bverbatim}%

```

```

226 }
227
228 \AfterEndEnvironment{BVerbatim}
229 {%
230 \LWR@afterendverbatim{0}%
231 }

```

End of the modifications to make at the end of the preamble:

```

232 } % \AfterEndPreamble

```

---

File 123 **lwarp-figcaps.sty**

§ 222 Package **figcaps**

*(Emulates or patches code by PATRICK W. DALY.)*

Pkg figcaps Emulated.

**for HTML output:** Discard all options for lwarp-figcaps:

```

1 \LWR@ProvidesPackageDrop{figcaps}[1999/02/23]

2 \newcommand*\figcapson{}
3 \newcommand*\figcapsoff{}
4 \newcommand*\printfigures{}
5 \newcommand*\figmarkon{}
6 \newcommand*\figmarkoff{}
7 \def\figurecapname{Figure Captions}
8 \def\tablepagename{Tables}
9 \def\figurepagename{Figures}

```

---

File 124 **lwarp-figsize.sty**

§ 223 Package **figsize**

*(Emulates or patches code by ANTHONY A. TANBAKUCHI.)*

Pkg figsize figsize is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{figsize}[2002/03/18]

Emulates a virtual 6×9 inch textsize.

```

2 \newlength{\figwidth}
3 \newlength{\figheight}
4
5 \newcommand{\SetFigLayout}[3][0]{%
6 \setlength{\figheight}{8in}%

```

```

7 \setlength{\figheight}{\figheight / #2}%
8 %
9 \setlength{\figwidth}{5.5in}%
10 \setlength{\figwidth}{\figwidth / #3}%
11 }

```

---

File 125 **lwarp-fitbox.sty**

§ 224 Package **fitbox**

Pkg fitbox fitbox is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fitbox}[2019/02/20]

```

2 \NewDocumentCommand{\fitbox}{s o m}{%
3 \begin{BlockClass}{fitbox}
4 #3
5 \end{BlockClass}
6 }
7
8 \newcommand*{\fitboxset}[1]{}
9
10 \newdimen\fitboxnatheight
11 \newdimen\fitboxnatwidth
12
13 \newcommand\SetFitboxLayout[3][[]]{}

```

---

File 126 **lwarp-fix2col.sty**

§ 225 Package **fix2col**

Pkg fix2col fix2col is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fix2col}[2015/11/13]


---

File 127 **lwarp-fixme.sty**

§ 226 Package **fixme**

*(Emulates or patches code by DIDIER VERNA.)*

Pkg fixme fixme is patched for use by lwarp.

 **external layouts** External layouts (\fxloadlayouts) are not supported.

User control is provided for setting the HTML styling of the “faces”. The defaults are as follows, and may be changed in the preamble after fixme is loaded:



```

\def\FXFaceInlineHTMLStyle{font-weight:bold}
\def\FXFaceEnvHTMLStyle{font-weight:bold}
\def\FXFaceSignatureHTMLStyle{font-style:italic}
\def\FXFaceTargetHTMLStyle{font-style:italic}

```

**for HTML output:** 1 \LWR@ProvidesPackagePass{fixme}[2017/03/05]

Restore lwarp's version of \@wrindex, ignoring the fixme package's target option:

```
2 \let\@wrindex\LWR@wrindex
```

Float-related macros required by lwarp:

```

3 \newcommand{\ext@fixme}{lox}
4
5 \renewcommand{\l@fixme}[2]{\hypertocfloat{1}{fixme}{lox}{#1}{#2}}

```

Other modifications:

```

6 \def\FXFaceInlineHTMLStyle{font-weight:bold}
7
8 \renewcommand*\FXLayoutInline[3]{ %
9 \InlineClass[\FXFaceInlineHTMLStyle]{fixmeinline}%
10 {\@fxttextstd{#1}{#2}{#3}}%
11 }
12
13 \def\FXFaceEnvHTMLStyle{font-weight:bold}
14
15 \renewcommand*\FXEnvLayoutPlainBegin[2]{%
16 \BlockClass[\FXFaceEnvHTMLStyle]{fixmebold}
17 \ignorespaces#2 \fxnotename{#1}: \ignorespaces}
18
19 \renewcommand*\FXEnvLayoutPlainEnd[2]{\endBlockClass}
20
21 \renewcommand*\FXEnvLayoutSignatureBegin[2]{%
22 \BlockClass[\FXFaceEnvHTMLStyle]{fixmebold}
23 \fxnotename{#1}: \ignorespaces}
24
25 \renewcommand*\FXEnvLayoutSignatureEnd[2]{\@fxsignature{#2}\endBlockClass}
26
27 \def\FXFaceSignatureHTMLStyle{font-style:italic}
28
29 \DeclareRobustCommand*\@fxsignature[1]{%
30 \ifthenelse{\equal{#1}{}}%
31 {}%
32 { -- {\InlineClass[\FXFaceSignatureHTMLStyle]{fixmesignature}{#1}}}%
33 }
34
35
36 \def\FXFaceTargetHTMLStyle{font-style:italic}
37
38 \renewcommand\FXTargetLayoutPlain[2]{%
39 \InlineClass[\FXFaceTargetHTMLStyle]{fixmetarget}{#2}%
40 }

```

---

File 128 **lwarp-fixmetodonotes.sty**

§ 227 Package **fixmetodonotes**

*(Emulates or patches code by GIOELE BARABUCCI.)*

Pkg fixmetodonotes fixmetodonotes is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{fixmetodonotes}[2013/04/28]
2 \renewcommand{\NOTES@addtolist}[2]{%
3 \refstepcounter{NOTES@note}%
4 % \phantomsection% REMOVED
5 \addcontentsline{notes}{NOTES@note}{%
6 \protect\numberline{\theNOTES@note}{\#1}: {\#2}}%
7 }%
8 }
9
10 \renewcommand{\NOTES@marker}[2]{\fbox{%
11 \textcolor{\#2}{% WAS \color
12 \textbf{\#1}}}%
13 }}
14
15 \renewcommand{\NOTES@colorline}[2]{%
16 \bgroup%
17 \ULon{\LWR@backgroundcolor{\#1}{\#2}}%
18 }
```

---

File 129 **lwarp-flafter.sty**

§ 228 Package **flafter**

Pkg flafter flafter is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{flafter}[2018/01/08]
2 \providecommand\fl@trace[1]{}
```

---

File 130 **lwarp-flippdf.sty**

§ 229 Package **flippdf**

Pkg flippdf flippdf is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{flippdf}[2006/06/30]
```

```
2 \newcommand\FlipPDF{}
3 \newcommand\UnFlipPDF{}
```

---

File 131 **lwarp-float.sty**

§ 230 Package **float**

(Emulates or patches code by ANSELM LINGNAU.)

Pkg float float is emulated.

Float styles boxed and ruled are emulated by css and a float class according to style.

The HTML `<figure>` class is set to the float type, so css may also be used to format the float and its caption, according to float type. Furthermore, an additional class is set to the float style: plain, plaintop, boxed, or ruled, so css may be used to format by float style as well. Default formatting by css is provided for ruled and boxed styles.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{float}[2001/11/08]

\listof See section 76.2 for the \listof command.

\LWR@floatstyle The default float style:

```
2 \newcommand*\LWR@floatstyle{plain}
```

\newfloat `{\langle 1: type \rangle}{\langle 2: placement \rangle}{\langle 3: ext \rangle}[\langle 4: within \rangle]`  
Emulates the \newfloat command from the float package.  
“placement” is ignored.

```
3 \NewDocumentCommand{\newfloat}{m m m o}{%
4 \IfValueTF{#4}%
5 {\DeclareFloatingEnvironment[fileext=#3,within=#4]{#1}}%
6 {\DeclareFloatingEnvironment[fileext=#3]{#1}}%
```

Remember the float style:

```
7 \csedef{\LWR@floatstyle@#1}{\LWR@floatstyle}%
```

newfloat package automatically creates the \listof command for new floats, but float does not, so remove \listof here in case it is manually created later.

```
8 \cslet{listof#1s}\relax%
9 \cslet{listof#1es}\relax%
```

Likewise, newfloat also creates \l@<type>, but float does not, so remove it here:

```
10 \cslet{l@#1}\relax%
11 }
```

\floatname `{\langle type \rangle}{\langle name \rangle}`

Sets the text name of the float, such as “Figure”.

```
12 \NewDocumentCommand{\floatname}{m +m}{%
13 \SetupFloatingEnvironment{#1}{name=#2}%
14 }
```

`\floatplacement`     $\langle type \rangle$   $\langle placement \rangle$

Float placement is ignored.

```
15 \newcommand*{\floatplacement}[2]{%
16 \SetupFloatingEnvironment{#1}{placement=#2}%
17 }
```

`\floatstyle`     $\langle style \rangle$

Remember the style for future floats:

```
18 \newcommand{\floatstyle}[1]{%
19 \def\LWR@floatstyle{#1}%
20 }
```

`\restylefloat`    \*  $\langle type \rangle$

Remember the style for this float:

```
21 \NewDocumentCommand{\restylefloat}{s m}{%
22 \csedef{LWR@floatstyle@#2}{\LWR@floatstyle}%
23 }
```

File 132    **lwarp-floatflt.sty**

§ 231    Package    **floatflt**

*(Emulates or patches code by MATS DAHLGREN.)*

Pkg floatflt    Emulated.

**for HTML output:**    Discard all options for lwarp-floatflt:

```
1 \LWR@ProvidesPackageDrop{floatflt}[1997/07/16]
```

Env     $\langle \rangle$     offset  $\langle type \rangle$   $\langle width \rangle$  Borrowed from the lwarp version of keyfloat:

```
2 \NewDocumentEnvironment{KFLTfloatflt@marginfloat}{0{-1.2ex} m m}
3 {%
4 \setlength{\LWR@templengthone}{#3}%
5 \LWR@BlockClassWP{%
6 float:right; %
7 width:\LWR@printlength{\LWR@templengthone}; % extra space
8 margin:10pt%
9 }{%
10 width:\LWR@printlength{\LWR@templengthone}%
11 }%
```

```

12 {marginblock}%
13 \captionsetup{type=#2}%
14 }
15 {%
16 \endLWR@BlockClassWP%
17 }

```

Env floatingfigure [*(placement)*] [*(width)*]

```

18 \DeclareDocumentEnvironment{floatingfigure}{o m}
19 {\begin{KFLTfloatflt@marginfloat}{figure}{#2}}
20 {\end{KFLTfloatflt@marginfloat}}

```

Env floatingtable [*(placement)*]

```

21 \DeclareDocumentEnvironment{floatingtable}{o}
22 {\begin{KFLTfloatflt@marginfloat}{table}{1.5in}}
23 {\end{KFLTfloatflt@marginfloat}}

```

---

File 133 **lwarp-floatpag.sty**

§ 232 Package **floatpag**

*(Emulates or patches code by VYTAS STATULEVIČIUS AND SIGITAS TOLUŠIS.)*

Pkg floatpag Emulated.

**for HTML output:** Discard all options for lwarp-floatpag:

```

1 \LWR@ProvidesPackageDrop{floatpag}[2012/05/29]

2 \newcommand*{\floatpagestyle}[1]{}
3 \newcommand*{\rotfloatpagestyle}[1]{}
4 \newcommand*{\thisfloatpagestyle}[1]{}

```

---


File 134 **lwarp-floatrow.sty**


§ 233 Package **floatrow**

*(Emulates or patches code by OLGA LAPKO.)*

Pkg floatrow floatrow is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{floatrow}[2008/08/02]

 **Misplaced alignment tab character &** Use \StartDefiningTabulars and \StopDefiningTabulars before and after defining macros using \ttabbox with a tabular inside. See section 9.10.1.

 **subfig package** When combined with the subfig package, while inside a subfloatrow \ffigbox and \ttabbox must have the caption in the first of the two of the mandatory arguments.

⚠ `\FBwidth, \FBheight`

The emulation of `floatrow` does not support `\FBwidth` or `\FBheight`. These values are pre-set to `.3\linewidth` and `2in`. Possible solutions include:

- Use fixed lengths. `lwarp` will scale the HTML lengths appropriately.
- Use `warpprint` and `warpHTML` environments to select appropriate values for each case.
- Inside a `warpHTML` environment, manually change `\FBwidth` or `\FBheight` before the `\ffigbox` or `\ttabbox`. Use `\FBwidth` or `\FBheight` normally afterwards; it will be used as expected in print output, and will use your custom-selected value in HTML output. This custom value will be used repeatedly, until it is manually changed to a new value.

After everything has loaded, remember whether `subcaption` was loaded. If not, it is assumed that `subfig` is used instead:

```
2 \newbool{LWR@subcaptionloaded}
3
4 \AtBeginDocument{
5 \ifpackageloaded{subcaption}
6 {\booltrue{LWR@subcaptionloaded}}
7 {\boolfalse{LWR@subcaptionloaded}}
8 }
```

`\floatbox` [*1 preamble*] [*2 captype*] [*3 width*] [*4 height*] [*5 vert pos*] [*6 caption*]  
[*7 object*]

Only parameters for `captype`, `width`, `caption`, and `object` are used.

`LWR@insubfloatrow` is true if inside a `subfloatrow` environment.

There are two actions, depending on the use of `subcaption` or `subfig`.

```
9 \NewDocumentCommand{\floatbox}{o m o o +m +m}{%
10 \ifbool{LWR@subcaptionloaded}%
11 {% subcaption
```

For `subcaption`:

```
12 \ifbool{LWR@insubfloatrow}%
13 {% subcaption in a subfloatrow
```

`subfigure` and `subtable` environments take `width` as an argument.

```
14 \IfValueTF{#3}%
15 {\@nameuse{sub#2}{#3}}%
16 {\@nameuse{sub#2}{\linewidth}}%
17]% subcaption in a subfloatrow
18 {% subcaption not in subfloatrow
```

`figure` and `table` environments do not take a `width` argument.

```
19 \@nameuse{#2}%
20]% subcaption not in subfloatrow
21 #6
22
23 #7
```

End the environments:

```
24 \ifbool{LWR@infloatrow}%
25 {\@nameuse{endsub#2}}%
26 {\@nameuse{end#2}}%
27 }% subcaption
28 {% assume subfig
```

For subfig:

```
29 \ifbool{LWR@infloatrow}%
30 {% subfig in a floatrow
```

`\subfloat` is a macro, not an environment.

Package `subfig`'s `\subfloat` command takes an optional argument which is the caption, but `\floatbox` argument #6 contains commands to create the caption and label, not the caption itself. Thus, `\caption` is temporarily disabled to return its own argument without braces.

```
31 \begingroup
32 \let\caption\@firstofone
33 \subfloat[#6]{#7}
34 \endgroup
35 }% subfig in a floatrow
36 {% subfig package, but not a subfig
```

`figure` and `table` are environments:

```
37 \@nameuse{#2}
38 #6
39
40 #7
41 \@nameuse{end#2}
42 }% subfig package, but not a subfig
43 }% assume subfig
44 }
```

Not used:

```
45 \newcommand*\nocapbeside{}
46 \newcommand*\capbeside{}
47 \newcommand*\captop{}
48 \newlength\FBwidth
49 \setlength\FBwidth{.3\linewidth}
50 \newlength\FBheight
51 \setlength\FBheight{2in}
52 \newcommand*\useFCwidth{}
53 \newcommand\floatsetup[2][{}
54 \newcommand\thisfloatsetup[1]{
55 \newcommand\clearfloatsetup[1]{
56 \newcommand*\killfloatstyle{}
```

`\newfloatcommand` {<1 command>} {<2 capttype>} [ <3 preamble> ] [ <4 default width> ]

Preamble and default width are ignored.

```
57 \NewDocumentCommand\newfloatcommand}{m m o o}{%
58 \@namedef{#1}{
```

```
59 \floatbox{#2}
60 }
61 }
```

`\renewfloatcommand` [*⟨1 command⟩*] [*⟨2 captype⟩*] [*⟨3 preamble⟩*] [*⟨4 default width⟩*]

Preamble and default width are ignored.

```
62 \NewDocumentCommand{\renewfloatcommand}{m m o o}{%
63 \@namedef{#1}{%
64 \floatbox{#2}
65 }
66 }
```

`\ffigbox` [*⟨width⟩*] [*⟨height⟩*] [*⟨vposn⟩*] [*⟨caption commands⟩*] [*⟨contents⟩*]

```
67 \newfloatcommand{ffigbox}{figure}[\nocapbeside][[]]
```

`\ttabbox` [*⟨width⟩*] [*⟨height⟩*] [*⟨vposn⟩*] [*⟨caption commands⟩*] [*⟨contents⟩*]

```
68 \newfloatcommand{ttabbox}{table}[\capttop][\FBwidth]
```

`\fcapside` [*⟨width⟩*] [*⟨height⟩*] [*⟨vposn⟩*] [*⟨caption commands⟩*] [*⟨contents⟩*]

```
69 \newfloatcommand{fcapside}{figure}[\capbeside][[]]
```

Env `floatrow` [*⟨numfloats⟩*]

The row of floats is placed into a `<div>` of class `floatrow`.

```
70 \newenvironment*{floatrow}[1][2]
71 {
72 \LWR@forcenewpage
73 \BlockClass{floatrow}
```

While inside the `floatrow`, divide the `\linewidth` by the number of floats.

```
74 \booltrue{LWR@infloatrow}
75 \setlength{\linewidth}{6in/#1}
76 }
77 {
78 \boolfalse{LWR@infloatrow}
79 \endBlockClass
80 }
```

Keys for `\DeclareNewFloatType`:

```
81 \newcommand*{\LWR@frowkeyplacement}{}
82 \newcommand*{\LWR@frowkeyname}{}
83 \newcommand*{\LWR@frowkeyfileext}{}
84 \newcommand*{\LWR@frowkeywithin}{}
85 \newcommand*{\LWR@frowkeycapstyle}{}
86
87 \define@key{frowkeys}{placement}{}%
88 \define@key{frowkeys}{name}{\renewcommand{\LWR@frowkeyname}{#1}}%
89 \define@key{frowkeys}{fileext}{\renewcommand{\LWR@frowkeyfileext}{#1}}%
```



```
90 \define@key{frowkeys}{within}{\renewcommand{\LWR@frowkeywithin}{#1}}%
91 \define@key{frowkeys}{relatedcapstyle}{}%
```

`\DeclareNewFloatType`     $\langle type \rangle$   $\langle options \rangle$

Use `\listof{type}{Title}` to print a list of the floats.

```
92 \newcommand*{\DeclareNewFloatType}[2]{%
```

Reset key values:

```
93 \renewcommand*{\LWR@frowkeyplacement}{}%
94 \renewcommand*{\LWR@frowkeyname}{}%
95 \renewcommand*{\LWR@frowkeyfileext}{}%
96 \renewcommand*{\LWR@frowkeywithin}{}%
97 \renewcommand*{\LWR@frowkeycapstyle}{}%
```

Read new key values:

```
98 \LWR@traceinfo{about to setkeys frowkeys}%
99 \setkeys{frowkeys}{#2}%
100 \LWR@traceinfo{finished setkeys frowkeys}%
```

Create a new float with optional [within]:

```
101 \ifthenelse{\equal{\LWR@frowkeywithin}{} }%
102 {%
103 \LWR@traceinfo{about to newfloat #1 \LWR@frowkeyplacement\ %
104 \LWR@frowkeyfileext}%
105 \newfloat{#1}{\LWR@frowkeyplacement}{\LWR@frowkeyfileext}%
106 }%
107 {%
108 \LWR@traceinfo{about to newfloat #1\ \LWR@frowkeyplacement\ %
109 \LWR@frowkeyfileext\ \LWR@frowkeywithin}%
110 \newfloat{#1}{\LWR@frowkeyplacement}%
111 {\LWR@frowkeyfileext}[\LWR@frowkeywithin]%
112 \LWR@traceinfo{finished newfloat #1}%
113 }%
```

Rename the float if a name was given:

```
114 \ifthenelse{\equal{\LWR@frowkeyname}{} }%
115 {}%
116 {\floatname{#1}{\LWR@frowkeyname}}%
117 }
```

Not used:

```
118 \newcommand{\buildFBBBOX}[2]{}
119 \newcommand*{\CenterFloatBoxes}{}
120 \newcommand*{\TopFloatBoxes}{}
121 \newcommand*{\BottomFloatBoxes}{}
122 \newcommand*{\PlainFloatBoxes}{}
123
124 \newcommand{\capsubrowsettings}{}
125
126 \NewDocumentCommand{\RawFloats}{o o}{}%
```

`\RawCaption`     $\langle text \rangle$   
 To be used inside a minipage or parbox.  
 127 `\newcommand{\RawCaption}[1]{#1}`

`\floatfoot`     $\langle text \rangle$   
 Places additional text inside a float, inside a CSS `<div>` of class `floatfoot`.  
 128 `\NewDocumentCommand{\floatfoot}{s +m}{%`  
 129 `\begin{BlockClass}{floatfoot}`  
 130 `#2`  
 131 `\end{BlockClass}`  
 132 `}`

Used to compute `\linewidth`.

133 `\newbool{LWR@insubfloatrow}`  
 134 `\boolfalse{LWR@insubfloatrow}`

Env `subfloatrow`     $[\langle num\_floats \rangle]$   
 135 `\newenvironment*{subfloatrow}[1][2]`  
 136 `{`

The row of floats is placed into a `<div>` of class `floatrow`:

137 `\LWR@forcenewpage`  
 138 `\BlockClass{floatrow}`

While inside the `floatrow`, `LWR@insubfloatrow` is set true, which tells `\floatbox` to use `\subfigure` or `\subtable`.

139 `\begingroup`  
 140 `\booltrue{LWR@insubfloatrow}`  
 141 `}`  
 142 `{`  
 143 `\endgroup`  
 144 `\endBlockClass`  
 145 `\boolfalse{LWR@insubfloatrow}`  
 146 `}`

File 135 **lwarp-fltrace.sty**

§ 234    Package **fltrace**

Pkg `fltrace`    `fltrace` is ignored.

**for HTML output:**    1 `\LWR@ProvidesPackageDrop{fltrace}[2018/01/08]`  
 2 `\def\tracefloats{}`  
 3 `\def\tracefloatsoff{}`  
 4 `\def\tracefloatvals{}`

File 136 **lwarp-flushend.sty**

§ 235 Package **flushend**

*(Emulates or patches code by SIGITAS TOLUŠIS.)*

Pkg flushend Emulated.

**for HTML output:** Discard all options for lwarp-flushend:

```
1 \LWR@ProvidesPackageDrop{flushend}[2017/03/27]

2 \newcommand*{\flushend}{}
3 \newcommand*{\raggedend}{}
4 \newcommand*{\flushcolsend}{}
5 \newcommand*{\raggedcolsend}{}
6 \newcommand*{\atColsBreak}[1]{}
7 \newcommand*{\atColsEnd}[1]{}
8 \newcommand*{\showcolsendrule}{}

```

File 137 **lwarp-fnbreak.sty**

§ 236 Package **fnbreak**

Pkg fnbreak fnbreak is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fnbreak}[2012/01/01]

```
2 \newcommand*{\fnbreakverbose}{}
3 \newcommand*{\fnbreaknonverbose}{}
4 \newcommand*{\fnbreaklabel}{}
5 \newcommand*{\fnbreaknolabel}{}

```

File 138 **lwarp-fncychap.sty**

§ 237 Package **fncychap**

*(Emulates or patches code by ULF A. LINDGREN.)*

Pkg fncychap fncychap is emulated.

**for HTML output:** Discard all options for lwarp-fncychap:

```
1 \LWR@ProvidesPackageDrop{fncychap}[2007/07/30]

```

---

```

2 \def\mghrulefill#1{}
3 \def\ChNameLowerCase{}
4 \def\ChNameUpperCase{}
5 \def\ChNameAsIs{}
6 \def\ChTitleLowerCase{}
7 \def\ChTitleUpperCase{}
8 \def\ChTitleAsIs{}
9 \newcommand{\ChRuleWidth}[1]{}
10 \newcommand{\ChNameVar}[1]{}
11 \newcommand{\ChNumVar}[1]{}
12 \newcommand{\ChTitleVar}[1]{}
13 \newcommand{\TheAlphaChapter}{}
14 \newcommand{\DOCH}{}
15 \newcommand{\DOTI}[1]{}
16 \newcommand{\DOTIS}[1]{}
17 \newlength{\mylen}
18 \newlength{\myhi}
19 \newlength{\px}
20 \newlength{\py}
21 \newlength{\pyy}
22 \newlength{\pxx}
23 \newlength{\RW}
24 \newcommand{\FmN}[1]{#1}
25 \newcommand{\FmTi}[1]{#1}

```

---

File 139 **lwarp-fnlineno.sty**

§ 238 Package **fnlineno**

Pkg fnlineno fnlineno is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fnlineno}[2011/01/07]

---

File 140 **lwarp-fnpara.sty**

§ 239 Package **fnpara**

Pkg fnpara fnpara is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fnpara}

---

File 141 **lwarp-fnpos.sty**

§ 240 Package **fnpos**

*(Emulates or patches code by HIROSHI NAKASHIMA.)*

Pkg fnpos fnpos is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{fnpos}[1999/07/14]

2 \newcommand*{\makeFNbottom}{}
3 \newcommand*{\makeFNmid}{}
4 \newcommand*{\makeFNbelow}{}
5 \newcommand*{\makeFNabove}{}

```

---


File 142 **lwarp-fontawesome.sty**

§ 241 Package **fontawesome**

*(Emulates or patches code by XAVIER DANAUX.)*

Pkg fontawesome fontawesome is patched for use by lwarp.

Hashed inline images are used, as there may not be Unicode support for all icons.

 **poppler syntax warning** If using pdfL<sup>A</sup>T<sub>E</sub>X, *poppler* may issue a syntax warning regarding parsing a ligature component. X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X or LuaL<sup>A</sup>T<sub>E</sub>X may be used to avoid this warning.

In the following, the general strategy is to intercept `\symbol` and embed it inside a `lateximage`. These changes are done inside a local group.

For pdfL<sup>A</sup>T<sub>E</sub>X, the `alt` tag includes the icon (symbol) number. For X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X and LuaL<sup>A</sup>T<sub>E</sub>X, the `alt` tag is generic.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{fontawesome}[2016/05/15]

2 \LetLtxMacro\LWR@orig@symbol\symbol
3
4 \ifxetexorluatex
5
6 \newfontfamily{\LWR@orig@FA}{FontAwesome}
7
8 \newcommand*{\LWR@fontawesome@xelatex@symbol}[1]{%
9 \begin{lateximage}*[(icon)][fontawesomexetex#1]%
10 \begingroup%
11 \LWR@orig@FA%
12 \LWR@orig@symbol{#1}%
13 \endgroup%
14 \end{lateximage}%
15 }
16
17 \RenewDocumentCommand{\FA}{}{}%
18 \LetLtxMacro\symbol\LWR@fontawesome@xelatex@symbol%
19 }
20
21 \else
22
23 \newcommand*{\LWR@fontawesome@symbolone}[1]{%

```

```

24 \begin{lateximage}*[(icon #1)][fontawesome#1]%
25 \begingroup%
26 \fontencoding{U}\fontfamily{fontawesome}\selectfont%
27 \LWR@orig@symbol{#1}%
28 \endgroup%
29 \end{lateximage}%
30 }
31
32 \newcommand*\LWR@fontawesome@symboltwo[1]{%
33 \begin{lateximage}*[(icon #1)][fontawesometwo#1]%
34 \begingroup%
35 \fontencoding{U}\fontfamily{fontawesometwo}\selectfont%
36 \LWR@orig@symbol{#1}%
37 \endgroup%
38 \end{lateximage}%
39 }
40
41 \newcommand*\LWR@fontawesome@symbolthree[1]{%
42 \begin{lateximage}*[(icon #1)][fontawesomethree#1]%
43 \begingroup%
44 \fontencoding{U}\fontfamily{fontawesomethree}\selectfont%
45 \LWR@orig@symbol{#1}%
46 \endgroup%
47 \end{lateximage}%
48 }
49
50 \renewrobustcmd\FAone{%
51 \LetLtxMacro\symbol\LWR@fontawesome@symbolone%
52 }
53
54 \renewrobustcmd\FAtwo{%
55 \LetLtxMacro\symbol\LWR@fontawesome@symboltwo%
56 }
57
58 \renewrobustcmd\FAthree{%
59 \LetLtxMacro\symbol\LWR@fontawesome@symbolthree%
60 }
61 \fi

```

---

File 143 **lwarp-fontawesome5.sty**

§ 242 Package **fontawesome5**

*(Emulates or patches code by MARCEL KRÜGER.)*

Pkg fontawesome5 fontawesome5 is patched for use by lwarp.

Hashed inline images are used, as there may not be Unicode support for all icons.

The alt tag has the name of the icon.

**for HTML output:** 1 \LWR@ProvidesPackagePass{fontawesome5}[2018/07/27]

```

2 \ExplSyntaxOn
3 \cs_set:Nn\fontawesome_use_icon:nn{
4 \cs_if_exist:cTF{c__fontawesome_slot_#2_tl}{
5 \begin{lateximage}*[(#2)][#1]
6 \exp_last_unbraced:Nv
7 __fontawesome_icon_at:nnnn
8 {c__fontawesome_slot_#2_tl}
9 {#1}{#2}
10 \end{lateximage}
11 }{
12 \msg_error:nxxx{fontawesome5}{icon-not-found}{#2}{#1}
13 }
14 }
15 \ExplSyntaxOff

```

---

File 144 **lwarp-fontenc.sty**

§ 243 Package **fontenc**

Pkg fontenc If using pdfL<sup>A</sup>T<sub>E</sub>X, lwarp used to require fontenc be loaded before lwarp, but now lwarp itself loads \fontenc with T1 encoding, which lwarp requires. fontenc is now allowed to be loaded with another encoding after lwarp.

lwarp-fontenc is no longer necessary, but is still provided to overwrite older versions.

**for HTML output:** 1 \LWR@ProvidesPackagePass{fontenc}[2017/04/05]

---

File 145 **lwarp-footmisc.sty**

§ 244 Package **footmisc**

*(Emulates or patches code by ROBIN FAIRBAIRNS.)*

Pkg footmisc footmisc is emulated.

lwarp incidentally happens to emulate the stable option.

1 \LWR@ProvidesPackageDrop{footmisc}[2011/06/06]

Some nullified commands:

```

2 \newcommand{\footnotelayout}{}
3 \newcommand{\setfnsymbol}[1]{}
4 \NewDocumentCommand{\DefineFNsymbols}{s m o m}{}
5
6 \newdimen\footnotemargin
7 \footnotemargin1.8em\relax
8
9 \newcommand*\hangfootparskip{0.5\baselineskip}

```

```

10 \newcommand*\hangfootparindent{0em}%
11
12 \let\pagefootnoterule\footnoterule
13 \let\mpfootnoterule\footnoterule
14 \def\splitfootnoterule{\kern-3\p@ \hrule \kern2.6\p@}
15
16 \providecommand*\multiplefootnotemarker}{3sp}
17 \providecommand*\multfootsep}{,}

```

Using cleveref:

```
18 \providecommand*\footref}[1]{\labelcref{#1}}
```

The following work as-is:

```

19 \newcommand\mpfootnotemark{%
20 \ifnextchar[%
21 \xmpfootnotemark%
22 {%
23 \stepcounter\mpfn%
24 \protected@xdef\thefnmark{\thempfn}%
25 \@footnotemark%
26 }%
27 }
28 \def\xmpfootnotemark[#1]{%
29 \begingroup%
30 \csname c@\mpfn\endcsname #1\relax%
31 \unrestored@protected@xdef\thefnmark{\thempfn}%
32 \endgroup%
33 \@footnotemark%
34 }

```

---

File 146 **lwarp-footnote.sty**

§ 245 Package **footnote**

*(Emulates or patches code by MARK WOODING.)*

Pkg footnote footnote is used with minor patches.

**for HTML output:** 1 \LWR@ProvidesPackagePass{footnote}[1997/01/28]

Removed print-version formatting:

```

2 \def\fn@startnote{%
3 % \@parboxrestore%
4 \protected@edef\currentlabel{\csname p@\mpfn\endcsname\thefnmark}%
5 % \color@begingroup% *** conflicts with lwarp
6 }
7
8 % \let\fn@endnote\color@endgroup% *** conflicts with lwarp
9 \def\fn@endnote{%

```



```

10 \LWR@htmltagc{/\LWR@tagregularparagraph}%
11 \LWR@originewline%
12 }

```

Removed print-version formatting:

```

13 \def\fn@startfntext{%
14 \setbox\z@\vbox\bgroup%
15 \fn@startnote%
16 \fn@prefntext%
17 \ignorespaces%
18 }

```

Removed print-version formatting, added closing paragraph tag:

```

19 \def\fn@endfntext{%
20 \LWR@htmltagc{/\LWR@tagregularparagraph}%
21 \LWR@originewline%
22 \fn@postfntext%
23 \egroup%
24 \beginingroup%
25 \let\@makefntext\@empty%
26 \let\@finalstrut\@gobble%
27 \LetLtxMacro\rule\@gobbletwo% *8* also the optional argument?
28 \@footnotetext{\unvbox\z@}%
29 \endgroup%
30 }

```

These have been redefined, so re-\let them again:

```

31 \let\endfootnote\fn@endfntext
32 \let\endfootnotetext\endfootnote

```

---

File 147 **lwarp-footnotebackref.sty**

§ 246 Package **footnotebackref**

Pkg footnotebackref footnotebackref is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{footnotebackref}[2012/07/01]

---

File 148 **lwarp-footnotehyper.sty**

§ 247 Package **footnotehyper**

Pkg footnotehyper footnotehyper is a hyperref-safe version of footnote. For lwarp, footnotehyper is emulated.

**for HTML output:**

Discard all options for lwarp-footnotehyper:

```
1 \RequirePackage{footnote}
2 \LWR@ProvidesPackageDrop{footnotehyper}[2018/01/23]
```

---

File 149 **lwarp-footnoterange.sty**

§ 248 Package **footnoterange**

*(Emulates or patches code by H.-MARTIN MÜNCH.)*

Pkg footnoterange footnoterange is patched for use by lwarp.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{footnoterange}[2012/02/17]

2 \csletcs{footnoterange}{footnoterange*}
3 \csletcs{endfootnoterange}{endfootnoterange*}
```

---

File 150 **lwarp-footnpag.sty**

§ 249 Package **footnpag**

Pkg footnpag footnpag is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{footnpag}
```

---

File 151 **lwarp-foreign.sty**

§ 250 Package **foreign**

*(Emulates or patches code by PHILIP G. RATCLIFFE.)*

Pkg foreign foreign is patched for use by lwarp.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{foreign}[2012/09/25]

2 \renewcommand\foreignabbrfont{\emph}
```

---

File 152 **lwarp-forest.sty**

§ 251 Package **forest**

*(Emulates or patches code by SAŠO ŽIVANOVIĆ.)*

Pkg forest forest is patched for use by lwarp.

⚠ **\Forest\*** The starred version of the macro `\Forest*` is not supported. `lwarp` encases each `lateximage` in an environment, so the global results of the starred `\Forest*` are lost.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{forest}[2017/07/14]

2 \BeforeBeginEnvironment{forest}{\begin{lateximage}[forest]}
3
4 \AfterEndEnvironment{forest}{\end{lateximage}}
5
6 \RenewDocumentCommand{\Forest*}{s D(){} m}{%
7 \forest@config{#2}%
8 \IfBooleanTF{#1}{%
9 \PackageError{lwarp-forest}%
10 {Starred \Forest is not supported}%
11 {Lwarp uses an environment for images, but \Forest* cannot work in an environment.}%
12 \let\forest@next\forest@env%
13 }{\let\forest@next\forest@group@env}%
14 \begin{lateximage}[forest]% lwarp
15 \forest@next{#3}%
16 \end{lateximage}% lwarp
17 }
```

---

File 153 **lwarp-framed.sty**

§ 252 Package **framed**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg framed framed is supported and patched by lwarp.

**for HTML output:** Accept all options for `lwarp-framed`:

```

1 \LWR@ProvidesPackagePass{framed}[2011/10/22]
2 \RequirePackage{xcolor}% for \convertcolorspec

3
4 \renewenvironment{framed}{%
5 \LWR@forcenewpage
6 \BlockClass{framed}%
7 }
8 {\endBlockClass}
9
10 \renewenvironment{oframed}{%
11 \LWR@forcenewpage
12 \BlockClass{framed}%
13 }
14 {\endBlockClass}
15
16
17 \renewenvironment{shaded}{%
18 \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
```

```

19 \LWR@forcenewpage
20 \BlockClass[background: \LWR@origpound\LWR@tempcolor]{shaded}%
21 }
22 {\endBlockClass}
23
24 \renewenvironment{shaded*}{%
25 \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
26 \LWR@forcenewpage
27 \BlockClass[background: \LWR@origpound\LWR@tempcolor]{shaded}%
28 }
29 {\endBlockClass}
30
31
32 \renewenvironment{leftbar}{%
33 \LWR@forcenewpage
34 \BlockClass{framedleftbar}
35 \def\FrameCommand{%
36 \MakeFramed {}
37 }%
38 {\endMakeFramed\endBlockClass}
39
40
41 \renewenvironment{snugshade}{%
42 \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
43 \LWR@forcenewpage
44 \BlockClass[background: \LWR@origpound\LWR@tempcolor]{snugframed}%
45 }
46 {\endBlockClass}
47
48 \renewenvironment{snugshade*}{%
49 \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
50 \LWR@forcenewpage
51 \BlockClass[background: \LWR@origpound\LWR@tempcolor]{snugframed}%
52 }
53 {\endBlockClass}
54
55 \let\oframed\framed
56 \let\endoframed\endframed
57
58
59 \RenewEnviron{titled-frame}[1]{%
60 \CustomFBox{#1}{0pt}{0pt}{0pt}{0pt}{\BODY}
61 }

\CustomFBox {<toptitle>} {<bottitle>} {<thicknesstop>} {<bottom>} {<left>} {<right>}
{<text contents>}

62 \renewcommand{\CustomFBox}[7]{%
63 \convertcolorspec{named}{TFFrameColor}{HTML}\LWR@tempcolor%
64 \LWR@forcenewpage
65 \begin{BlockClass}[border: 3px solid \LWR@origpound\LWR@tempcolor]{framed}%
66 \ifthenelse{\isempty{#1}}{% not empty
67 \begin{BlockClass}[background: \LWR@origpound\LWR@tempcolor]{framedtitle}%
68 \textcolor{TFTitleColor}{\textbf{#1}}%
69 \end{BlockClass}

```

```

70 }% not empty
71
72 #7
73
74 \ifthenelse{\isempty{#2}}{\}% not empty
75 \convertcolorspec{named}{TFFrameColor}{HTML}\LWR@tempcolor%
76 \begin{BlockClass}[background: \LWR@origpound\LWR@tempcolor]{framedtitle}%
77 \textcolor{TFTitleColor}{\textbf{#2}}%
78 \end{BlockClass}
79 }% not empty
80 \end{BlockClass}
81 }

\TitleBarFrame [<marker>] {<title>} {<contents>}

82 \renewcommand\TitleBarFrame[3][{}{
83 \CustomFBox
84 {#2}{}%
85 \fboxrule\fboxrule\fboxrule\fboxrule
86 {#3}%
87 }

88 \renewcommand{\TF@Title}[1]{#1}

MakeFramed {<settings>}

89 \let\MakeFramed\relax
90 \let\endMakeFramed\relax
91
92 \NewEnviron{MakeFramed}[1]{%
93 \FrameCommand{\begin{minipage}{\linewidth}\BODY\end{minipage}}%
94 }

\fb@put@frame {<frame cmd no split>} {<frame cmd split>}

95 \renewcommand*\fb@put@frame[2]{%
96 \relax%
97 \@tempboxa%
98 }

```

---

File 154 **lwarp-ftcap.sty**

§ 253 Package **ftcap**

Pkg ftcap ftcap is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{ftcap}

---

File 155 **lwarp-ftnright.sty**

§ 254 Package **ftnright**

Pkg ftnright ftnright is ignored.

**for HTML output:** Discard all options for lwarp-ftnright:

```
1 \LWR@ProvidesPackageDrop{ftnright}[2014/10/28]
```

---

File 156 **lwarp-fullminipage.sty**

§ 255 Package **fullminipage**

Pkg fullminipage fullminipage is nullified.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fullminipage}[2014/07/06]

```
2 \newenvironment{fullminipage}[1][{}]{}
```

---

File 157 **lwarp-fullpage.sty**

§ 256 Package **fullpage**

Pkg fullpage fullpage is ignored.

**for HTML output:** Discard all options for lwarp-fullpage:

```
1 \LWR@ProvidesPackageDrop{fullpage}[1994/06/01]
```

---

File 158 **lwarp-fullwidth.sty**

§ 257 Package **fullwidth**

*(Emulates or patches code by MARCO DANIEL.)*

Pkg fullwidth fullwidth is emulated.

A minipage is used, of no HTML width.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fullwidth}[2011/11/18]

---

```

2 \newenvironment*{fullwidth}[1][]{%
3 \minipagefullwidth%
4 \minipage{\linewidth}%
5 }
6 {%
7 \endminipage%
8 }

```

---

File 159 **lwarp-fwlw.sty**

§ 258 Package **fwlw**

Pkg fwlw fwlw is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fwlw}

```

2 \newbox\FirstWordBox \global\setbox\FirstWordBox\hbox{}
3 \newbox\NextWordBox \global\setbox\NextWordBox\hbox{}
4 \newbox\LastWordBox \global\setbox\LastWordBox\hbox{}
5 \def\ps@fwlhead{}
6 \def\ps@NextWordFoot{}

```

---

File 160 **lwarp-gentombow.sty**

§ 259 Package **gentombow**

Pkg gentombow gentombow is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{gentombow}[2018/05/17]

```

2 \newcommand{\settombowbanner}[1]{}
3 \newcommand{\settombowbannerfont}[1]{}
4 \newcommand{\settombowwidth}[1]{}
5 \newcommand{\settombowbleed}[1]{}
6 \newcommand{\settombowcolor}[1]{}

```

---

File 161 **lwarp-geometry.sty**

§ 260 Package **geometry**

*(Emulates or patches code by HIDEO UMEKI.)*

Pkg geometry geometry is preloaded by lwarp, but must be nullified as seen by the user's source code.

**for HTML output:**

Discard all options for lwarp-geometry:

```
1 \LWR@ProvidesPackageDrop{geometry}[2018/04/16]

2 \renewcommand*\geometry[1]{}
3 \renewcommand*\newgeometry[1]{}
4 \renewcommand*\restoregeometry{}
5 \renewcommand*\savegeometry[1]{}
6 \renewcommand*\loadgeometry[1]{}

```

File 162 **lwarp-gloss.sty**

§ 261 Package **gloss**

(Emulates or patches code by JOSE LUIS DÍAZ, JAVIER BEZOS.)

Pkg gloss **gloss** is patched for use by lwarp.

To process the HTML glossary:

```
bibtex <projectname>_html.gls
```

**for HTML output:** 1 \LWR@ProvidesPackagePass{gloss}[2002/07/26]

```
2 \xpatchcmd{\gls@gloss@iii}
3 {\thepage}
4 {\theLWR@previousautopagelabel}
5 {}
6 {\LWR@patcherror{gloss}{\gls@gloss@iii}}
7
8 \def\gls@page@i#1#2{%
9 \endgroup
10 \global\@namedef{glsp@#1}{\nameref{autopage-#2}}

```

File 163 **lwarp-glossaries.sty**


§ 262 Package **glossaries**

(Emulates or patches code by NICOLA L.C. TALBOT.)

Pkg glossaries *lwarpmk* has the commands `lwarpmk printglossary` and `lwarpmk htmlglossary`, which process the glossaries created by the `glossaries` package using that package's `makeglossaries` program.

Opt GlossaryCmd  
 Default: `makeglossaries`  
 Opt [lwarpmk] `printglossary`  
 Opt [lwarpmk] `htmlglossary`

The shell command to execute is set by the `lwarp` option `GlossaryCmd`, which defaults to `makeglossaries`. The print or HTML glossary filename is appended to this command.

 **makeglossaries not found** In some situations it may be required to modify the default command, such as to add



the `perl` command in front:

```
\usepackage[
 GlossaryCmd={perl makeglossaries},
] {lwarp}
```

*xindy* language To set the language to use for processing glossaries with *xindy*:

```
\usepackage[
 GlossaryCmd={makeglossaries -L english},
] {lwarp}
```

Other options for *makeglossaries* may be set as well.

placement and toc options The glossaries may be placed in a numbered or unnumbered section, given a TOC entry, and placed inline or on their own HTML page:

**Numbered section, on its own HTML page:**

```
\usepackage[xindy,toc,numberedsection=noLabel]{glossaries}
...
\printglossaries
```

**Unnumbered section, inline with the current HTML page:**

```
\usepackage[xindy,toc]{glossaries}
...
\printglossaries
```

**Unnumbered section, on its own HTML page:**

```
\usepackage[xindy,toc]{glossaries}
...
\ForceHTMLPage
\printglossaries
```

⚠ **glossary style** The default `style=item` option for glossaries conflicts with `lwarp`, so the style is forced to `index` instead.

⚠ **number list** The page number list in the printed form would become `\namerefs` in HTML, which could become a very long string if many items are referenced. For now, the number list is simply turned off.

print/HTML versions The print and HTML versions of the glossary differ in their internal page numbers. Separate commands for generating print and HTML glossaries are used, even though the page number is currently ignored.

**for HTML output:**

```
1 \PassOptionsToPackage{xindy}{glossaries}
2
3 \LWR@ProvidesPackagePass{glossaries}[2018/07/23]
4
5 \setupglossaries{nonumberlist}
6 \setglossarystyle{index}
```

Patched to fix TOC pointing to the previous page:

```
7 \renewcommand*{\@ep@glossarysection}[2]{%
```

```

8 \glsclearpage
9 \phantomsection
10 \ifdefempty\@glossarysecstar
11 {%
12 \csname\@glossarysec\endcsname{#2}%
13 }%
14 {%

```

In the original, the toc entry was made before the section, thus linking to the phantomsection in the printed version, but for HTML, this caused the link to point to the page before the glossaries, which could be a different HTML file. Here, the toc entry is made after the section is created:

```

15 \csname\@glossarysec\endcsname*{#2}%
16 \@gls@toc{#1}{\@glossarysec}% Moved after the previous line.
17 }%
18 \@glossaryseclabel
19 }

```

lwarp's sectioning commands cannot handle robust macros when splitting HTML into named filenames. glossaries uses \translate in sectioning names, and \translate is robust and cannot be expanded. The following pre-expands the translations at this moment, making use of \translatelet.

```

20 \newcommand*\LWR@comp@glossaryname{\translate{Glossary}}
21
22 \ifdefstrequal{\glossaryname}{\LWR@comp@glossaryname}{
23 \translatelet\LWR@translatetemp{Glossary}
24 \edef\glossaryname{\LWR@translatetemp}
25 }{}
26
27 \newcommand*\LWR@comp@acronymname{\translate{Acronym}}
28
29 \ifdefstrequal{\acronymname}{\LWR@comp@acronymname}{
30 \translatelet\LWR@translatetemp{Acronym}
31 \edef\acronymname{\LWR@translatetemp}
32 }{}
33
34 \newcommand*\LWR@comp@glsymbolsgroupname{\translate{Symbols (glossaries)}}
35
36 \ifdefstrequal{\glsymbolsgroupname}{\LWR@comp@glsymbolsgroupname}{
37 \translatelet\LWR@translatetemp{Symbols (glossaries)}
38 \edef\glsymbolsgroupname{\LWR@translatetemp}
39 }{}
40
41 \newcommand*\LWR@comp@glsnumbersgroupname{\translate{Numbers (glossaries)}}
42
43 \ifdefstrequal{\glsnumbersgroupname}{\LWR@comp@glsnumbersgroupname}{
44 \translatelet\LWR@translatetemp{Numbers (glossaries)}
45 \edef\glsnumbersgroupname{\LWR@translatetemp}
46 }{}

```

---

File 164 **lwarp-gmeometric.sty**

§ 263 Package **gmeometric**

Pkg gmeometric gmeometric is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{gmeometric}[2008/11/22]

---

File 165 **lwarp-graphics.sty**

§ 264 Package **graphics**

*(Emulates or patches code by D. P. CARLISLE.)*

Pkg graphics graphics is emulated.

**for HTML output:** 1 \LWR@ProvidesPackagePass{graphics}[2017/06/25]

§ 264.1 **Graphics extensions**

`\DeclareGraphicsExtensions`  $\{\langle list \rangle\}$

`\AtBeginDocument` allow SVG files instead of PDF:

```
2 \AtBeginDocument{
3 \DeclareGraphicsExtensions{.svg,.SVG,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}
4 \DeclareGraphicsRule{.svg}{svg}{.svg}{}
5 \DeclareGraphicsRule{.SVG}{svg}{.SVG}{}
6 }
```

Inside a `lateximage`, allow PDF instead of SVG:

```
7 \ifpdf
8 \appto\LWR@restoreorigformatting{%
9 \DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
10 }
11 \else% \ifpdf
12 \ifXeTeX
13 \appto\LWR@restoreorigformatting{%
14 \DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
15 }
16 \else
17 \appto\LWR@restoreorigformatting{%
18 \DeclareGraphicsExtensions{.eps,.EPS,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
19 }
20 \fi
21 \fi
```

## § 264.2 Length conversions and graphics options



whitespace

A scaled image in L<sup>A</sup>T<sub>E</sub>X by default takes only as much space on the page as it requires, but HTML browsers use as much space as the original unscaled image would have taken, with the scaled image over- or under-flowing the area.

Used to store the user's selected dimensions and HTML class.

The class defaults to “inlineimage” unless changed by a `class=xyx` option.

```

22 \newlength{\LWR@igwidth}
23 \newlength{\LWR@igheight}
24 \newcommand*\LWR@igwidthstyle{}
25 \newcommand*\LWR@igheightstyle{}
26 \newcommand*\LWR@igorigin{}
27 \newcommand*\LWR@igangle{}
28 \newcommand*\LWR@igxscale{1}
29 \newcommand*\LWR@igyyscale{1}
30 \newcommand*\LWR@igclass{inlineimage}

31 \newcommand*\LWR@igalt{(image)}

```

Set the actions of each of the key/value combinations for `\includegraphics`. Many are ignored.

If an optional width was given, set an HTML style:

```

32 \define@key{igraph}{width}{%
33 \setlength{\LWR@igwidth}{#1}%
34 \ifthenelse{\lengthtest{\LWR@igwidth > 0pt}}%
35 {%

```

Default to use the converted fixed length given:

```

36 \renewcommand*\LWR@igwidthstyle{width:\LWR@printlength{\LWR@igwidth}}%

```

If ex or em dimensions were given, use those instead:

```

37 \IfEndWith{#1}{ex}%
38 {\renewcommand*\LWR@igwidthstyle{width:#1}}% yes ex
39 {}% not ex
40 \IfEndWith{#1}{em}%
41 {\renewcommand*\LWR@igwidthstyle{width:#1}}% yes em
42 {}% not em
43 \IfEndWith{#1}{\}%
44 {\renewcommand*\LWR@igwidthstyle{width:#1}}% yes percent
45 {}% not percent
46 \IfEndWith{#1}{px}%
47 {\renewcommand*\LWR@igwidthstyle{width:#1}}% yes px
48 {}% not px
49 }{}% end of length > 0pt
50 }

```

If an optional height was given, set an HTML style:

```
51 \define@key{igraph}{height}{%
52 \setlength{\LWR@igheight}{#1}%
53 \ifthenelse{\lengthtest{\LWR@igheight > 0pt}}%
54 {%
```

Default to use the converted fixed length given:

```
55 \renewcommand*\LWR@igheightstyle{%
56 height:\LWR@printlength{\LWR@igheight} % extra space
57 }%
```

If ex or em dimensions were given, use those instead:

```
58 \IfEndWith{#1}{ex}%
59 {\renewcommand*\LWR@igheightstyle}{height:#1}}% yes ex
60 {}% not ex
61 \IfEndWith{#1}{em}%
62 {\renewcommand*\LWR@igheightstyle}{height:#1}}% yes em
63 {}% not em
64 \IfEndWith{#1}{\}%
65 {\renewcommand*\LWR@igheightstyle}{height:#1}}% yes percent
66 {}% not percent
67 \IfEndWith{#1}{px}%
68 {\renewcommand*\LWR@igheightstyle}{height:#1}}% yes px
69 {}% not px
70 }{}% end of length > 0pt
71 }
```

Handle origin key:

```
72 \define@key{igraph}{origin}[c]{%
73 \renewcommand*\LWR@igorigin}{#1}%
74 }
```

Handle angle key:

```
75 \define@key{igraph}{angle}{\renewcommand*\LWR@igangle}{#1}}
```

Handle class key:

```
76 \define@key{igraph}{class}{\renewcommand*\LWR@igclass}{#1}}
```

Handle alt key:

```
77 \define@key{igraph}{alt}{\renewcommand*\LWR@igalt}{#1}}
```

It appears that `graphicx` does not have separate keys for `xscale` and `yscale`. `scale` adjusts both at the same time.

```
78 \define@key{igraph}{scale}{%
79 \ifthenelse{equal{#1}{1}}{}{}% must expand #1
80 \PackageWarning{lwarp}{%
```

```

81 It is recommended to use\MessageBreak
82 [width=xx\protect\linewidth]\MessageBreak
83 instead of [scale=yy],%
84 }%
85 }%
86 \renewcommand*\LWR@igxscale{#1}%
87 \renewcommand*\LWR@igyscale{#1}%
88 }

```

Numerous ignored keys:

```

89 \define@key{igraph}{bb}{}
90 \define@key{igraph}{bblx}{}
91 \define@key{igraph}{bblly}{}
92 \define@key{igraph}{bburx}{}
93 \define@key{igraph}{bbury}{}
94 \define@key{igraph}{natwidth}{}
95 \define@key{igraph}{natheight}{}
96 \define@key{igraph}{hiresbb}[true]{}
97 \define@key{igraph}{viewport}{}
98 \define@key{igraph}{trim}{}
99 \define@key{igraph}{totalheight}{}
100 \define@key{igraph}{keepaspectratio}[true]{}
101 \define@key{igraph}{clip}[true]{}
102 \define@key{igraph}{draft}[true]{}
103 \define@key{igraph}{type}{}
104 \define@key{igraph}{ext}{}
105 \define@key{igraph}{read}{}
106 \define@key{igraph}{command}{}

```

New in v1.1a:

```

107 \define@key{igraph}{quite}{}
108 \define@key{igraph}{page}{}
109 \define@key{igraph}{pagebox}{}
110 \define@key{igraph}{interpolate}[true]{}

```

New in v1.1b:

```

111 \define@key{igraph}{decodearray}{}

```

### § 264.3 Printing HTML styles

`\LWR@rotstyle`  $\{\langle prefix \rangle\} \{\langle degrees \rangle\}$

Prints the rotate style with the given prefix.

`prefix` is `-ms-` or `-webkit-` or nothing, and is used to generate three versions of the `transform: rotate` style.

```

112 \newcommand*\LWR@rotstyle[2]{%
113 #1transform: rotate(-#2deg);
114 }

```

`\LWR@scalestyle`  $\{\langle prefix \rangle\} \{\langle xscale \rangle\} \{\langle yscale \rangle\}$

Prints the scale style with the given prefix.

`prefix` is `-ms-` or `-webkit-` or nothing, and is used to generate three versions of the `transform: scale` style.

```
115 \newcommand*\LWR@scalestyle[3]{%
116 #1transform:scale(#2,#3);
117 }
```

## § 264.4 `\includegraphics`

Bool `LWR@infloatrow` Used to compute `\linewidth`.

```
118 \newbool{LWR@infloatrow}
119 \boolfalse{LWR@infloatrow}
```

`\LWR@opacity` For HTML, used only for `\includegraphics`.

`\LWR@opacity` may be set by the transparent package.

```
120 \def\LWR@opacity{1}
```

`\LWR@imagesizebox` Used to determine the actual image size if needed.

```
121 \newsavebox{\LWR@imagesizebox}
```

`\LWR@HTML@Gin@setfile`  $\{\langle w \rangle\} \{\langle h \rangle\} \{\langle filename \rangle\}$  Sets the parsed filename for HTML output.

```
122 \newcommand*\LWR@HTML@Gin@setfile[3]{%
123 \xdef\LWR@parsedfilename{#3}%
124 }
```

Key [Gin] `class` css class for the image.

Define the new class key for the print-mode version of `\includegraphics`, which is enabled inside a `lateximage`.

```
125 \AtBeginDocument{
126 \define@key{Gin}{class}{}
127 \define@key{Gin}{alt}{}
128 }
```

`\LWR@replaceEPSSVG` Usually, references to EPS files become SVG files, but if the `epstopdf` package is being used, it automatically converts EPS to PDF, and the following must NOT be done.

```
129 \AtBeginDocument{
130 \ifpackageloaded{epstopdf}
131 {
132 \newcommand*\LWR@replaceEPSSVG{}
```

```

133 }{%
134 \newcommand*\LWR@replaceEPSSVG{%
135 \StrSubstitute{\LWR@tempone}{.eps}{.svg}[\LWR@tempone]%
136 \StrSubstitute{\LWR@tempone}{.EPS}{.SVG}[\LWR@tempone]%
137 }
138 }%
139 }

```

`\LWR@includegraphicsb` \* [*2: options*] [*3: options*] {*4: filename*}

`graphics` syntax is `\includegraphics` \* [*llx,lly*] [*urx,ury*] {*file*}

`graphicx` syntax is `\includegraphics` [*key values*] {*file*}

If #3 is empty, only one optional argument was given, thus `graphicx` syntax.

If using `\epsfig` or `\psfig` from the `epsfig` package, #4 will be `\LWR@epsfig@filename`, which will have been set by the `file` or `figure` keys. Therefore, #4 must not be used until after the keys have been processed.

```

140 \NewDocumentCommand{\LWR@includegraphicsb}{s o o m}
141 {%

```

Start the image tag on a new line, allow PDF output word wrap:

```

142 \LWR@origtilde \LWR@orignewline%

```

Temporarily compute `\linewidth`, `\textwidth`, `\textheight` arguments with a 6x9 inch size until the next `\endgroup`.

```

143 \begingroup%
144 \ifthenelse{\cnttest{\value{\LWR@minipagedepth}}{=}{0}}{%
145 {%
146 \ifbool{\LWR@infloatrow}%
147 {}
148 {% not in a minipage or a floatrow:
149 \setlength{\linewidth}{6in}%
150 \setlength{\textwidth}{6in}%
151 \setlength{\textheight}{9in}%
152 }%
153 }{%

```

For correct em sizing during the width and height conversions:

```

154 \large%

```

Reset some defaults, possibly will be changed below if options were given:

```

155 \setlength{\LWR@igwidth}{0pt}%
156 \setlength{\LWR@igheight}{0pt}%
157 \renewcommand*\LWR@igwidthstyle{}%
158 \renewcommand*\LWR@igheightstyle{}%
159 \renewcommand*\LWR@igorigin{}%

```



```

160 \renewcommand*\LWR@igangle}{}%
161 \renewcommand*\LWR@igxscale}{1}%
162 \renewcommand*\LWR@igyyscale}{1}%
163 \renewcommand*\LWR@igclass}{inlineimage}%

```

```

164 \renewcommand*\LWR@igalt}{(image)}%

```

If #3 is empty, only one optional argument was given, thus `graphicx` syntax:

```

165 \IfValueF{#3}{%
166 \IfValueTF{#2}%
167 {\setkeys{igraph}{#2}}%
168 {\setkeys{igraph}{}}%
169 }%

```

Fully expand and detokenize the filename, changing the file extension to `.svg` if necessary.

```

170 \begingroup%
171 \LetLtxMacro\Gin@setfile\LWR@HTML@Gin@setfile%
172 \edef\LWR@tempone{#4}%
173 \StrSubstitute{\LWR@tempone}{.pdf}{.svg}[\LWR@tempone]%
174 \StrSubstitute{\LWR@tempone}{.PDF}{.SVG}[\LWR@tempone]%
175 \LWR@replaceEPSSVG%
176 \xdef\LWR@parsedfilename{\LWR@tempone}%
177 \Gin@l@de@graphics{\detokenize\expandafter{\LWR@tempone}}%
178 \endgroup%
179 \filename@parse{\LWR@parsedfilename}%
180 \LWR@traceinfo{\LWR@parsedfilename is \LWR@parsedfilename}%
181 % \LWR@sanitize{\LWR@parsedfilename}%

```

If formatting for a word processor, find and set the actual image size, without rotation, using `PDF` instead of `svg` to find the original bounding box:

```

182 \ifbool{FormatWP}{%
183 \begingroup%
184 \LWR@restoreorigformatting%
185 \ifpdf%
186 \appto\LWR@restoreorigformatting{%
187 \DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
188 }%
189 \else% \ifpdf
190 \ifXeTeX%
191 \appto\LWR@restoreorigformatting{%
192 \DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
193 }%
194 \else%
195 \appto\LWR@restoreorigformatting{%
196 \DeclareGraphicsExtensions{.eps,.EPS,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
197 }%
198 \fi%
199 \fi% \ifpdf
200 \define@key{Gin}{angle}{}%
201 \IfBooleanTF{#1}%

```

```

202 {% starred
203 \IfValueTF{#3}%
204 {%
205 \global\savebox{\LWR@imagesizebox}{\LWR@originincludegraphics*[#2][#3]{#4}}%
206 }%
207 {%
208 \IfValueTF{#2}%
209 {%
210 \global\savebox{\LWR@imagesizebox}{\LWR@originincludegraphics*[#2]{#4}}%
211 }{%
212 \global\savebox{\LWR@imagesizebox}{\LWR@originincludegraphics*{#4}}%
213 }%
214 }%
215 }% starred
216 {% not starred
217 \IfValueTF{#3}%
218 {%
219 \global\savebox{\LWR@imagesizebox}{\LWR@originincludegraphics[#2][#3]{#4}}%
220 }%
221 {%
222 \IfValueTF{#2}%
223 {%
224 \global\savebox{\LWR@imagesizebox}{\LWR@originincludegraphics[#2]{#4}}%
225 }{%
226 \global\savebox{\LWR@imagesizebox}{\LWR@originincludegraphics{#4}}%
227 }%
228 }%
229 }% not starred
230 \endgroup%
231 \settowidth{\LWR@igwidth}{\usebox{\LWR@imagesizebox}}%
232 \global\renewcommand*{\LWR@igwidthstyle}{width:\LWR@printlength{\LWR@igwidth}}%
233 \settoheight{\LWR@igheight}{\usebox{\LWR@imagesizebox}}%
234 \global\renewcommand*{\LWR@igheightstyle}{height:\LWR@printlength{\LWR@igheight}}%
235 }{}% FormatWP

```

Create the HTML reference with the graphicspath, filename, extension, alt tag, style, and class.

The `\LWR@origtilde` adds space between tags in case this is being done inside a `\savebox` where `\newline` has no effect.

```

236 \LWR@traceinfo{\LWR@includegraphicsb: about to create href}%
237 \href{\LWR@parsedfilename}%
238 {% start of href
239 \LWR@traceinfo{\LWR@includegraphicsb: about to LWR@htmltag}%
240 \LWR@htmltag{% start of image tags
241 img\LWR@indentHTML%
242 src="%

243 \detokenize\expandafter{\LWR@parsedfilename}%

244 "\LWR@indentHTML%

```

Only include a style tag if a width, height, angle, or scale was given:

```

245 \ifthenelse{
246 \NOT\equal{\LWR@igwidthstyle}{ } \OR
247 \NOT\equal{\LWR@igheightstyle}{ } \OR
248 \NOT\equal{\LWR@igorigin}{ } \OR
249 \NOT\equal{\LWR@igangle}{ } \OR
250 \NOT\equal{\LWR@igxscale}{1} \OR
251 \NOT\equal{\LWR@igyscale}{1}
252 }%
253 {%
254 style="\LWR@indentHTML
255 \ifthenelse{\NOT\equal{\LWR@igwidthstyle}{ }}%
256 {\LWR@igwidthstyle;\LWR@indentHTML}{ }%
257 \ifthenelse{\NOT\equal{\LWR@igheightstyle}{ }}%
258 {\LWR@igheightstyle;\LWR@indentHTML}{ }%
259 \ifthenelse{\NOT\equal{\LWR@igorigin}{ }}%
260 {%
261 transform-origin: \LWR@originnames{\LWR@igorigin};\LWR@indentHTML%
262 }{ }%
263 \ifthenelse{\NOT\equal{\LWR@igangle}{ }}%
264 {%
265 \LWR@rotstyle{-ms-}{\LWR@igangle}\LWR@indentHTML
266 \LWR@rotstyle{-webkit-}{\LWR@igangle}\LWR@indentHTML
267 \LWR@rotstyle}{\LWR@igangle }\LWR@indentHTML
268 }{ }%
269 \ifthenelse{%
270 \NOT\equal{\LWR@igxscale}{1}\OR%
271 \NOT\equal{\LWR@igyscale}{1}%
272 }%
273 {%
274 \LWR@scalestyle{-ms-}{\LWR@igxscale}{\LWR@igyscale}\LWR@indentHTML
275 \LWR@scalestyle{-webkit-}{\LWR@igxscale}{\LWR@igyscale}\LWR@indentHTML
276 \LWR@scalestyle}{\LWR@igxscale}{\LWR@igyscale}\LWR@indentHTML
277 }{ }%
278 %
279 \ifthenelse{\NOT\equal{\LWR@opacity}{1}}%
280 {opacity:\LWR@opacity;\LWR@indentHTML}{ }%
281 %
282 "\LWR@indentHTML%
283 }{ }%

```

Set the class and alt tag:

```

284 class="\LWR@igclass"\LWR@indentHTML%
285 alt="\LWR@igalt" \LWR@originewline%
286 }% end of image tags
287 }% end of href

```

Return to original page size and font size:

```

288 \endgroup
289 \LWR@traceinfo{\LWR@includegraphicsb done}%
290 }

```

`\includegraphics` [*<key=val>*] {*<filename>*}

Handles width and height, converted to fixed width and heights.

The user should always use no file suffix in the document source.

```
291 \AtBeginDocument{
292
293 \LWR@traceinfo{Patching includegraphics.}
294
295 \LetLtxMacro\LWR@originincludegraphics\includegraphics
296
297 \renewcommand*\includegraphics}
298 {%
```

This graphic should trigger an HTML paragraph even if alone, so ensure that are doing paragraph handling:

```
299 \LWR@traceinfo{includegraphics}%
300 \LWR@ensuredoingapar%
301 \LWR@includegraphicsb%
302 }% includegraphics
303 }% AtBeginDocument
```

## § 264.5 Boxes

`\LWR@rotboxorigin` Holds the origin key letters.

```
304 \newcommand*\LWR@rotboxorigin{}
```

`\LWR@originname` {*<letter>*}

Given one L<sup>A</sup>T<sub>E</sub>X origin key value, translate into an HTML origin word:

```
305 \newcommand*\LWR@originname[1]{%
306 \ifthenelse{\equal{#1}{t}}{top}{}%
307 \ifthenelse{\equal{#1}{b}}{bottom}{}%
308 \ifthenelse{\equal{#1}{c}}{center}{}%
309 \ifthenelse{\equal{#1}{l}}{left}{}%
310 \ifthenelse{\equal{#1}{r}}{right}{}%
311 }
```

`\LWR@originnames` {*<letters>*}

Given one- or two-letter L<sup>A</sup>T<sub>E</sub>X origin key values, translate into HTML origin words:

```
312 \newcommand*\LWR@originnames[1]{%
313 \StrChar{#1}{1}[\LWR@strresult]%
314 \LWR@originname{\LWR@strresult}
315 \StrChar{#1}{2}[\LWR@strresult]%
316 \LWR@originname{\LWR@strresult}
317 }
```

Handle the origin key for `\rotatebox`:

```
318 \define@key{krotbox}{origin}{%
319 \renewcommand*{\LWR@rotboxorigin}{#1}%
320 }
```

These keys are ignored:

```
321 \define@key{krotbox}{x}{}
322 \define@key{krotbox}{y}{}
323 \define@key{krotbox}{units}{}

```

`\rotatebox` [*keyval list*] {*angle*} {*text*}

```
324 \AtBeginDocument{
```

The HTML version:

```
325 \NewDocumentCommand{\LWR@HTML@rotatebox}{O{} m +m}{%
```

Reset the origin to “none-given”:

```
326 \renewcommand*{\LWR@rotboxorigin}{}

```

Process the optional keys, which may set `\LWR@rotateboxorigin`:

```
327 \setkeys{krotbox}{#1}%

```

Select inline-block so that HTML will transform this span:

```
328 \LWR@htmltagc{%
329 span\LWR@indentHTML
330 style="\LWR@indentHTML
331 display: inline-block;\LWR@indentHTML

```

If an origin was given, translate and print the origin information:

```
332 \ifthenelse{\NOT\equal{\LWR@rotboxorigin}{} }%
333 {transform-origin: \LWR@originnames{\LWR@rotboxorigin};\LWR@indentHTML}%
334 {}%

```

Print the rotation information:

```
335 \LWR@rotstyle{-ms-}{#2}\LWR@indentHTML
336 \LWR@rotstyle{-webkit-}{#2}\LWR@indentHTML
337 \LWR@rotstyle{}{#2}"\LWR@originewline%
338 }\LWR@originewline%

```

Print the text to be rotated:

```
339 \begin{LWR@nestspan}%
340 #3%

```

Close the span:

```
341 \LWR@htmltagc{/span}%
342 \end{LWR@nestspan}%
343 }
```

The high-level interface:

```
344 \LWR@formatted{rotatebox}
345
346 }% AtBeginDocument
```

`\scalebox`  $\{\langle h\text{-scale}\rangle\} [\langle v\text{-scale}\rangle] \{\langle text\rangle\}$

```
347 \AtBeginDocument{
```

The HTML version:

```
348 \NewDocumentCommand{\LWR@HTML@scalebox}{m o m}{%
```

Select inline-block so that HTML will transform this span:

```
349 \LWR@htmltagc{%
350 span\LWR@indentHTML
351 style="\LWR@indentHTML
352 display: inline-block;\LWR@indentHTML
```

Print the scaling information:

```
353 \LWR@scalestyle{-ms-}{#1}{\IfNoValueTF{#2}{#1}{#2}}\LWR@indentHTML
354 \LWR@scalestyle{-webkit-}{#1}{\IfNoValueTF{#2}{#1}{#2}}\LWR@indentHTML
355 \LWR@scalestyle{}{#1}{\IfNoValueTF{#2}{#1}{#2}}
356 "\LWR@orignewLine
357 }\LWR@orignewLine%
```

Print the text to be scaled:

```
358 \begin{LWR@nestspan}%
359 #3%
```

Close the span:

```
360 \LWR@htmltagc{/span}%
361 \end{LWR@nestspan}%
362 }
```

The high-level interface:

```
363 \LWR@formatted{scalebox}
364
365 }% AtBeginDocument
```

`\reflectbox`  $\{\langle text \rangle\}$

```
366 \AtBeginDocument{
367
368 \newcommand{\LWR@HTML@reflectbox}[1]{%
369 \scalebox{-1}[1]{#1}%
370 }% \reflectbox
371
372 \LWR@formatted{reflectbox}
373
374 }% AtBeginDocument
```

`\resizebox`  $\{\langle h-length \rangle\} \{\langle v-length \rangle\} \{\langle text \rangle\}$

Simply prints its text argument.

```
375 \AtBeginDocument{
376
377 \NewDocumentCommand{\LWR@HTML@resizebox}{s m m m}{%
378 #4%
379 }
380
381 \LWR@formatted{resizebox}
382
383 }% AtBeginDocument
```

---

File 166 **lwarp-graphics.sty**

§ 265 Package **graphicx**

Pkg graphicx graphicx is emulated.

graphicx loads graphics, which also loads lwarp-graphics, which remembers the original graphics definitions for use inside a lateximage, and then patches them \AtBeginDocument for HTML output.

lwarp-graphics handles the syntax of either graphics or graphicx.

**for HTML output:** `1 \LWR@ProvidesPackagePass{graphicx}[2017/06/01]`

---

File 167 **lwarp-grffile.sty**

§ 266 Package **grffile**

Pkg grffile grffile is supported as-is. File types known to the browser are displayed, and unknown file types are given a link. Each PDF image for print mode should be accompanied by an SVG, PNG, or JPG version for HTML.



**matching PDF and SVG**

lwarp-grffile now exists as a placeholder since grffile used to be emulated by lwarp, and thus older versions of lwarp-grffile may exist and should be overwritten by this newer version.

**for HTML output:** 1 \LWR@ProvidesPackagePass{grffile}[2017/06/30]

---

File 168 **lwarp-grid.sty**

§ 267 Package **grid**

Pkg grid grid is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{grid}[2009/06/16]

2 \newenvironment\*{gridenv}{}{}

---

File 169 **lwarp-grid-system.sty**

§ 268 Package **grid-system**

*(Emulates or patches code by MARCUS BITZL.)*

Pkg grid-system grid-system is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{grid-system}[2014/02/16]

(\ifdef is in case the older syntax is removed.)

```
2 \AtBeginEnvironment{Row}{\setlength{\linewidth}{6in}}
3
4 \ifdef{\endrow}{
5 \AtBeginEnvironment{row}{\setlength{\linewidth}{6in}}
6 }{}
7
8 \renewcommand{\gridsystem@finishcell}{\hspace{\gridsystem@cellsep}}
```

---

File 170 **lwarp-gridset.sty**

§ 269 Package **gridset**

Pkg gridset gridset is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{gridset}

2 \newcommand\*{\gridbase}{}{}



```

3 \newcommand*\gridinterval{}
4 \newcommand*\savepos}[1]{}
5 \newcounter{gridcnt}
6 \newcommand*\vskipnextgrid{}
7 \newcommand*\thegridinfo}[1]{}
8 \newcommand*\theposinfo}[1]{}
9 \newcommand*\theypos}[1]{}

```

File 171 **lwarp-hang.sty**

§ 270 Package **hang**

*(Emulates or patches code by ANDREAS NOLDA.)*

Pkg hang **hang** is emulated.

```

for HTML output: 1 \LWR@ProvidesPackageDrop{hang}[2017/02/18]

2 \newlength{\hangingindent}
3 \setlength{\hangingindent}{1em}
4 \newlength{\hangingleftmargin}
5 \setlength{\hangingleftmargin}{0em}
6
7 \newcommand*\LWR@findhangingleftmargin{%
8 \setlength{\LWR@templengthone}{\hangingleftmargin}%
9 \addtolength{\LWR@templengthone}{\hangingindent}%
10 }
11
12 \newenvironment{hangingpar}
13 {
14 \LWR@findhangingleftmargin%
15 \BlockClass[%
16 \LWR@print@mbbox{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
17 \LWR@print@mbbox{text-indent:-\LWR@printlength{\hangingindent}}%
18]%
19 {hangingpar}%
20 }
21 {\endBlockClass}
22
23 \newenvironment{hanginglist}
24 {%
25 \renewcommand*\LWR@printcloselist{\LWR@printcloseitemize}%
26 \renewcommand*\LWR@printopenlist{%
27 \LWR@findhangingleftmargin%
28 ul style="%
29 \LWR@print@mbbox{list-style-type:none;} % extra space
30 \LWR@print@mbbox{%
31 margin-left:\LWR@printlength{\LWR@templengthone}%
32 } ; % extra space
33 \LWR@print@mbbox{%
34 text-indent:-\LWR@printlength{\hangingindent}%
35 }%
36 "%

```

```

37 }%
38 \let\item\LWR@itemizeitem%
39 \list{}{}%
40 }
41 {\endlist}
42
43 \newenvironment{compacthang}
44 {\hanginglist}
45 {\endhanginglist}
46
47 \newlength{\labeledleftmargin}
48 \setlength{\labeledleftmargin}{0em}
49
50 \newenvironment{labeledpar}[2]
51 {%
52 \BlockClass[%
53 \LWR@findhangingleftmargin%
54 \LWR@print@mbx{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
55 \LWR@print@mbx{text-indent:-\LWR@printlength{\hangingindent}}%
56]{labeledpar}#2%
57 }
58 {\endBlockClass}
59
60 \newenvironment{labeledlist}[1]
61 {\hanginglist}
62 {\endhanginglist}
63
64 \newenvironment{compactlabel}[1]
65 {\hanginglist}
66 {\endhanginglist}

```

---

File 172 **lwarp-hanging.sty**

§ 271 Package **hanging**

Pkg hanging hanging is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{hanging}[2009/09/02]

```

2 \@ifclassloaded{memoir}{
3 \let\hangpara\relax
4 \let\hangparas\relax
5 \let\endhangparas\relax
6 \let\hangpunct\relax
7 \let\endhangpunct\relax
8 }{}

```

\hangpara {<indent>} {<afternum>}

**Use hangparas instead.**

```

9 \newcommand*{\hangpara}[2]{}

```

```

Env hangparas {\langle indent \rangle} {\langle afternum \rangle}

10 \newenvironment*{hangparas}[2]
11 {%
12 \BlockClass[%
13 \LWR@print@mbbox{margin-left:\LWR@printlength{#1}} ; %
14 \LWR@print@mbbox{text-indent:-\LWR@printlength{#1}}}%
15]%
16 {hangingpar}%
17 }
18 {\endBlockClass}

```

```

Env hangpunct

19 \newenvironment*{hangpunct}
20 {\BlockClass{hangpunct}}
21 {\endBlockClass}

22 \newcommand{\nhpt}{.}
23 \newcommand{\nhlq}{'}
24 \newcommand{\nhrq}{'}

```

---

File 173 **lwarp-hypcap.sty**

§ 272 Package **hypcap**

Pkg hypcap hypcap is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{hypcap}[2016/05/16]

2 \newcommand*{\capstart}{}
3 \newcommand*{\hypcapspace}{}
4 \newcommand*{\hypcapredef}[1]{}
5 \newcommand*{\capstartfalse}{}
6 \newcommand*{\capstarttrue}{}

```

---

File 174 **lwarp-hypdestopt.sty**

§ 273 Package **hypdestopt**

Pkg hypdestopt hypdestopt is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{hypdestopt}[2016/05/21]

```

---

File 175 **lwarp-hypernat.sty**

§ 274 Package **hypernat**

Pkg hypernat hypernat is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{hypernat}[2001/07/09]

---

File 176 **lwarp-hyperref.sty**

§ 275 Package **hyperref**

*(Emulates or patches code by SEBASTIAN RAHTZ, HEIKO OBERDIEK.)*

Pkg hyperref hyperref is emulated.

**for HTML output:**

```

1 % \LWR@ProvidesPackageDrop{hyperref}
2 \typeout{Using the lwarp html version of package 'hyperref', discarding options.}
3 \typeout{ Are not using ProvidesPackage, so that other packages}
4 \typeout{ do not attempt to patch lwarp's version of 'hyperref'..}
5 % \ProvidesPackage{lwarp-#1-#2}
6 \DeclareOption*{}

7 % \ProcessOptions\relax
8 \let\ds@\@empty% from the original \ProcessOptions
9 \edef\@curroptions{}% lwarp modification to \ProcessOptions
10 \@process@ptions\relax% from the original \ProcessOptions

11 \newcommand*{\hypersetup}[1]{}
12 \newcommand*{\hyperbaseurl}[1]{}

```

\hyperimage {<URL>} {<alt text>}

Insert an image with alt text:

```

13 \NewDocumentCommand{\LWR@hyperimageb}{m +m}{%
14 \LWR@ensuredoingapar%
15 \def\LWR@templink{#1}%
16 \@onelevel@sanitize\LWR@templink%
17 \LWR@htmltag{img src="\LWR@templink" alt="#2" class="hyperimage"}%
18 \LWR@ensuredoingapar%
19 \endgroup%
20 }
21
22 \newrobustcmd*{\hyperimage}{%
23 \begingroup%
24 \catcode'\#=12%
25 \catcode'\%=12%

```

```

26 \catcode'\&=12%
27 \catcode'\~=12%
28 \catcode'_ =12%
29 \LWR@hyperimageb%
30 }
31

```

`\hyperdef`     $\langle 1: category \rangle \langle 2: name \rangle \langle 3: text \rangle$

Creates an HTML anchor to `category.name` with the given text.

```

32 \NewDocumentCommand{\LWR@hyperdefb}{m m +m}{%
33 \LWR@ensuredoingapar%
34 \LWR@sublabel{\#1.\#2}%
35 \#3%
36 \endgroup%
37 }
38
39 \newcommand*\hyperdef{%
40 \begingroup%
41 \catcode'\#=12%
42 \catcode'\%=12%
43 \catcode'\&=12%
44 \catcode'\~=12%
45 \catcode'_ =12%
46 \LWR@hyperdefb%
47 }
48

```

`\LWR@hyperrefb`     $\langle 1: URL \rangle \langle 2: category \rangle \langle 3: name \rangle \langle 4: text \rangle$

Creates an HTML link to `URL#category.name` with the given text.

```

49 \newcommand{\LWR@hyperreffinish}[1]{%
50 \begingroup%
51 \RenewDocumentCommand{\ref}{\LWR@ref@ignorestar}%
52 \#1%
53 \endgroup%
54 \LWR@htmltag{/a}%
55 }
56
57 \newcommand*\LWR@hyperrefbb[3]{%
58 \LWR@htmltag{%
59 a href="%
60 \detokenize\expandafter{\#1}\LWR@hashmark%
61 \detokenize\expandafter{\#2}.\detokenize\expandafter{\#3}%
62 "%
63 }%
64 \endgroup%
65 \LWR@hyperreffinish%
66 }
67
68 \newrobustcmd*\LWR@hyperrefb{%
69 \begingroup%
70 \catcode'\#=12%
71 \catcode'\%=12%

```

```

72 \catcode'\&=12%
73 \catcode'\~=12%
74 \catcode'_ =12%
75 \LWR@hyperrefbb%
76 }

```

`\LWR@hyperrefc` [*label*] {*text*}

Creates text as an HTML link to the L<sup>A</sup>T<sub>E</sub>X label.

```

77
78 \NewDocumentCommand{\LWR@hyperrefcb}{0{label}}{%
79 \LWR@startref{#1}%
80 \endgroup%
81 \LWR@hyperreffinish%
82 }
83
84 \newcommand*\LWR@hyperrefc{%
85 \begingroup%
86 \catcode'\#=12%
87 \catcode'\%=12%
88 \catcode'\&=12%
89 \catcode'\~=12%
90 \catcode'_ =12%
91 \LWR@hyperrefcb%
92 }

```

`\hyperref` {*1: URL*} {*2: category*} {*3: name*} {*4: text*} — or —  
[*1: label*] {*2: text*}

```

93 \DeclareRobustCommand*\hyperref{%
94 \LWR@ensuredoingapar%
95 \@ifnextchar[\LWR@hyperrefc\LWR@hyperrefb%
96 }

```

`\hypertarget` {*name*} {*text*}

Creates an anchor to name with the given text.

```

97 \NewDocumentCommand{\LWR@hypertargetb}{m +m}{%
98 \label{LWR-ht-#1}%
99 #2%
100 \endgroup%
101 }
102
103 \newcommand*\hypertarget{%
104 \begingroup%
105 \catcode'\#=12%
106 \catcode'\%=12%
107 \catcode'\&=12%
108 \catcode'\~=12%
109 \catcode'_ =12%
110 \LWR@hypertargetb%
111 }

```

`\hyperlink`     $\langle name \rangle$   $\langle text \rangle$

Creates a link to the anchor created by `hypertarget`, with the given link text.

Declared because also defined by `memoir`.

```

112 \DeclareDocumentCommand{\LWR@hyperlinkb}{m}{%
113 \LWR@hyperrefcb[LWR-ht-#1]%
114 }
115
116 \DeclareDocumentCommand{\hyperlink}{}{%
117 \LWR@ensuredoingapar%
118 \begingroup%
119 \catcode'\#=12%
120 \catcode'\%=12%
121 \catcode'\&=12%
122 \catcode'\~=12%
123 \catcode'_ =12%
124 \LWR@hyperlinkb%
125 }

```

`\autoref`    \*  $\langle label \rangle$

For HTML, `\cleveref` is used instead.

```

126 \NewDocumentCommand{\autoref}{s m}{%
127 \IfBooleanTF{#1}{\ref{#2}}{\cref{#2}}%
128 }

```

`\autopageref`     $\langle label \rangle$

For HTML, `\cleveref` is used instead.

```

129 \NewDocumentCommand{\autopageref}{s m}{%
130 \IfBooleanTF{#1}{\cpageref{#2}}{\cref{#2}}%
131 }

```

`\pdfstringdef`     $\langle macroname \rangle$   $\langle TEXstring \rangle$

```

132 \newcommand{\pdfstringdef}[2]{}

```

`\pdfbookmark`    [ $\langle level \rangle$ ]  $\langle text \rangle$   $\langle name \rangle$

```

133 \newcommand{\pdfbookmark}[3][{}]{

```

`\currentpdfbookmark`     $\langle text \rangle$   $\langle name \rangle$

```

134 \newcommand{\currentpdfbookmark}[2]{}

```

`\subpdfbookmark`     $\langle text \rangle$   $\langle name \rangle$

```

135 \newcommand{\subpdfbookmark}[2]{}

```

`\belowpdfbookmark`     $\langle text \rangle$   $\langle name \rangle$

```

136 \newcommand{\belowpdfbookmark}[2]{}

```

```

\textorpdfstring {\langle TeXstring\rangle} {\langle PDFstring\rangle}
137 \newcommand{\textorpdfstring}[2]{#1}

\hypercalcbp {\langle dimen\rangle} From hyperref.
138 \def\hypercalcbp#1{%
139 \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
140 }%

\Acrobatmenu {\langle menuoption\rangle} {\langle text\rangle}
141 \newcommand{\Acrobatmenu}[2]{}

\TextField [\langle parameters\rangle] {\langle label\rangle}
142 \DeclareRobustCommand{\TextField}[2][{}]{

\CheckBox [\langle parameters\rangle] {\langle label\rangle}
143 \DeclareRobustCommand{\CheckBox}[2][{}]{

\ChoiceMenu [\langle parameters\rangle] {\langle label\rangle} {\langle choices\rangle}
144 \DeclareRobustCommand{\ChoiceMenu}[3][{}]{

\PushButton [\langle parameters\rangle] {\langle label\rangle}
145 \DeclareRobustCommand{\PushButton}[2][{}]{

\Submit [\langle parameters\rangle] {\langle label\rangle}
146 \DeclareRobustCommand{\Submit}[2][{}]{

\Reset [\langle parameters\rangle] {\langle label\rangle}
147 \DeclareRobustCommand{\Reset}[2][{}]{

\Gauge [\langle parameters\rangle] {\langle label\rangle}
148 \DeclareRobustCommand{\Gauge}[2][{}]{

\LayoutTextField {\langle label\rangle} {\langle field\rangle}
149 \newcommand*\LayoutTextField[2]{

\LayoutChoiceField {\langle label\rangle} {\langle field\rangle}
150 \newcommand*\LayoutChoiceField[2]{

```



|                                |                                                              |
|--------------------------------|--------------------------------------------------------------|
| <code>\LayoutCheckField</code> | <code>{\langle label \rangle}{\langle field \rangle}</code>  |
|                                | 151 <code>\newcommand*{\LayoutCheckField}[2]{}</code>        |
| <code>\MakeRadioField</code>   | <code>{\langle width \rangle}{\langle height \rangle}</code> |
|                                | 152 <code>\newcommand*{\MakeRadioField}[2]{}</code>          |
| <code>\MakeCheckField</code>   | <code>{\langle width \rangle}{\langle height \rangle}</code> |
|                                | 153 <code>\newcommand*{\MakeCheckField}[2]{}</code>          |
| <code>\MakeTextField</code>    | <code>{\langle width \rangle}{\langle height \rangle}</code> |
|                                | 154 <code>\newcommand*{\MakeTextField}[2]{}</code>           |
| <code>\MakeChoiceField</code>  | <code>{\langle width \rangle}{\langle height \rangle}</code> |
|                                | 155 <code>\newcommand*{\MakeChoiceField}[2]{}</code>         |
| <code>\MakeFieldButton</code>  | <code>{\langle text \rangle}</code>                          |
|                                | 156 <code>\newcommand{\MakeFieldButton}[1]{}</code>          |

File 177 **lwarp-hyperxmp.sty**

§ 276 Package **hyperxmp**

Pkg hyperxmp Emulated.

**for HTML output:** Discard all options for lwarp-hyperxmp:

```
1 \LWR@ProvidesPackageDrop{hyperxmp}[2018/11/27]
```

File 178 **lwarp-hyphenat.sty**

§ 277 Package **hyphenat**

Pkg hyphenat **hyphenat** is emulated during HTML output, while the print-mode version is used inside a lateximage.

**for HTML output:** 1 `\LWR@ProvidesPackagePass{hyphenat}[2009/09/02]`

```
2 \LetLtxMacro\LWRHYNAT@origtextnhtt\textnhtt
3 \LetLtxMacro\LWRHYNAT@orignhttfamily\nhttfamily
4 \LetLtxMacro\LWRHYNAT@orignohyphens\nohyphens
5 \LetLtxMacro\LWRHYNAT@origbshyp\bshyp
```

```

6 \LetLtxMacro\LWRHYNAT@origfshyp\fshyp
7 \LetLtxMacro\LWRHYNAT@origdothyp\dothyp
8 \LetLtxMacro\LWRHYNAT@origcolonhyp\colonhyp
9 \LetLtxMacro\LWRHYNAT@orighyp\hyp
10
11 \LetLtxMacro\textnhtt\texttt
12 \LetLtxMacro\nhttfamily\ttfamily
13
14 \renewcommand{\nohyphens}[1]{#1}
15 \renewrobustcmd{\bshyp}{%
16 \ifmode\backslash\else\textbackslash\fi%
17 }
18 \renewrobustcmd{\fshyp}{/}
19 \renewrobustcmd{\dothyp}{.}
20 \renewrobustcmd{\colonhyp}{:}
21 \renewrobustcmd{\hyp}{-}
22
23 \appto\LWR@restoreorigformatting{%
24 \LetLtxMacro\textnhtt\LWRHYNAT@origtextnhtt%
25 \LetLtxMacro\nhttfamily\LWRHYNAT@orignhttfamily%
26 \LetLtxMacro\nohyphens\LWRHYNAT@orignohyphens%
27 \LetLtxMacro\bshyp\LWRHYNAT@origbshyp%
28 \LetLtxMacro\fshyp\LWRHYNAT@origfshyp%
29 \LetLtxMacro\dothyp\LWRHYNAT@origdothyp%
30 \LetLtxMacro\colonhyp\LWRHYNAT@origcolonhyp%
31 \LetLtxMacro\hyp\LWRHYNAT@orighyp%
32 }

```

---

File 179 **lwarp-idxlayout.sty**

§ 278 Package **idxlayout**

*(Emulates or patches code by THOMAS TITZ.)*

Pkg idxlayout Emulated.

**for HTML output:** Discard all options for lwarp-idxlayout:

```

1 \LWR@ProvidesPackageDrop{idxlayout}[2012/03/30]
2 \newcommand{\LWR@indexprenote}{}
3
4 \preto\printindex{
5
6 \LWR@orignewpage
7 \LWR@startpars
8
9 \LWR@indexprenote
10
11 }
12
13 \newcommand{\setindexprenote}[1]{\renewcommand{\LWR@indexprenote}{#1}}
14 \newcommand*\noindexprenote{\renewcommand{\LWR@indexprenote}{} }

```

```

15
16 \newcommand{\idxlayout}[1]{}
17 \newcommand*{\indexfont}{}
18 \newcommand*{\indexjustific}{}
19 \newcommand*{\indexsubsdelim}{}
20 \newcommand*{\indexstheadcase}{}

```

---

File 180 **lwarp-ifoddpagel.sty**

§ 279 Package **ifoddpagel**

*(Emulates or patches code by MARTIN SCHARRER.)*

Pkg ifoddpagel ifoddpagel is emulated.

**for HTML output:** Discard all options for lwarp-ifoddpagel:

```

1 \LWR@ProvidesPackageDrop{ifoddpagel}[2016/04/23]

2 \newif\ifoddpagel
3
4 \newif\ifoddpageloroneside
5
6 \DeclareRobustCommand{\checkoddpagel}{\oddpageltrue\oddpageloronesidetrue}
7
8 \def\oddpagel@page{1}
9
10 \def\@ifoddpagel{%
11 \expandafter\@firstoftwo
12 }
13
14 \def\@ifoddpageloroneside{%
15 \expandafter\@firstoftwo
16 }

```

---

File 181 **lwarp-imakeidx.sty**

§ 280 Package **imakeidx**

*(Emulates or patches code by ENRICO GREGORIO.)*

Pkg imakeidx imakeidx is patched for use by lwarp.

**letter headings** When using *makeindex*, to match the print and HTML output's display of index letter headings, specify the lwarp.ist style:

```
\makeindex[options={-s lwarp.ist}]
```

(For HTML the lwarp.ist style is used automatically, which displays letter headings. When using *xindy* the default style also displays letter headings.)

**index setup** See section 9.6.17 for how to setup *lwarpmk* to process the indexes with *imakeidx*, both with and without shell escape.

**for HTML output:** 1 \LWR@ProvidesPackagePass{imakeidx}[2016/10/15]

Use the new HTML suffix:

```
2 \catcode'_ =12%
3 \define@key{imki}{name}{\def\imki@name{#1_html}}
4 \catcode'_ =8%
```

**\printindex** The HTML version of `\printindex`:

```
5 \catcode'_ =12%
6
7 \renewcommand*{\printindex}[1][\imki@jobname]{%
8 \LWR@orignewpage%
9 \LWR@startpars%
10 \ifstrequal{#1}{\imki@jobname}{%
11 \ifundefined{#1@idxfile}{%
12 \imki@error{#1}%
13 }{%
14 \imki@putindex{#1}%
15 }%
16 }{%
17 \ifundefined{#1_html@idxfile}{\imki@error{#1_html}}{\imki@putindex{#1_html}}%
18 }%
19 }
20
21 \catcode'_ =8%
```

**\@index** The HTML version of `\index`:

```
22 \catcode'_ =12%
23
24 \def\@index[#1]{%
25 \ifstrequal{#1}{\imki@jobname}%
26 {%
27 \@ifundefined{#1@idxfile}%
28 {%
29 \PackageWarning{imakeidx}{Undefined index file '#1'}%
30 \begingroup
31 \@sanitize
32 \imki@nowrindex%
33 }%
34 {%
35 \edef\@idxfile{#1}%
36 \begingroup
37 \@sanitize
38 \@wrindex\@idxfile%
39 }%
40 }%
41 {%
42 \@ifundefined{#1_html@idxfile}%

```

```

43 {%
44 \PackageWarning{imakeidx}{Undefined index file '#1_html'}%
45 \begingroup
46 \@sanitize
47 \imki@nowrindex%
48 }%
49 {%
50 \edef\@idxfile{#1_html}%
51 \begingroup
52 \@sanitize
53 \@wrindex\@idxfile%
54 }%
55 }%
56 }
57
58 \catcode'_ =8%

```

```

\item
\subitem
\subsubitem HTML versions of \item, etc.:

```

```

59 \appto\theindex{%
60 \let\item\LWR@indexitem%
61 \let\subitem\LWR@indexsubitem%
62 \let\subsubitem\LWR@indexsubsubitem%
63 }

```

```
\imki@wrindexentrysplit {<file>} {<entry>} {<page>}
```

```
\imki@wrindexentryunique {<file>} {<entry>} {<page>}
```

While writing index entries, adds an HTML label, and writes the label's index instead of the page number:

```

64 \renewcommand\imki@wrindexentrysplit[3]{%
65 \addtocounter{LWR@autoindex}{1}%
66 \LWR@new@label{LWR@index-\arabic{LWR@autoindex}}%
67 \expandafter\protected@write\csname#1@idxfile\endcsname{%
68 {\string\indexentry{#2}{\arabic{LWR@autoindex}}}%
69 }
70
71 \renewcommand\imki@wrindexentryunique[3]{%
72 \addtocounter{LWR@autoindex}{1}%
73 \LWR@new@label{LWR@index-\arabic{LWR@autoindex}}%
74 \protected@write\@indexfile{%
75 {\string\indexentry[#1]{#2}{\arabic{LWR@autoindex}}}%
76 }
77
78 \def\imki@wrindexsplit#1#2{%
79 \imki@wrindexentrysplit{#1}{#2}{\thepage}%
80 \endgroup\imki@showindexentry{#1}{#2}%
81 \@esphack%
82 }
83
84 \def\imki@wrindexunique#1#2{%

```

```

85 \imki@wrindexentryunique{#1}{#2}{\thepage}%
86 \endgroup\imki@showindexentry{#1}{#2}%
87 \@esphack%
88 }
89

```

`\LWR@imki@setxdydefopts`

Sets the *xindy* HTML options, ignoring the user's settings.

```

90 \newcommand*\LWR@imki@setxdydefopts{%
91 \edef\imki@options{ \space %
92 -M \space \LWR@xindyStyle\space %
93 -L \space \LWR@xindyLanguage\space %
94 -C \space \LWR@xindyCodepage\space %
95 }%
96 }

```

`\LWR@imki@setdefopts`    *{(user options)}*

Sets the HTML options, added to the user's settings, depending on whether *makeindex* or *xindy* are used.

For *makeindex*, the user's choice is ignored, and only the *lwarp* version is used. (Only one style at a time is possible.)

For *xindy*, multiple modules may be specified, and the *lwarp* version is appended.

```

97 \newcommand*\LWR@imki@setdefopts}[1]{%
98 \ifblank{#1}{%
99 \edef\imki@options{\space -s \space \LWR@makeindexStyle \space}%
100 \ifdefstring{\imki@progdefault}{xindy}{\LWR@imki@setxdydefopts}{}%
101 \ifdefstring{\imki@progdefault}{texindy}{\LWR@imki@setxdydefopts}{}%
102 \ifdefstring{\imki@progdefault}{truexindy}{\LWR@imki@setxdydefopts}{}%
103 }{%
104 \edef\imki@options{\space #1 \space}%
105 }%
106 }

```

`\imki@makeindex`    Use the new HTML options:

```

107 \xpatchcmd{\imki@makeindex}
108 {\let\imki@options\space}
109 {\LWR@imki@setdefopts{}}%
110 {}
111 {\LWR@patcherror{imakeidx}{makeindex}}

```

Use the new HTML options.

```

112 \define@key{imki}{options}{\LWR@imki@setdefopts{#1}}

```

`\imki@resetdefaults`    Use the new HTML options:

```

113 \xpatchcmd{\imki@resetdefaults}
114 {\def\imki@options{ }}
115 {\LWR@imki@setdefopts{}}
116 {}

```

```
117 {\LWR@patcherror{imakeidx}{resetdefaults}}
```

theindex was already defined \AtBeginDocument by the lwarp core, so it must be redefined here similarly, but patched for imakeidx:

Env theindex

```
118 \AtBeginDocument{
119 \renewenvironment*{theindex}{%
120 \imki@maybeaddtoc
121 \imki@indexlevel{\indexname}
122 \let\item\LWR@indexitem%
123 \let\subitem\LWR@indexsubitem%
124 \let\subsubitem\LWR@indexsubsubitem%
125 }{}
126 }% AtBeginDocument
```

Update to the new defaults:

```
127 \imki@resetdefaults
```

Update to the new patches:

\AtBeginDocument is because \@wrindex is previously defined as \AtBeginDocument in the lwarp core.

```
128 \ifimki@splitindex
129 \let\imki@startidx\imki@startidxunique
130 \AtBeginDocument{\let\@wrindex\imki@wrindexunique}
131 \let\imki@putindex\imki@putindexunique
132 \let\imki@wrindexentry\imki@wrindexentryunique
133 \let\imki@startidxsplit\@undefined
134 \let\imki@wrindexsplit\@undefined
135 \let\imki@putindexsplit\@undefined
136 \else
137 \let\imki@startidx\imki@startidxsplit
138 \AtBeginDocument{\let\@wrindex\imki@wrindexsplit}
139 \let\imki@putindex\imki@putindexsplit
140 \let\imki@wrindexentry\imki@wrindexentrysplit
141 \let\imki@startidxunique\@undefined
142 \let\imki@wrindexunique\@undefined
143 \let\imki@putindexunique\@undefined
144 \fi
```

---

File 182 **lwarp-index.sty**

§ 281 Package **index**

*(Emulates or patches code by DAVID M. JONES.)*

Pkg index index is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{index}[2004/01/20]

Use `\theLWR@autoindex` instead of `\thepage`. `\@tempwatrue` is used to force an immediate write to the index file instead of waiting until the end of the page.

```

2 \xpatchcmd{\newindex}
3 {\x@newindex[thepage]}
4 {%
5 \@tempwatrue%
6 \x@newindex[theLWR@autoindex]%
7 }
8 {}
9 {\LWR@patcherror{index}{newindex}}
10
11 \xpatchcmd{\renewindex}
12 {\x@renewindex[thepage]}
13 {%
14 \@tempwatrue%
15 \x@renewindex[theLWR@autoindex]%
16 }
17 {}
18 {\LWR@patcherror{index}{renewindex}}

```

Patched to set a new autoindex:

```

19 \xpatchcmd{\@wrindex}
20 {\begingroup}
21 {%
22 \addtocounter{LWR@autoindex}{1}% lwarp
23 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}% lwarp
24 \begingroup%
25 }
26 {}
27 {\LWR@patcherror{index}{@wrindex}}

```

`\AtBeginDocument` `lwarp core` `\lets \@wrindex` to `\LWR@wrindex`. Since the index package has been loaded, `\let` to its version instead:

```

28 \let\LWR@index@wrindex\@wrindex
29
30 \AtBeginDocument{
31 \let\@wrindex\LWR@index@wrindex
32 }

```

Modified to add `\index@prologue`:

```

33 \AtBeginDocument{
34 \renewenvironment*{theindex}{%
35 \LWR@indexsection{\indexname}%
36 \ifx\index@prologue\empty\else
37 \index@prologue
38 \bigskip
39 \fi
40 \let\item\LWR@indexitem%
41 \let\subitem\LWR@indexsubitem%
42 \let\subsubitem\LWR@indexsubsubitem%
43 }{}

```



```
44 }% AtBeginDocument
```

Disabled:

```
45 \def\@showidx#1{}
46 \let\@texttop\relax
47 \renewcommand*\raggedbottom{}
48 \renewcommand*\flushbottom{}
49 \renewcommand*\markboth}[2]{}
50 \renewcommand*\markright}[1]{}

```

---

File 183 **lwarp-inputtrc.sty**

§ 282 Package **inputtrc**

*(Emulates or patches code by Uwe Lück.)*

Pkg inputtrc inputtrc is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{inputtrc}[2012/10/10]

Patched to remove extraneous spaces, which sometimes showed up in logos inside a lateximage.

```
2 \renewcommand*\IT@prim@input}[1]{%
3 \typeout{\IT@indent\IT@currfile INPUTTING #1}%
4 %% ... TODO: option to write to '.log' only.
5 \xdef\IT@filestack{\IT@currfile\IT@filestack}%
6 \xdef\IT@currfile{#1}%
7 \expandafter \gdef\expandafter \IT@indent\expandafter{%
8 \IT@indent \IT@indent@unit}% lwarp
9 \@input#1% lwarp
10 \expandafter\IT@pop@indent\IT@indent \@nil% lwarp
11 \expandafter\IT@pop@file \IT@filestack\@nil% lwarp
12 \IT@maybe@returnmessage% v0.2 lwarp
13 }

```

---

File 184 **lwarp-intopdf.sty**

§ 283 Package **intopdf**

Pkg intopdf intopdf is emulated.

The MIME type and description are ignored for now.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{intopdf}[2018/03/15]

```
2 \NewDocumentCommand{\attachandlink}{m o m m}{%
3 \href{#1}{#4}%
4 }

```

File 185 **lwarp-karnaugh-map.sty**

§ 284 Package **karnaugh-map**

(Emulates or patches code by MATTIAS JACOBSSON.)

Pkg karnaugh-map karnaugh-map is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{karnaugh-map}[2017/02/20]

(It is hard to patch this macro, so the entire thing is redefined here, with the lwarp modifications identified in comments.)

```

2 \RenewDocumentEnvironment{karnaugh-map}{s O{4} O{4} O{1} O{X_1X_0$} O{X_3X_2$} O{X_5X_4$}} {%
3 \begingroup
4 % store map size {[START]
5 \renewcommand{\@karnaughmap@var@mapsizex@}{#2}%
6 \renewcommand{\@karnaughmap@var@mapsizex@}{#3}%
7 \renewcommand{\@karnaughmap@var@mapsizex@}{#4}%
8 % [END]}
9 % determinate if markings should be color or black and white
10 \IfBooleanTF{#1}{%
11 % should be black and white
12 \renewcommand{\@karnaughmap@var@bw@}{1}%
13 }{%
14 % should be color
15 \renewcommand{\@karnaughmap@var@bw@}{0}%
16 }%
17 %
18 % find matching matrix template and alignment parameters {[START]
19 \newcommand{\@karnaughmap@local@matrixtemplate@}{0}% '0' is considered as missing matrix template
20 \newcommand{\@karnaughmap@local@maprealignmentx@}{0}%
21 \newcommand{\@karnaughmap@local@maprealignmenty@}{0}%
22 \ifnum\@karnaughmap@var@mapsizex@\@karnaughmap@var@mapsizex@\@karnaughmap@var@mapsizex@=221
23 \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
24 \& 0 \& 1 \& \& \&
25 0 \& |(000000)| \& |(000001)| \& \& \&
26 1 \& |(000010)| \& |(000011)| \& \& \&
27 \& \& \& \& \& \& \&
28 }%
29 \fi
30 \ifnum\@karnaughmap@var@mapsizex@\@karnaughmap@var@mapsizex@\@karnaughmap@var@mapsizex@=241
31 \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
32 \& 0 \& 1 \& \& \&
33 00 \& |(000000)| \& |(000001)| \& \& \&
34 01 \& |(000010)| \& |(000011)| \& \& \&
35 11 \& |(000110)| \& |(000111)| \& \& \&
36 10 \& |(000100)| \& |(000101)| \& \& \&
37 \& \& \& \& \& \& \&
38 }%
39 \fi

```



```

95 }%
96 % \fi original
97 }{}% lwarp
98 \begin{tikzpicture}
99 % grid
100 % for all dimensions
101 \draw[color=black, ultra thin] (0,0) grid (\@karnaughmap@var@mapsizex@,\@karnaughmap@var@mapsizex@);
102 % when there are 2 sub maps
103 \ifnum\@karnaughmap@var@mapsizex@=2
104 \draw[color=black, ultra thin] (5,0) grid (9,4);
105 \fi
106 % when there are 4 sub maps
107 \ifnum\@karnaughmap@var@mapsizex@=4
108 \draw[color=black, ultra thin] (5,0) grid (9,4);
109 \draw[color=black, ultra thin] (0,-5) grid (4,-1);
110 \draw[color=black, ultra thin] (5,-5) grid (9,-1);
111 \fi
112 % labels
113 % for all dimensions
114 \node[above] at (\@karnaughmap@var@mapsizex@*0.5,\@karnaughmap@var@mapsizex@+0.9) {\small{#5}};
115 \node[left] at (-0.9,\@karnaughmap@var@mapsizex@*0.5) {\small{#6}};
116 % when there are 2 sub maps
117 \ifnum\@karnaughmap@var@mapsizex@=2
118 \node[above] at (7,4.9) {\small{#5}};
119 % extra sub maps labels
120 \node[below] at (2,-0.1) {\small{#7$=0$}};
121 \node[below] at (7,-0.1) {\small{#7$=1$}};
122 \fi
123 % when there are 4 sub maps
124 \ifnum\@karnaughmap@var@mapsizex@=4
125 \node[above] at (7,4.9) {\small{#5}};
126 \node[left] at (-0.9,-3) {\small{#6}};
127 % extra sub maps labels
128 \node[below] at (2,-0.1) {\small{#7$=00$}};
129 \node[below] at (7,-0.1) {\small{#7$=01$}};
130 \node[below] at (2,-5.1) {\small{#7$=10$}};
131 \node[below] at (7,-5.1) {\small{#7$=11$}};
132 \fi
133 % data
134 \matrix[
135 matrix of nodes,
136 ampersand replacement=\&,
137 column sep={1cm,between origins},
138 row sep={1cm,between origins},
139] at (\@karnaughmap@var@mapsizex@*0.5+\@karnaughmap@local@maprealignmentx@,\@karnaughmap@var@mapsizex@*\@karnaughmap@local@matrixtemplate@);
140 \node[above] at (7,4.9) {\small{#5}};
141 \node[left] at (-0.9,-3) {\small{#6}};
142 }{}
143 \end{tikzpicture}
144 \endgroup
145 }


```

File 186 **lwarp-keyfloat.sty**

§ 285 Package **keyfloat**

*(Emulates or patches code by BRIAN DUNN.)*

Pkg keyfloat **keyfloat** is supported with a considerable amount of hacking. (It's a mashup of lwarp, keyfloat, and tocdata.)

 **keywrap** If placing a `\keyfig[H]` inside a keywrap, use an absolute width for `\keyfig`, instead of lw-proportional widths. (The [H] option forces the use of a minipage, which internally adjusts for a virtual 6-inch wide minipage, which then corrupts the lw option.)

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{keyfloat}[2019/03/21]
2
3 \@ifpackagelater{keyfloat}{2019/03/21}{}{
4 \PackageError{lwarp-keyfloat}
5 {%
6 The keyfloat package is out of date.\MessageBreak
7 Update to keyfloat v2.00 2019/03/21 or later%
8 }
9 {%
10 Please update the keyfloat package. It's worth it!%
11 }
12 }
```

After keyfloat has loaded:

```

13 \AtBeginDocument{
14 \providecommand*\KFLT@LWR@hook@boxouter{}
15 \renewcommand*\KFLT@LWR@hook@boxouter{%
16 \ifbool{KFLT@keywrap}{}{%
17 \ifnumequal{\value{KFLT@keyfloatdepth}}{0}{}%
18 \setlength{\linewidth}{6in}%
19 \setlength{\textwidth}{6in}%
20 \setlength{\textheight}{9in}%
21 }{}%
22 }%
23 }
24
25 \let\KFLT@LWR@hook@boxouter@minipage\relax
26 \let\endKFLT@LWR@hook@boxouter@minipage\relax
27 \newenvironment*{KFLT@LWR@hook@boxouter@minipage}[2][{}]{
28
29 \providecommand*\KFLT@LWR@hook@keysubfloats{}
30 \renewcommand*\KFLT@LWR@hook@keysubfloats{%
31 \ifbool{KFLT@keywrap}{}{%
32 \ifnumequal{\value{KFLT@keyfloatdepth}}{0}{}%
33 \setlength{\linewidth}{6in}%
34 \setlength{\textwidth}{6in}%

```

```

35 \setlength{\textheight}{9in}%
36 }{}%
37 }%
38 }
39
40 \let\KFLT@LWR@hook@keyfloatsminipage\relax
41 \let\endKFLT@LWR@hook@keyfloatsminipage\relax
42 \newenvironment*{KFLT@LWR@hook@keyfloatsminipage}[1]{}{}
43
44 \providecommand*{\KFLT@LWR@hook@keyfloats}{}
45 \renewcommand*{\KFLT@LWR@hook@keyfloats}{%
46 \ifbool{KFLT@keywrap}{}{%
47 \ifnumequal{\value{KFLT@keyfloatdepth}}{0}{%
48 \setlength{\linewidth}{6in}%
49 \setlength{\textwidth}{6in}%
50 \setlength{\textheight}{9in}%
51 }{}%
52 }%
53 }
54
55 \renewcommand*{\KFLT@maybeendfloatrow}{%
56 \ifnumless{\value{KFLT@thiscol}}{\value{KFLT@numcols}}%
57 {}% thiscol < numcols
58 {% >=
59 \defcounter{KFLT@thiscol}{0}%
60 }%
61 }%
62
63 \renewcommand{\KFLT@trackrows}{%
64 {%

```

If are nested inside a keyfloats or a subfloat:

```

65 \ifboolexpr{%
66 test {\ifnumgreater{\value{KFLT@keyfloatdepth}}{0}} or%
67 bool{KFLT@inkeysubfloats}%
68 }%
69 {% nested

```

Tracks row start and end:

```

70 \KFLT@maybestartfloatrow%

```

Possibly fill space between columns:

```

71 \ifnumgreater{\value{KFLT@thiscol}}{1}%
72 {%
73 \hfill%
74 }%
75 }{}%
76 }% nested
77 {}% not nested
78 }

```

```

79 \RenewDocumentCommand{\KFLT@onefigureimage}{m}
80 {%
81 \LWR@traceinfo{KFLT@onefigureimage}%
82 % \begin{lrbox}{\KFLT@envbox}%
83 \ifthenelse{\NOT\equal{\KFLT@lw}{}}%
84 {%
85 \KFLT@frame{\includegraphics%
86 [scale=\KFLT@s,width=\KFLT@imagewidth]{#1}}%
87 }%
88 {% not linewidth
89 \ifthenelse{\dimtest{\KFLT@w}{>}{0pt}}%
90 {% width is given
91 \ifthenelse{\dimtest{\KFLT@h}{>}{0pt}}%
92 {% w and h
93 \KFLT@frame{\includegraphics%
94 [scale=\KFLT@s,%
95 width=\KFLT@imagewidth,height=\KFLT@h]{#1}}%
96 }% w and h
97 {% only w
98 \KFLT@frame{\includegraphics%
99 [scale=\KFLT@s,width=\KFLT@imagewidth]{#1}}%
100 }% only w
101 }% width is given
102 {% width is not given
103 \ifthenelse{\dimtest{\KFLT@h}{>}{0pt}}%
104 {%
105 \KFLT@frame{\includegraphics%
106 [scale=\KFLT@s,height=\KFLT@h]{#1}}%
107 }%
108 {%
109 \KFLT@frame{\includegraphics%
110 [scale=\KFLT@s]{#1}}%
111 }%
112 }% width is not given
113 }% not linewidth
114 % \end{lrbox}%
115 % \unskip%
116 % \KFLT@findenvboxwidth%
117 % \begin{turn}{\KFLT@r}%
118 % \KFLT@frame{\usebox{\KFLT@envbox}}%
119 % \unskip%
120 % \end{turn}%
121 \LWR@traceinfo{KFLT@onefigureimage: done}%
122 }

123 \RenewDocumentEnvironment{KFLT@boxinner}{ }
124 {%
125 \LWR@traceinfo{KFLT@boxinner}%
126 \LWR@stoppars%
127 \minipagefullwidth%
128 \ifboolexpr{bool{KFLT@ft} or bool{KFLT@f}}{
129 \fminipage{\KFLT@imagewidth}%
130 }{%
131 \minipage{\KFLT@imagewidth}%
132 }%

```

```

133 }
134 {%
135 \ifboolexpr{bool{KFLT@ft} or bool{KFLT@f}}{
136 \endfminipage%
137 }{%
138 \endminipage%
139 }%
140 \LWR@startpars%
141 \LWR@traceinfo{KFLT@boxinner: done}%
142 }

143 \newcommand*{\LWR@KFLT@setttextalign}[1]{%
144 \def\LWR@KFLT@textalign{justify}%
145 \ifcsstring{KFLT@#1textalign}{\centering}%
146 {\def\LWR@KFLT@textalign{center}}%
147 }%
148 \ifcsstring{KFLT@#1textalign}{\raggedleft}%
149 {\def\LWR@KFLT@textalign{right}}%
150 }%
151 \ifcsstring{KFLT@#1textalign}{\raggedright}%
152 {\def\LWR@KFLT@textalign{left}}%
153 }%
154 }
155
156 \renewcommand{\KFLT@addtext}[1]
157 {%

```

Is there text to add?

```

158 \ifcsemtyp{KFLT@#1t}%
159 }% no text
160 {% text to add
161 {% local

```

Add some space, then create a full-width minipage to contain the text:

```

162 \addvspace{\smallskipamount}%
163 \LWR@KFLT@setttextalign{#1}%
164 \begin{BlockClass}[text-align:\LWR@KFLT@textalign]{floatnotes}%

```

Set the alignment and some text parameters:

```

165 % \csuse{KFLT@#1textalign}%
166 % \footnotesize%
167 \setlength{\parskip}{1.5ex}%
168 \setlength{\parindent}{0em}%

```

Typeset the actual text:

```

169 \csuse{KFLT@#1t}%

```

Close it all out with a little more space:

```

170 \end{BlockClass}%

```



```

171 % \par\addvspace{2ex}%
172 }% local
173 }% text to add
174 }
175
176 \@ifpackageloaded{tocdata}
177 {}
178 {% tocdata not loaded
179
180 \newcommand*\LWR@KFLT@setnamealign[1]{%
181 \def\LWR@KFLT@textalign{justify}%
182 \ifstrequal{#1}{\centering}%
183 {\def\LWR@KFLT@textalign{center}}%
184 }%
185 \ifstrequal{#1}{\raggedleft}%
186 {\def\LWR@KFLT@textalign{right}}%
187 }%
188 \ifstrequal{#1}{\raggedright}%
189 {\def\LWR@KFLT@textalign{left}}%
190 }%
191 }
192
193 \renewcommand*\KFLT@addartisttext[3]{%
194

```

Add space and create the name inside a full-width minipage:

```

195 % \addvspace{\medskipamount}%
196 % \begin{minipage}{\linewidth}%
197 \LWR@KFLT@setnamealign{#3}%
198 \begin{BlockClass}[text-align:\LWR@KFLT@textalign]{floatnotes}%
199

```

Text alignment is #3, and depends on artist or author:

```

200 % #3%
201

```

#1 is empty or 'subgrp'  
 #2 is empty for artist, 'u' for author:

```

202 \footnotesize\textsc{%
203 \KFLT@optionalname{\csuse{KFLT@#1a#2p}}%
204 \KFLT@optionalname{\csuse{KFLT@#1a#2f}}%
205 \csuse{KFLT@#1a#2l}%
206 \csuse{KFLT@#1a#2s}%
207 }%
208 % \end{minipage}%
209 \end{BlockClass}
210 % \par\addvspace{2ex}%
211 }
212
213 }% tocdata not loaded

```

```

214 \DeclareDocumentEnvironment{KFLT@marginfloat}{0{-1.2ex} m}
215 {%
216 \LWR@BlockClassWP{float:right; width:2in; margin:10pt}}{marginblock}%
217 \captionsetup{type=#2}%
218 \minipage{2in}%
219 }
220 {%
221 \endminipage%
222 \endLWR@BlockClassWP%
223 }

224 \DeclareDocumentEnvironment{marginfigure}{o}
225 {\begin{KFLT@marginfloat}{figure}}
226 {\end{KFLT@marginfloat}}
227
228 \DeclareDocumentEnvironment{margintable}{o}
229 {\begin{KFLT@marginfloat}{table}}
230 {\end{KFLT@marginfloat}}

231 \DeclareDocumentEnvironment{keywrap}{m +m}
232 {%
233 \LWR@ensuredoingapar%
234 \setlength{\linewidth}{6in}%
235 \setlength{\LWR@templengthone}{#1}%
236 \begin{LWR@BlockClassWP}%
237 {%
238 float:right; width:\LWR@printlength{\LWR@templengthone}; % extra space
239 margin:10pt%
240 }%
241 {%
242 width:\LWR@printlength{\LWR@templengthone}%
243 }%
244 {marginblock}%
245 \setlength{\linewidth}{.95\LWR@templengthone}%
246 \booltrue{KFLT@keywrap}%
247 #2%
248 \end{LWR@BlockClassWP}%
249 }
250 {}

251]% AtBeginDocument

```

---

File 187 **lwarp-layaureo.sty**

§ 286 Package **layaureo**

Pkg layaureo layaureo is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop[layaureo][2004/09/16]

---

File 188 **lwarp-layout.sty**

§ 287 Package **layout**

Pkg layout layout is ignored.

**for HTML output:** Discard all options for lwarp-layout:

```
1 \LWR@ProvidesPackageDrop{layout}[2014/10/28]
2 \NewDocumentCommand{\layout}{s}{}

```

---

File 189 **lwarp-layouts.sty**

§ 288 Package **layouts**

Pkg layouts layouts is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{layouts}[2009/09/02]

```
2 \newif\ifoddpagelayout
3 \oddpagelayouttrue
4 \newif\iftwocolumnlayout
5 \twocolumnlayoutfalse
6 \newif\ifdrawmarginpars
7 \drawmarginparstrue
8 \newif\ifdrawparameters
9 \drawparameterstrue
10 \newif\iflistaspara
11 \listasparatrue
12 \newif\ifruninhead
13 \runinheadfalse
14 \newif\ifprintparameters
15 \printparameterstrue
16 \newif\ifdrawdimensions
17 \drawdimensionsfalse
18 \newif\ifprintheadings
19 \printheadingstrue
20 \newcommand{\testdrawdimensions}{}
21 \newcommand{\testprintparameters}{}
22 \newcommand{\setlabelfont}[1]{}
23 \newcommand{\setparameterfont}[1]{}
24 \newcommand{\setvaluetextsize}[1]{}
25 \newcommand{\setlayoutscale}[1]{}
26 \newcommand{\setuplayouts}{}
27 \newcommand{\printinunitsof}[1]{}
28 \newcommand{\prntlen}[1]{}
29 \newcommand{\trypaperwidth}[1]{}

```

```
30 \newcommand{\trypaperheight}[1]{
31 \newcommand{\tryoffset}[1]{
32 \newcommand{\tryvoffset}[1]{
33 \newcommand{\trytopmargin}[1]{
34 \newcommand{\tryheadheight}[1]{
35 \newcommand{\tryheadsep}[1]{
36 \newcommand{\trytextheight}[1]{
37 \newcommand{\tryfootskip}[1]{
38 \newcommand{\tryoddsidemargin}[1]{
39 \newcommand{\tryevensidemargin}[1]{
40 \newcommand{\trytextwidth}[1]{
41 \newcommand{\trymarginparsep}[1]{
42 \newcommand{\trymarginparwidth}[1]{
43 \newcommand{\trymarginparpush}[1]{
44 \newcommand{\trycolumnsep}[1]{
45 \newcommand{\trycolumnseprule}[1]{
46 \newcommand{\setfootbox}[2]{
47 \newcommand{\currentpage}{
48 \newcommand{\drawpage}{(draw page)}
49 \newcommand{\pagediagram}{(page diagram)}
50 \newcommand{\pagedesign}{(page design)}
51 \newcommand{\pagevalues}{(page values)}
52 \newcommand{\trystockwidth}[1]{
53 \newcommand{\trystockheight}[1]{
54 \newcommand{\trytrimedge}[1]{
55 \newcommand{\trytrimtop}[1]{
56 \newcommand{\tryuppermargin}[1]{
57 \newcommand{\tryspinemargin}[1]{
58 \newcommand{\currentstock}{
59 \newcommand{\drawstock}{(draw stock)}
60 \newcommand{\stockdiagram}{(stock diagram)}
61 \newcommand{\stockdesign}{(stock design)}
62 \newcommand{\stockvalues}{(stock values)}
63 \newcommand{\tryitemindent}[1]{
64 \newcommand{\trylabelwidth}[1]{
65 \newcommand{\trylabelsep}[1]{
66 \newcommand{\tryleftmargin}[1]{
67 \newcommand{\tryrightmargin}[1]{
68 \newcommand{\trylistparindent}[1]{
69 \newcommand{\trytopsep}[1]{
70 \newcommand{\tryparskip}[1]{
71 \newcommand{\trypartopsep}[1]{
72 \newcommand{\tryparsep}[1]{
73 \newcommand{\tryitemsep}[1]{
74 \newcommand{\currentlist}{
75 \newcommand{\drawlist}{(draw list)}
76 \newcommand{\listdiagram}{(list diagram)}
77 \newcommand{\listdesign}{(list design)}
78 \newcommand{\listvalues}{(list values)}
79 \newcommand{\tryfootins}[1]{
80 \newcommand{\tryfootnotesepp}[1]{
81 \newcommand{\tryfootnotebaseline}[1]{
82 \newcommand{\tryfootruleheight}[1]{
83 \newcommand{\tryfootrulefrac}[1]{
84 \newcommand{\currentfootnote}{
```

```
85 \newcommand{\drawfootnote}{(draw footnote)}
86 \newcommand{\footnotediagram}{(footnote diagram)}
87 \newcommand{\footnotedesign}{(footnote design)}
88 \newcommand{\footnotevalues}{(footnote values)}
89 \newcommand{\tryparindent}[1]{}
90 \newcommand{\tryparlinewidth}[1]{}
91 \newcommand{\tryparbaselineskip}[1]{}
92 \newcommand{\currentparagraph}{}
93 \newcommand{\drawparagraph}{(draw paragraph)}
94 \newcommand{\paragraphdiagram}{(paragraph diagram)}
95 \newcommand{\paragraphdesign}{(paragraph design)}
96 \newcommand{\paragraphvalues}{(paragraph values)}
97 \newcommand{\trybeforeskip}[1]{}
98 \newcommand{\tryafterskip}[1]{}
99 \newcommand{\tryindent}[1]{}
100 \newcommand{\currentheading}{}
101 \newcommand{\drawheading}[1]{}{(draw heading)}
102 \newcommand{\headingdiagram}[1]{}{(heading diagram)}
103 \newcommand{\headingdesign}[1]{}{(heading design)}
104 \newcommand{\headingvalues}{(heading values)}
105 \newcommand{\trytextfloatsep}[1]{}
106 \newcommand{\tryfloatsep}[1]{}
107 \newcommand{\tryintextsep}[1]{}
108 \newcommand{\trytopfigrule}[1]{}
109 \newcommand{\trybotfigrule}[1]{}
110 \newcommand{\currentfloat}{}
111 \newcommand{\drawfloat}{(draw float)}
112 \newcommand{\floatdiagram}{(float diagram)}
113 \newcommand{\floatdesign}{(float design)}
114 \newcommand{\floatvalues}{(float values)}
115 \newcommand{\trytotalnumber}[1]{}
116 \newcommand{\trytopnumber}[1]{}
117 \newcommand{\trybottomnumber}[1]{}
118 \newcommand{\trytopfraction}[1]{}
119 \newcommand{\trytextfraction}[1]{}
120 \newcommand{\trybottomfraction}[1]{}
121 \newcommand{\currentfloatpage}{}
122 \newcommand{\drawfloatpage}{(draw floatpage)}
123 \newcommand{\floatpagediagram}{(floatpage diagram)}
124 \newcommand{\floatpagedesign}{(floatpage design)}
125 \newcommand{\floatpagevalues}{(floatpage values)}
126 \newcommand{\trytocindent}[1]{}
127 \newcommand{\trytocnumwidth}[1]{}
128 \newcommand{\trytoclinewidth}[1]{}
129 \newcommand{\trytocrmarg}[1]{}
130 \newcommand{\trytocpnumwidth}[1]{}
131 \newcommand{\trytocdotsep}[1]{}
132 \newcommand{\currenttoc}{}
133 \newcommand{\drawtoc}{(draw toc)}
134 \newcommand{\tocdiagram}{(toc diagram)}
135 \newcommand{\tocdesign}{(toc design)}
136 \newcommand{\tocvalues}{(toc values)}
137 \newcommand{\drawspread}[8][0]{}{(a spread)}
138 \newcommand{\drawfontframe}[1]{}{(font frame)}
139 \newcommand{\drawfontframelabel}[1]{}{(font frame label)}
```

---

File 190 **lwarp-leading.sty**

§ 289 Package **leading**

Pkg leading leading is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{leading}[2008/12/11]
2 \newcommand\leading[1]{}

```

---

File 191 **lwarp-letterspace.sty**

§ 290 Package **letterspace**

*(Emulates or patches code by R SCHLICHT.)*

Pkg letterspace letterspace is a subset of microtype, which is pre-loaded by lwarp. All user options and macros are ignored and disabled.

**for HTML output:** Discard all options for lwarp-letterspace:

```
1 \LWR@ProvidesPackageDrop{letterspace}[2018/01/14]
2 \newcommand*\lsstyle{}
3 \newcommand\textls[2][1]{}
4 \def\textls#1#{}
5 \newcommand*\lslig[1]{#1}

```

---

File 192 **lwarp-lettrine.sty**

§ 291 Package **lettrine**

*(Emulates or patches code by DANIEL FLIPO.)*

Pkg lettrine Emulated.

**for HTML output:** Discard all options for lwarp-lettrine:

```
1 \LWR@ProvidesPackageDrop{lettrine}[2018-08-28]
```

The initial letter is in a <span> of class lettrine, and the following text is in a <span> of class lettrinetext. \lettrine [*<keys>*] {*<letter>*} {*<additional text>*}

```
2 \DeclareDocumentCommand{\lettrine}{o m m}{%
3 \InlineClass{lettrine}{#2}\InlineClass{lettrinetext}{#3} % extra space

```

```

4 }
5
6 \newcounter{DefaultLines}
7 \setcounter{DefaultLines}{2}
8 \newcounter{DefaultDepth}
9 \newcommand*\DefaultOptionsFile{\relax}
10 \newcommand*\DefaultLoversize{0}
11 \newcommand*\DefaultLraise{0}
12 \newcommand*\DefaultLhang{0}
13 \newdimen\DefaultFindent
14 \setlength{\DefaultFindent}{\z@}
15 \newdimen\DefaultNindent
16 \setlength{\DefaultNindent}{0.5em}
17 \newdimen\DefaultSlope
18 \setlength{\DefaultSlope}{\z@}
19 \newdimen\DiscardVskip
20 \setlength{\DiscardVskip}{0.2\p@}
21 \newif\ifLettrineImage
22 \newif\ifLettrineOnGrid
23 \newif\ifLettrineRealHeight
24
25 \newcommand*\LettrineTextFont{\scshape}
26 \newcommand*\LettrineFontHook{}
27 \newcommand*\LettrineFont[1]{\InlineClass{lettrine}{#1}}
28 \newcommand*\LettrineFontEPS[1]{\includegraphics[height=1.5ex]{#1}}

```

---

File 193 **lwarp-lineno.sty**

§ 292 Package **lineno**

*(Emulates or patches code by STEPHAN I. BÖTTCHER.)*

Pkg lineno **lineno** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{lineno}[2005/11/02]
2 \newcommand*\resetlinenumber[1][\@ne]{}
3
4 \def\linenumbers{%
5 \@ifnextchar[{\resetlinenumber}%
6 {\@ifstar{\resetlinenumber}{}}%
7 }
8
9 \newcommand*\nolinenumbers{}
10
11 \@namedef{linenumbers*}{\par\linenumbers*}
12 \@namedef{runninglinenumbers*}{\par\runninglinenumbers*}
13
14 \def\endlinenumbers{\par}
15 \let\endrunninglinenumbers\endlinenumbers
16 \let\endpagewiselinenumbers\endlinenumbers
17 \expandafter\let\csname endlinenumbers*\endcsname\endlinenumbers
18 \expandafter\let\csname endrunninglinenumbers*\endcsname\endlinenumbers

```

```
19 \let\endnolinenumbers\endlinenumbers
20
21 \def\pagewiselinenumbers{\linenumbers\setpagewiselinenumbers}
22
23 \def\runninglinenumbers{\setrunninglinenumbers\linenumbers}
24
25 \def\setpagewiselinenumbers{}
26
27 \def\setrunninglinenumbers{}
28
29 \def\linenomath{}%
30 \@namedef{linenomath*}{}%
31 \def\endlinenomath{}
32 \expandafter\let\csname endlinenomath*\endcsname\endlinenomath
33
34 \let\lineLabel\label
35
36 \def\switchlinenumbers{\@ifstar{}{}}
37 \def\setmakelinenumbers#1{\@ifstar{}{}}
38
39 \def\leftlinenumbers{\@ifstar{}{}}
40 \def\rightlinenumbers{\@ifstar{}{}}
41
42 \newcounter{linenumber}
43 \newcount\c@pagewiselinenumber
44 \let\c@runninglinenumber\c@linenumber
45
46 \def\runningpagewiselinenumbers{}
47 \def\realpagewiselinenumbers{}
48
49
50 \NewDocumentCommand\modulolinenumbers{s o}{}
51
52 \chardef\c@linenumbermodulo=5
53 \modulolinenumbers[1]
54
55 \newcommand*\firstlinenumber[1]{}
56
57 \newcommand\internallinenumbers{}
58 \let\endinternallinenumbers\endlinenumbers
59 \@namedef{internallinenumbers*}{\internallinenumbers*}
60 \expandafter\let\csname endinternallinenumbers*\endcsname\endlinenumbers
61
62 \newcommand*\linenoplaceholder[1]{% redefine per language
63 (line number reference for \detokenize\expandafter{#1})
64 }
65
66 \newcommand*\lineref}[2][\linenoplaceholder{#2}]
67 \newcommand*\linerefp}[2][\linenoplaceholder{#2}]
68 \newcommand*\linerefr}[2][\linenoplaceholder{#2}]
69
70 \newcommand\quotelinenumbers
71 {\@ifstar\linenumbers{\@ifnextchar[\linenumbers{\linenumbers*}}}
72
73 \newdimen\linenumbersep
```



```

74 \newdimen\linenumberwidth
75 \newdimen\quotelinenumbersep
76
77 \quotelinenumbersep=\linenumbersep
78 \let\quotelinenumberfont\linenumberfont
79
80 \def\linenumberfont{\normalfont\tiny\sffamily}
81
82
83 \linenumberwidth=10pt
84 \linenumbersep=10pt
85
86 \def\thelinenumber{}
87
88 \def\LineNumber{}
89 \def\makeLineNumber{}
90 \def\makeLineNumberLeft{}
91 \def\makeLineNumberRight{}
92 \def\makeLineNumberOdd{}
93 \def\makeLineNumberEven{}
94 \def\makeLineNumberRunning{}
95
96
97 \newenvironment{numquote} {\quote}{\endquote}
98 \newenvironment{numquotation} {\quotation}{\endquotation}
99 \newenvironment{numquote*} {\quote}{\endquote}
100 \newenvironment{numquotation*}{\quotation}{\endquotation}
101
102 \newdimen\bframerule
103 \bframerule=\fboxrule
104
105 \newdimen\bframesep
106 \bframesep=\fboxsep
107
108 \newenvironment{bframe}
109 {%
110 \LWR@forceminwidth{\bframerule}%
111 \BlockClass[
112 border:\LWR@printlength{\LWR@atleastonept} solid black ; %
113 padding:\LWR@printlength{\bframesep}%
114]{bframe}
115 }
116 {\endBlockClass}

```

---

File 194 **lwarp-lips.sty**

§ 293 Package **lips**

*(Emulates or patches code by MATT SWIFT.)*

Pkg lips lips is emulated.

```
1 % \LWR@ProvidesPackageDrop{lips}
```

```

2 \PackageInfo{lwarp}{Using the lwarp version of package ‘lips’.}%
3 \ProvidesPackage{lwarp-lips}[2001/08/31]
4
5 \NewDocumentCommand{\Lips}{}{\textellipsis}
6
7 \NewDocumentCommand{\BracketedLips}{}{[\textellipsis]}
8
9 \let\lips\Lips
10 \let\olips\lips
11
12 \DeclareOption*{}
13 \DeclareOption{mla}{
14 \let\lips\BracketedLips
15 }
16 \ProcessOptions\relax
17
18 \newcommand \LPNobreakList {}

```

---

File 195 **lwarp-listings.sty**

§ 294 Package **listings**

*(Emulates or patches code by CARSTEN HEINZ, BROOKS MOSES, JOBST HOFFMANN.)*

Pkg listings listings is supported with some limitations. Text formatting is not yet supported.

for HTML output: 1 \begin{warHTML}

2 \LWR@ProvidesPackagePass{listings}[2018/09/02]

Force flexible columns. Fixed columns inserts spaces in the PDF output.

3 \lst@column@flexible

Patches to embed listings inside pre tags:

4 \let\LWR@origlst@Init\lst@Init

5 \let\LWR@origlst@DeInit\lst@DeInit

6

7 \let\LWR@origlsthkEveryPar\lsthk@EveryPar

8

9 \renewcommand{\l@lstlisting}[2]{\hypertocfloat{1}{\lstlisting}{lol}{#1}{#2}}

\lstset {<options>}

Use the listings `literate` option to replace HTML entities:

10 \def\lstset@#1{\endgroup%

11 % \ifx\@empty#1%

12 % \@empty%

13 % \else%

14 % \setkeys{lst}{%

```

15 #1%
16 ,literate=%
17 {<}{\HTMLentity{lt}}{4}%
18 {>}{\HTMLentity{gt}}{4}%
19 {\&}{\HTMLentity{amp}}{5}%
20 }%
21 % \fi%
22 }

```

`\lst@Init`    *{(backslash-processing)}*    Done at the start of a listing.

```
23 \renewcommand{\lst@Init}[1]{%
```

Perform the listings initialization:

```

24 \LWR@traceinfo{\lst@Init}%
25 \renewcommand*{@capttype}{lstlisting}%
26 \let\lst@aboveskip\z@\let\lst@belowskip\z@%
27 \gdef\lst@boxpos{t}%
28 \let\lst@frame\@empty
29 \let\lst@frametshape\@empty
30 \let\lst@framershape\@empty
31 \let\lst@framebshape\@empty
32 \let\lst@framelshape\@empty
33 \lstframe@\lst@frameround ffff\relax%
34 \lst@multicols\@empty%
35 \LWR@origlst@Init{#1}\relax%

```

Avoids extra horizontal space:

```

36 \def\lst@frame{r}%
37 \LWR@traceinfo{finished origlst@Init}%
38 \lst@ifdisplaystyle%

```

Creating a display.

Disable line numbers, produce the <pre>, then reenable line numbers.

```

39 \LWR@traceinfo{About to create verbatim.}%
40 \let\lsthk@EveryPar\relax%
41 \LWR@forcenewpage
42 \LWR@atbeginverbatim{2}{programlisting}%
43
44 \let\lsthk@EveryPar\LWR@origlsthkEveryPar%
45 \else%

```

Inline, so open a <span>:

```

46 \ifbool{LWR@verbtags}{\LWR@htmltag{span class="inlineprogramlisting"}}{}%
47 \fi%
48 }
49

```

`\lst@DeInit`    Done at the end of a listing.

```

50 \renewcommand*{\lst@DeInit}{%
51 \lst@ifdisplaystyle%

```

Creating a display.

Disable line numbers, produce the `</pre>`, then reenable line numbers:

```
52 \let\lsthk@EveryPar\relax%
53 \LWR@afterendverbatim{0}%
54 \let\lsthk@EveryPar\LWR@origlsthkEveryPar%
55 \else%
```

Inline, so create the closing `</span>`:

```
56 \ifbool{LWR@verbtags}{\noindent\LWR@htmltag{/span}}{ }%
57 \fi%
```

Final listings deinit:

```
58 \LWR@origlst@DeInit%
59 }
```

```
\lst@MakeCaption {}
```

This is called BOTH at the top and at the bottom of each listing.

Patched for lwarp.

```
60 \def\lst@MakeCaption#1{%
61 \LWR@traceinfo{MAKING CAPTION at #1}%
62 \lst@ifdisplaystyle
63 \LWR@traceinfo{making a listings display caption}%
64 \ifx #1t%
65 \ifx\lst@caption\@empty\expandafter\lst@HRefStepCounter \else
66 \expandafter\refstepcounter
67 \fi {lstlisting}%
68 \LWR@traceinfo{About to assign label: !\lst@label!}%
69 % \ifx\lst@label\@empty\else
70 % \label{\lst@label}\fi
71 \LWR@traceinfo{Finished assigning the label.}%
72 \let\lst@arg\lst@iname \lst@ReplaceIn\lst@arg\lst@filenamerpl
73 \global\let\lst@name\lst@arg \global\let\lstname\lst@name
74 \lst@ifno!else
75 \ifx\lst@caption\@empty
76 \ifx\lst@caption\@empty
77 \ifx\lst@iname\@empty \else \def\lst@temp{ }%
78 \ifx\lst@iname\lst@temp \else
```

This code places a contents entry for a non-float. This would have to be modified for lwarp:

```
79 \LWR@traceinfo{addcontents lst@name: -\lst@name-}%
80 % \addcontentsline{lol}{lstlisting}{\lst@name}
81 \fi\fi
82 \fi
83 \else
```

This would have to be modified for lwarp:

```
84 \LWR@traceinfo{addcontents lst@caption: -\lst@caption-}%
85 \addcontentsline{lol}{lstlisting}%
86 {\protect\numberline{\thelstlisting}%
87 {\protect\ignorespaces \LWR@isolate{\lst@caption} \protect\relax}}%
88 \fi
```

```

89 \fi
90 \fi
91 \ifx\lst@caption\@empty\else
92 \LWR@traceinfo{\lst@caption not empty-}%
93 \lst@ifsubstring #1\lst@captionpos
94 {\begingroup
95 \LWR@traceinfo{at the selected position}%

```

These space and box commands are not needed for HTML output:

```

96 % \let\@vskip\vskip
97 % \def\vskip{\afterassignment\lst@vskip \@tempskipa}%
98 % \def\lst@vskip{\nobreak\@vskip\@tempskipa\nobreak}%
99 % \par\@parboxrestore\normalsize\normalfont % \noindent (AS)
100 % \ifx #1t\allowbreak \fi
101 \ifx\lst@title\@empty

```

New lwarp code to create a caption:

```

102 \lst@makecaption\fnum\lstlisting{\ignorespaces \lst@caption}
103 \else

```

New lwarp code to create a title:

```

104 % \lst@maketitle\lst@title % (AS)
105 \LWR@traceinfo{Making title: \lst@title}%
106 \begin{BlockClass}{\lstlistingtitle}% lwarp
107 \lst@maketitle\lst@title% lwarp
108 \end{BlockClass}% lwarp
109 \fi
110 \LWR@traceinfo{About to assign label: !\lst@label!}%
111 \ifx\lst@label\@empty\else
112 \leavevmode% gets rid of bad space factor error
113 \GetTitleStringExpand{\lst@caption}%
114 \edef\LWR@lntemp{\GetTitleStringResult}%
115 \edef\@currentlabelname{\detokenize\expandafter{\LWR@lntemp}}%
116 \label{\lst@label}\fi
117 \LWR@traceinfo{Finished assigning the label.}%

```

Not needed for lwarp:

```

118 % \ifx #1b\allowbreak \fi
119 \endgroup}{}%
120 \fi
121 \LWR@traceinfo{end of making a listings display caption}%
122 \else
123 \LWR@traceinfo{INLINE}%
124 \fi
125 \LWR@traceinfo{DONE WITH CAPTION at #1}%
126 }

```

[line numbers](#) Patched to keep left line numbers outside of the left margin, and place right line numbers in a field `\VerbatimHTMLwidth` wide.

```

127 \lst@Key{numbers}{none}{%
128 \let\lst@PlaceNumber\@empty
129 \lstKV@SwitchCases{#1}%
130 {none:}%
131 left:\def\lst@PlaceNumber{%

```

For now, `lwarp` places left line numbers inline. Ideally the entire line would be moved to the right, but conflicts with list indenting occurs.

```

132 % \LWR@origllap{
133 \LWR@originormalfont%
134 \lst@numberstyle{\thelstnumber}\kern\lst@numbersep%
135 % }
136 }\\%
137 right:\def\lst@PlaceNumber{\LWR@origrlap{\LWR@originormalfont
138 \kern 6in \kern\lst@numbersep
139 \lst@numberstyle{\thelstnumber}}}%
140 }{\PackageError{Listings}{Numbers #1 unknown}\@ehc}

141 \end{warpHTML}

```

---

File 196 **lwarp-listliketab.sty**

§ 295 Package **listliketab**

Pkg listliketab listliketab is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop[listliketab][2005/01/09]

```

2 \newcommand*\storestyleof[1]{}
3 \newcommand*\storeliststyle{}
4 \newenvironment{listliketab}{}{}

```

---

File 197 **lwarp-lltjext.sty**

§ 296 Package **lltjext**

*(Emulates or patches code by THE L<sup>A</sup>T<sub>E</sub>X-JA PROJECT TEAM.)*

Pkg lltjext lltjext is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{lltjext}[2018/10/07]

```

2 \protected\def\yoko{%
3 \directlua{luatexja.direction.set_list_direction(4, 'yoko')}%
4 }
5 \protected\def\tate{\yoko}
6 \protected\def\dtou{\yoko}
7 \protected\def\utod{\yoko}
8
9 \define@key[ltj]{japaram}{direction}{}
10
11 \yoko
12
13 \DeclareExpandableDocumentCommand{\rensuji}{s o m}{#3}

```

```

14
15 \DeclareDocumentCommand{\layoutfloat}{d() o m}{}
16
17 \DeclareDocumentCommand{\DeclareLayoutCaption}{m d<> d() o}{}
18
19 \LetLtxMacro\pccaption\caption
20
21 \DeclareDocumentCommand{\layoutcaption}{d<> d() o}{}
22
23 \let\captiondir\relax
24 \RenewDocumentEnvironment{LWR@HTML@minipage}{d<> O{t} O{} O{t} m}
25 {\LWR@HTML@sub@minipage{#2}{#3}{#4}{#5}}
26 {\endLWR@HTML@sub@minipage}
27
28 \RenewDocumentCommand{\LWR@HTML@parbox}{d<> O{t} O{} O{t} m +m}
29 {
30 \LWR@traceinfo{parbox of width #4}%
31 \begin{minipage}[#2][#3][#4]{#5}%
32 #6
33 \end{minipage}%
34 }
35
36 \RenewDocumentCommand{\pbox}{d<> O{0pt} O{c} m}{%
37 \global\booltrue{LWR@minipagefullwidth}%
38 \parbox{#2}{#4}%
39 }

```

---

File 198 **lwarp-longtable.sty**

§ 297 Package **longtable**

(Emulates or patches code by DAVID CARLISLE.)

Pkg longtable longtable is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{longtable}[2014/10/28]

Use one of either `\endhead` or `\endfirsthead` for both print and HTML, and use a `\warpprintonly` macro to disable the other head phrase, and also the `\endfoot` and `\endfirstfoot` phrases. (See section 9.10.4 if using `threeparttablex`.)

```

\begin{longtable}{ [column specifiers] }
[. . .] \endfirsthead % or \endhead, for print and HTML
\warpprintonly{ % not used in HTML
[. . .] \endhead % or \endfirsthead
[. . .] \endfoot
[<lastfoot macros>] \endlastfoot
}
. . . table contents . . .
\warppHTMLonly{
[<lastfoot macros>] % HTML last footer, without \endfoot
% or \endlastfoot.
}
\end{longtable}

```

⚠ **Misplaced \noalign** Use the `\warpprintonly` macro instead of the `\warpprint` environment. Doing so helps avoid “Misplaced \noalign.” when using `\begin{\warpprint}`.

⚠ **\kill** `\kill` is ignored, place a `\kill` line inside

```
\begin{\warpprint} . . . \end{\warpprint}
```

or place it inside `\warpprintonly`.

⚠ **lateximage** `longtable` is not supported inside a `lateximage`.

See:

<http://tex.stackexchange.com/questions/43006/why-is-input-not-expandable>

Used to detect more than one of `\endhead` and `\endfirsthead` in use for HTML at the same time.

```

2 \newbool{LWR@longtable@havehead}
3 \boolfalse{LWR@longtable@havehead}

```

Env `longtable` \* [*horizontalignment*] {*colspec*} Emulates the `longtable` environment.

Per the `caption` package, the starred version steps the counter per caption. The unstarred version steps the counter once at the beginning, but not at each caption.

Options [c], [l], and [r] are ignored.

```

4 \newenvironment{longtable*}[2][{}]{%
5 \LWR@floatbegin{table}%
6 \setcaptiontype{LTcaption}%
7 \caption@setoptions{longtable}%
8 \caption@setoptions{@longtable}%
9 \caption@LT@setup%
10 \booltrue{LWR@starredlongtable}%
11 \boolfalse{LWR@longtable@havehead}%
12 \let\captionlistentry\LWR@LTcaptionlistentry%
13 \tabular{#2}
14 }
15 {\endtabular\LWR@floatend}
16

```



```

17 \newenvironment{longtable}[2][]{%
18 \LWR@floatbegin{table}%
19 \setcaptiontype{LTcaption}%
20 \caption@setoptions{longtable}%
21 \caption@setoptions{@longtable}%
22 \caption@LT@setup%
23 \refstepcounter{LTcaption}%
24 \boolfalse{LWR@longtable@havehead}%
25 \let\captionlistentry\LWR@LTcaptionlistentry%
26 \tabular{#2}
27 }
28 {\endtabular\LWR@floatend}

```

Provided for compatibility, but ignored:

```
29 \newcounter{LTchunksize}
```

Error for heads which should have been in \warpprintonly:

```

30 \newcommand*{\LWR@longtable@headerror}{%
31 \PackageError{lwarp}
32 {For longtable:\MessageBreak
33 1: Keep either one of an \protect\endhead\space or
34 \protect\endfirsthead\space\MessageBreak
35 \space phrase as-is, to be used by both print and HTML.\MessageBreak
36 2: Place any other \protect\end... phrases inside a\MessageBreak
37 \space\protect\warpprintonly\space macro,
38 to be ignored by HTML.\MessageBreak
39 3: Add a final footer for HTML at the end of the table\MessageBreak
40 \space inside a \protect\warpprintonly\space macro.
41 This can be\MessageBreak
42 \space a copy of an \protect\endfoot\space or
43 \protect\endfirstfoot\space phrase,\MessageBreak
44 \space but without the actual \protect\endfoot\space
45 or \protect\endfirstfoot\MessageBreak
46 \space macros. If using threeparttablex, add\MessageBreak
47 \space \protect\insertTableNotes\space here,
48 optionally with\MessageBreak
49 \space \protect\UseMinipageWidths\space in front.\MessageBreak
50 See the lwarp documentation regarding longtables\MessageBreak
51 and threeparttablex}
52 {See the lwarp documentation regarding longtables and threeparttablex.}
53 }

```

Error if more than one of \endhead or \endfirsthead is outside of warpprintonly.

```

54 \newcommand*{\LWR@longtable@maybeheaderror}{%
55 \ifbool{LWR@longtable@havehead}%
56 {\LWR@longtable@headerror}%
57 {%
58 \booltrue{LWR@longtable@havehead}
59 \LWR@tabularendofline% throws away options //[dim] and //*
60 }%
61 }

```

Error if more than one of these is outside of warpprint.

```
62 \def\endhead{\LWR@longtable@maybeheaderror}
63 \def\endfirsthead{\LWR@longtable@maybeheaderror}
```

Error if ANY of these is outside of warpprint.

```
64 \def\endfoot{\LWR@longtable@headerror}
65 \def\endlastfoot{\LWR@longtable@headerror}

66 \providecommand*\LWR@HTML@tabularnewline{\LWR@tabularendofline}
67 \LWR@formatted{tabularnewline}

68 \newcommand{\setlongtables}{}% Obsolete command, does nothing.
69 \newlength{\LTleft}
70 \newlength{\LTright}
71 \newlength{\LTpre}
72 \newlength{\LTpost}
73 \newlength{\LTcapwidth}

74 \LetLtxMacro\LWR@origkill\kill
75 \renewcommand*\kill{\LWR@tabularendofline}
76 \appto\LWR@restoreorigformatting{%
77 \LetLtxMacro\kill\LWR@origkill%
78 }
```

---

File 199 **lwarp-lscape.sty**

§ 298 Package **lscape**

*(Emulates or patches code by D. P. CARLISLE.)*

Pkg lscape lscape is emulated.

**for HTML output:** Discard all options for lwarp-lscape.

```
1 \LWR@ProvidesPackageDrop{lscape}[2000/10/22]
2 \newenvironment*{landscape}{}{}
```

---

File 200 **lwarp-ltablex.sty**

§ 299 Package **ltablex**

*(Emulates or patches code by ANIL K. GOEL.)*

Pkg ltablex ltablex is emulated by lwarp.

**for HTML output:**

Relies on tabularx.

```

1 \RequirePackage{tabularx}
2
3 \LWR@ProvidesPackageDrop{ltablex}[2014/08/13]
4
5 \DeclareDocumentEnvironment{tabularx}{m o m}
6 {\longtable{#3}}
7 {\endlongtable}
8
9 \DeclareDocumentEnvironment{tabularx*}{m o m}
10 {\longtable{#3}}
11 {\endlongtable}
12
13 \newcommand*\keepXColumns{}
14 \newcommand*\convertXColumns{}

```

---

File 201 **lwarp-ltcaption.sty**

§ 300 Package **ltcaption**

*(Emulates or patches code by AXEL SOMMERFELDT.)*

Pkg ltcaption ltcaption is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{ltcaption}[2018/08/26]

\LTcaption is already defined by lwarp.

longtable\* is already defined by lwarp-longtable.

```

2 \newlength{\LTcapskip}
3 \newlength{\LTcapleft}
4 \newlength{\LTcapright}
5 \newcommand*\LTcapmarginfalse{}

```

---

File 202 **lwarp-ltxgrid.sty**

§ 301 Package **ltxgrid**

Pkg ltxgrid ltxgrid is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{ltxgrid}[2010/07/25]

```

2 \newcommand*\onecolumngrid{}
3 \newcommand*\twocolumngrid{}
4 \newcommand*\removestuff{}
5 \newcommand*\addstuff[2]{}
6 \newcommand*\replacestuff[2]{}


```

---

File 203 **lwarp-ltxtable.sty**

§ 302 Package **ltxtable**

Pkg ltxtable ltxtable is emulated.

 **table numbering** The print version does not seem to honor longtable\* from the caption package, while lwarp does.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{ltxtable}[1995/12/11]

```
\LTXtable {<width>} {<file>}
2 \newcommand*\LTXtable[2]{%
3 \input{#2}%
4 }
```

---

File 204 **lwarp-lua-check-hyphen.sty**

§ 303 Package **lua-check-hyphen**

Pkg lua-check-hyphen lua-check-hyphen is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{lua-check-hyphen}[2018/04/19]

```
2 \newcommand*\LuaCheckHyphen[1]{}
```

---

File 205 **lwarp-lua-visual-debug.sty**

§ 304 Package **lua-visual-debug**

Pkg lua-visual-debug lua-visual-debug is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{lua-visual-debug}[2016/05/30]

---

File 206 **lwarp-luacolor.sty**

§ 305 Package **luacolor**

Pkg luacolor luacolor is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{luacolor}[2016/05/16]

---

```
2 \newcommand{\luacolorProcessBox}[1]{}
```

---

File 207 **lwarp-luatodonotes.sty**

§ 306 Package **luatodonotes**

*(Emulates or patches code by FABIAN LIPP.)*

Pkg luatodonotes luatodonotes is emulated.

The documentation for `todonotes` and `luatodonotes` have an example with a `todo` inside a caption. If this example does not work it will be necessary to move the `todo` outside of the caption.

**for HTML output:** 1 \LWR@ProvidesPackagePass[luatodonotes][2017/09/30]

Nullify options:

```
2 \@todonotes@additionalMarginEnabledfalse

3 \if@todonotes@disabled
4 \else
5
6 \newcommand{\ext@todo}{tdo}
7
8 \renewcommand{\l@todo}[2]{\hypertocfloat{1}{todo}{ldo}{#1}{#2}}

9 \let\LWRTODONOTES@orig@todototoc\todototoc
10
11 \renewcommand*{\todototoc}{%
12 \phantomsection%
13 \LWRTODONOTES@orig@todototoc%
14 }
15
16
17 \renewcommand{\@todonotes@drawMarginNoteWithLine}{%
18 \fcolorbox
19 {\@todonotes@currentbordercolor}
20 {\@todonotes@currentbackgroundcolor}
21 {\arabic{\@todonotes@numberoftodonotes}}
22 \marginpar{\@todonotes@drawMarginNote}
23 }
24
25 \renewcommand{\@todonotes@drawInlineNote}{%
26 \fcolorboxBlock%
27 {\@todonotes@currentbordercolor}%
28 {\@todonotes@currentbackgroundcolor}%
29 {%
30 \if@todonotes@authorgiven%
31 {\@todonotes@author:\,}%
32 \fi%
```

```

33 \@todonotes@text%
34 }%
35 }
36
37 \newcommand{\@todonotes@drawMarginNote}{%
38 \if@todonotes@authorgiven%
39 \@todonotes@author\par%
40 \fi%
41 \arabic{@todonotes@numberoftodonotes}: %
42 \fcolorbox%
43 {\@todonotes@currentbordercolor}%
44 {\@todonotes@currentbackgroundcolor}%
45 {%
46 \@todonotes@sizecommand%
47 \@todonotes@text %
48 }%
49 }%
50
51 \renewcommand{\missingfigure}[2][{}]{%
52 \setkeys{todonotes}{#1}%
53 \addcontentsline{tdo}{\todo}{\@todonotes@MissingFigureText: #2}%
54 \fcolorboxBlock%
55 {\@todonotes@currentbordercolor}%
56 {\@todonotes@currentfigcolor}%
57 {%
58 \setlength{\fboxrule}{4pt}%
59 \fcolorbox{red}{white}{Missing figure} \quad #2%
60 }
61 }
62
63 \LetLtxMacro\LRWRTODONOTES@orig@todocommon\@todocommon
64
65 \RenewDocumentCommand{\@todocommon}{m m}{%
66 \begingroup%
67 \renewcommand*\phantomsection{}%
68 \LRWRTODONOTES@orig@todocommon{#1}{#2}%
69 \endgroup%
70 }
71
72 \renewcommand{\@todoarea}[3][{}]{%
73 \@todonotes@areaselectedtrue%
74 \@todocommon{#1}{#2}%
75 \todonotes@textmark@highlight{#3}%
76 \zref@label{\@todonotes@arabic{@todonotes@numberoftodonotes}@end}%
77 }%
78
79
80 \DeclareDocumentCommand{\todonotes@textmark@highlight}{m}{%
81 \InlineClass[background:\LWR@origpound{}B3FFB3]{highlight}{#1}%
82 }
83
84 \fi% \if@todonotes@disabled

```

File 208 **lwarp-magaz.sty**

§ 307 Package **magaz**

Pkg magaz **magaz** is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{magaz}[2011/11/24]

```

2 \newcommand\FirstLine[1]{%
3 \begingroup%
4 \FirstLineFont{%
5 \LWR@textcurrentcolor{%
6 \LWR@textcurrentfont{%
7 #1%
8 }%
9 }%
10 }%
11 \endgroup%
12 }
13
14 \providecommand\FirstLineFont{\scshape}
```

File 209 **lwarp-makeidx.sty**

§ 308 Package **makeidx**

*(Emulates or patches code by L<sup>A</sup>T<sub>E</sub>X PROJECT TEAM.)*

Pkg makeidx **makeidx** is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{makeidx}[2014/09/29]

\@wrindex is redefined \AtBeginDocument by the lwarp core.

\printindex

```

2 \preto\printindex{%
3 \LWR@originewpage%
4 \LWR@startpars%
5 }
```

File 210 **lwarp-manyfoot.sty**

§ 309 Package **manyfoot**

Pkg manyfoot manyfoot is emulated.

**bigfoot, manyfoot** Verbatim footnotes are not yet supported.

 **verbatim**

If using the **bigfoot** package, and possibly also **manyfoot**, problems may occur with counter allocation because **lwarp** uses many counters, and there is a difference in how counters numbered 256 and up are handled in **pdfL<sup>A</sup>T<sub>E</sub>X**. With **bigfoot** this has been known to show up as an error related to one footnote insert being forbidden inside another. Another problem showed up as a input stack error, and which of these problems occurred depended on how many counters were allocated.

As a possible solution, try creating several new counters before defining **bigfoot** or **manyfoot** footnotes, hoping to shift the problematic counter above the 256 threshold. It may instead be necessary to use **X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X** or **LuaL<sup>A</sup>T<sub>E</sub>X** instead of **pdfL<sup>A</sup>T<sub>E</sub>X**.

**lwarp**'s emulation of **bigfoot** uses **manyfoot**, so some of the **bigfoot** enhancements are included here.

The **bigfoot** “default” footnote is ignored, using the **lwarp** version instead.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{manyfoot}[2005/09/11]

2 \RequirePackage{nccfoots}
3
4 \newcommand{\extrafootnoterule}{}
5
6 \let\defaultfootnoterule\footnoterule
7
8 \newcommand*{\SelectFootnoteRule}[2][0]{}
9
10 \newcommand{\footnoterulepriority}{1}
11
12 \newcommand{\SetFootnoteHook}[1]{}
13 \onlypreamble\SetFootnoteHook
14
15 \newcommand{\SplitNote}{}
16
17 \newcommand*{\ExtraParaSkip}[1]{}
18
19 \newcommand*{\newfootnote}[2][plain]{%
20 \ifstrequal{#2}{default}{}{} not "default"
21 \expandafter\newbox\csname LWR@footnote#2box\endcsname%
22 \appto{\LWR@printpendingfootnotes}{%
23 \LWR@printpendingfootnotes{footnote#2}%
24 }
25 \long\csdef{Footnotetext#2}##1##2{%
26 \NCC@makefnmark{##1}%

```



```

27 \LWR@@footnotetext{##2}{LWR@footnote#2box}%
28 }%
29 \long\csdef{Footnotetext#2+}##1##2{%
30 \NCC@makefnmark{##1}%
31 \LWR@@footnotetext{##2}{LWR@footnote#2box}%
32 }%
33 }% not "default"
34 }
35 \onlypreamble\newfootnote
36
37 \newcommand*\DeclareNewFootnote}[2][plain]{%
38 \ifnextchar[%
39 {\LWR@manyfoot@declare{#1}{#2}}%
40 {\LWR@manyfoot@declare{#1}{#2}[arabic]}%
41 }
42
43 \def\LWR@manyfoot@declare#1#2[#3]{%
44 \ifstrequal{#2}{default}{}% not "default"
45 \newfootnote[#1]{#2}%
46 \newcounter{footnote#2}%
47 \newcounter{footnote#2Reset}%
48 \setcounter{footnote#2Reset}{0}%
49 \csdef{thefootnote#2}{%
50 \expandafter\noexpand\csname @#3\endcsname%
51 \expandafter\noexpand\csname c@footnote#2\endcsname%
52 }%

```

For **bigfoot**, the footnote commands may be appended with one or two plusses or one or two minuses, which are ignored in HTML.

```

53 \expandafter\NewDocumentCommand\csname footnote#2\endcsname{t{+}t{+}t{-}t{-}}{%
54 \stepcounter{footnote#2}%
55 \protected@xdef\@thefnmark{\csname thefootnote#2\endcsname}%
56 \@footnotemark%
57 \csuse{Footnotetext#2}{\@thefnmark}% absorbs the footnote contents
58 }%
59 \csdef{footnotemark#2}{%
60 \stepcounter{footnote#2}%
61 \protected@xdef\@thefnmark{\csname thefootnote#2\endcsname}%
62 \@footnotemark%
63 }%
64 \expandafter\NewDocumentCommand\csname footnotetext#2\endcsname{t{+}t{+}t{-}t{-}}{%
65 \protected@xdef\@thefnmark{\csname thefootnote#2\endcsname}%
66 \csuse{Footnotetext#2}{\@thefnmark}% absorbs the footnote contents
67 }%
68 \csdef{Footnotemark#2}{%
69 \Footnotemark%
70 }%
71 \csdef{Footnote#2}##1{%
72 \Footnotemark{##1}%
73 \csuse{Footnotetext#2}{##1}%
74 }%
75 }% not "default"
76 }
77 \onlypreamble\DeclareNewFootnote

```

---

File 211 **lwarp-marginal.sty**

§ 310 Package **marginal**

Pkg marginal marginal is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{marginal}

2 \newcommand*{\showlostmarginals}{}
3 \newcommand*{\enlargefreelist}{}
4 \newcommand*{\onesidemarginals}{}

```

---

File 212 **lwarp-marginfit.sty**

§ 311 Package **marginfit**

Pkg marginfit marginfit is ignored.

**for HTML output:** Discard all options for lwarp-marginfit:

```

1 \LWR@ProvidesPackageDrop{marginfit}[2018/06/08]

```

---

File 213 **lwarp-marginfix.sty**

§ 312 Package **marginfix**

*(Emulates or patches code by STEPHEN HICKS.)*

Pkg marginfix Emulated.

**for HTML output:** Discard all options for lwarp-marginfix:

```

1 \LWR@ProvidesPackageDrop{marginfix}[2013/09/08]

2 \newcommand*{\marginsskip}[1]{}
3 \newcommand*{\clearmargin}{}
4 \newcommand*{\softclearmargin}{}
5 \newcommand*{\extendmargin}[1]{}
6 \newcommand*{\mparshift}[1]{}
7 \newdimen\marginheightadjustment
8 \newdimen\marginposadjustment
9 \newcommand*{\blockmargin}[1][1]{}
10 \newcommand*{\unblockmargin}[1][1]{}
11 \newcommand*{\marginphantom}[2][1]{}

```

---

File 214 **lwarp-marginnote.sty**

§ 313 Package **marginnote**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg marginnote Emulated.

**for HTML output:** Discard all options for lwarp-marginnote:

```

1 \LWR@ProvidesPackageDrop{marginnote}[2018/08/09]

2 \NewDocumentCommand{\marginnote}{+o +m o}{\marginpar{#2}}

3 \newcommand*{\marginnoteleftadjust}{}
4 \newcommand*{\marginnoterightadjust}{}
5 \newcommand*{\marginnotetextwidth}{}
6 \let\marginnotetextwidth\textwidth
7 \newcommand*{\marginnotevadjust}{}
8 \newcommand*{\marginfont}{}
9 \newcommand*{\raggedleftmarginnote}{}
10 \newcommand*{\raggedrightmarginnote}{}

```

---

File 215 **lwarp-marvosym.sty**

§ 314 Package **marvosym**

*(Emulates or patches code by THOMAS HENLICH, MOJCA MIKLAVEC.)*

Pkg marvosym marvosym is patched for use by lwarp.

Hashed inline images are used, as there may not be Unicode support for all icons.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{marvosym}[2011/07/20]

2 \renewcommand{\mvchr}[1]{%
3 \begin{lateximage}*[(symbol #1)][marvosym #1]%
4 \mvs\char#1%
5 \end{lateximage}%
6 }
7
8 \renewcommand{\textmvs}[1]{%
9 \begin{lateximage}%
10 \mvs #1%
11 \end{lateximage}%
12 }

```


---

File 216 **lwarp-mathtools.sty**

§ 315 Package **mathtools**

*(Emulates or patches code by MORTEN HØGHOLM, LARS MADSEN.)*

Pkg mathtools mathtools is patched for use by lwarp.

 **numbering, italics** showonlyrefs and mathic are disabled.

**for HTML output:** 1 \LWR@ProvidesPackagePass{mathtools}[2018/01/08]

2 \RequirePackage{graphicx}

3 \MHInternalSyntaxOn

Forces showonlyrefs off because lwarp uses cleveref, which is not compatible with showonlyrefs.

4 \renewcommand\*\MT\_showonlyrefs\_true:{\MT\_showonlyrefs\_false:}

5 \mathtoolsset{showonlyrefs=false}

Forces math italic correction off. Not patched for lwarp.

6 \renewcommand\*\MT\_mathic\_true:{\MT\_mathic\_false:}

7 \mathtoolsset{mathic=false}

8 \MHInternalSyntaxOff

---

File 217 **lwarp-mcaption.sty**

§ 316 Package **mcaption**

*(Emulates or patches code by STEPHAN HENNIG.)*

Pkg mcaption mcaption is nullified.

**for HTML output:** Discard all options for lwarp-mcaption:

1 \LWR@ProvidesPackageDrop{mcaption}[2009/03/13]

2 \newenvironment{margincap}{}{}

3 \newcommand\*\margincapalign{}

4 \newlength\*\margincapsep

File 218 **lwarp-mdframed.sty**

§ 317 Package **mdframed**

*(Emulates or patches code by MARCO DANIEL, ELKE SCHUBERT.)*

Pkg mdframed mdframed is loaded with options forced to framemethod=none.

### § 317.1 Limitations

**support** Most basic functionality is supported, including frame background colors and single-border colors and thickness, title and subtitle background colors and borders and thickness, border radius, and shadow. CSS classes are created for mdframed environments and frame titles.

 **loading** When used, lwarp loads mdframed in HTML with framemethod=none.

**font** For title font, use

```
frametitlefont=\textbf,
```

instead of

```
frametitlefont=\bfseries,
```

where `\textbf` must appear just before the comma and will receive the following text as its argument (since the text happens to be between braces in the mdframed source). Since lwarp does not support `\bfseries` and friends, only one font selection may be made at a time.

**theoremtitlefont** theoremtitlefont is not supported, since the following text is not in braces in the mdframed source.

**ignored options** userdefinedwidth and align are currently ignored.

**css classes** Environments created or encapsulated by mdframed are enclosed in a `<div>` of class `mdframed`, and also class `md<environmentname>` for new environments.

Frame titles are placed in a `<div>` of class `|mdframedtitle|`. Subtitles are in a `<div>` of class `|mdframedsubtitle|`, and likewise for subsubtitles.

Pre-existing hooks are used to patch extra functions before and after the frames.

## § 317.2 Package loading

**for HTML output:**

```

1 \RequirePackage{xcolor}% for \convertcolorspec
2
3 \LWR@ProvidesPackageDrop{mdframed}[2013/07/01]
```

Do not require Tikz or pstricks:

```
4 \LWR@origRequirePackage[framemethod=none]{mdframed}
```

## § 317.3 Patches

Patch to remove PDF formatting and add HTML tags:

```

5 \AtBeginDocument{
6 \def\mdf@trivlist#1{%
7 \edef\mdf@temp{%
8 % \topsep=\the\topsep\relax%
9 % \partopsep=\the\partopsep\relax%
10 % \parsep=\the\parsep\relax%
11 }%
12 % \setlength{\topsep}{#1}%
13 % \topskip\z@%
14 % \partopsep\z@%
15 % \parsep\z@%
16 % \@nbrlistfalse%
17 % \@trivlist%
18 % \labelwidth\z@%
19 % \leftmargin\z@%
20 % \itemindent\z@%
21 \let\itemlabel\@empty%
22 \def\makelabel##1{##1}%
23 % \item\relax\mdf@temp\relax%
24 }
25
26 \renewcommand*{\endmdf@trivlist}{%
27 \LWR@traceinfo{endmdf@trivlist}%
28 % \endtrivlist%
29 \LWR@listend%
30 }
31 }% AtBeginDocument
```

## § 317.4 Initial setup

To handle css and paragraphs, patch code at start and end of environment and contents. `\LWR@print@raggedright` helps avoid hyphenation.

```

32 \mdfsetup{
33 startcode={\LWR@mdframedstart\LWR@print@raggedright},
34 endcode={\LWR@mdframedend},
35 startinnercode={\LWR@startpars\LWR@print@raggedright},
36 endinnercode={\LWR@stoppars},
37 }
```

### § 317.5 **Color and length HTML conversion**

`\LWR@mdfprintcolor`    `{\mdfcolorkey}`  
 Given the `mdframed` key, print the color.

```
38 \newcommand*\LWR@mdfprintcolor[1]{%
39 \convertcolorspec{named}{\@nameuse{mdf#1}}{HTML}\LWR@tempcolor%
40 \LWR@origpound\LWR@tempcolor
41 }
```

`\LWR@mdfprintlength`    `{\mdflengthkey}`  
 Given the `mdframed` key, print the length.

```
42 \newcommand*\LWR@mdfprintlength[1]{%
43 \LWR@forceminwidth{\@nameuse{mdf#1@length}}%
44 \LWR@printlength{\LWR@atleastonept}%
45 }
```

### § 317.6 **Environment encapsulation**

`\LWR@mdframedstart`    Actions before an `mdframe` starts.  
 Encapsulate a frame inside a `<div>` of the desired class.

```
46 \newcommand*\LWR@mdframedstart{%
47 \LWR@traceinfo{\LWR@mdframedstart start}%
```

Turn off paragraph handling during the generation of the encapsulating tags:

```
48 \LWR@stoppars%
```

Open a `<div>` and with custom class and custom style. A `BlockClass` environment is not used because this `<div>` is created by the `mdframed` startcode and encode settings, which do not properly nest the `<div>` inside the `mdframed` environment.

```
49 \LWR@htmltagc{div class="%
50 mdframed%
51 \ifdefstring{\LWR@mdthisenv}{mdframed}}{\LWR@mdthisenv}%
52 " \LWR@orignewline
53 style=" \LWR@orignewline
```

Convert and print the background color:

```
54 background: \LWR@mdfprintcolor{backgroundcolor} ; \LWR@orignewline
```

Convert and print the border color and width:

```
55 border: \LWR@mdfprintlength{linewidth} solid
56 \LWR@mdfprintcolor{linecolor} ; \LWR@orignewline
```

Convert and print the border radius:

```
57 border-radius: \LWR@mdfprintlength{roundcorner} ; \LWR@orignewline
```

Convert and print the shadow:

```
58 \ifbool{mdf@shadow}{%
59 box-shadow:
60 \LWR@mdfprintlength{shadowsize}
61 \LWR@mdfprintlength{shadowsize}
62 \LWR@mdfprintlength{shadowsize}
```

```

63 \LWR@mdfprintcolor{shadowcolor} ;
64 }
65 {box-shadow: none ;}
66 \LWR@orignewline

67 "}
68 % \LWR@htmldivclass{\LWR@mdthisenv}

```

mdframed environment may not work with the HTML versions of the following, so restore them to their originals while inside mdframed:

```

69 \LWR@select@print@hspace%
70 \renewcommand*{\rule}{\LWR@print@rule}
71 \let\LTxMacro\makebox\LWR@print@makebox%

72 \LWR@startpars%
73 \LWR@traceinfo{\LWR@mdframedstart done}%
74 }

```

`\LWR@mdframedend`    Actions after an mdframe ends.

After closing the `<div>`, globally restore to the default environment type:

```

75 \newcommand*{\LWR@mdframedend}{
76 \LWR@traceinfo{\LWR@mdframedend start}%

```

Close the custom `<div>`:

```

77 \LWR@htmldivclassend{\LWR@mdthisenv}

```

Reset future custom class to the default:

```

78 \gdef\LWR@mdthisenv{mdframed}

```

Resume paragraph handling:

```

79 \LWR@startpars%
80 \LWR@traceinfo{\LWR@mdframedend done}%
81 }

```

### § 317.7 **Mdframed environment**

```

82 \renewenvironment{mdframed}[1][[]]{%
83 \color@begingroup%
84 \mdfsetup{userdefinedwidth=\linewidth,#1}%
85 \mdf@startcode%
86 \mdf@preenvsetting%
87 \ifdefempty{\mdf@firstframetitle}{}%
88 {\let\mdf@frametitlesave\mdf@frametitle%
89 \let\mdf@frametitle\mdf@firstframetitle%
90 }%
91 \ifvmode\nointerlineskip\fi%
92 \ifdefempty{\mdf@frametitle}{}%
93 {\mdfframedtitleenv{\mdf@frametitle}%
94 \mdf@@frametitle@use%
95 }%
96 \mdf@trivlist{\mdf@skipabove@length}%%
97 \mdf@settings%
98 \mdf@lrbbox{\mdf@splitbox@one}%
99 \mdf@startinnercode%

```



```

100 }%
101 {%
102 % \mdf@@ignorelastdescenders%
103 \par%
104 % \unskip\ifvmode\nointerlineskip\hrule \@height\z@ \@width\hsize\fi%
105 \ifmdf@footnoteinside%
106 \def\mdf@reserveda{%
107 \mdf@footnoteoutput%
108 % \mdf@endinnercode%
109 % \endmdf@lrbox%
110 % \ifdefempty{\mdf@frametitle}}}%
111 % {\mdfframetitleenv{\mdf@frametitle}\mdf@@frametitle@use}%
112 % \detected@mdf@put@frame
113 }%
114 \else%
115 \def\mdf@reserveda{%
116 % \mdf@endinnercode%
117 % \endmdf@lrbox%
118 % \ifdefempty{\mdf@frametitle}}}%
119 % {\mdfframetitleenv{\mdf@frametitle}\mdf@@frametitle@use}%
120 % \detected@mdf@put@frame%
121 \mdf@footnoteoutput%
122 }%
123 \fi%
124 \mdf@reserveda%
125 \aftergroup\endmdf@trivlist%
126 \color@endgroup%
127 \mdf@endcode%
128 }

```

`\mdf@footnoteoutput`

```

129 \renewrobustcmd*\mdf@footnoteoutput{%
130 \LWR@printpendingmpfootnotes%
131 }

```

### § 317.8 Titles and subtitles

`\mdfframetitleenv` `{<title>}`

Place the title inside a `<div>` of class `mdfframetitle`:

```

132 \newlength{\LWR@titleroundcorner}
133
134 \renewrobustcmd\mdfframetitleenv[1]{%
135 \LWR@traceinfo{\LWR@mdfframetitleenv start}%

```

Open a `<div>` with a custom `class` and custom `style`:

```

136 \begin{BlockClass}[%

```

Convert and print the title background color:

```

137 background:
138 \LWR@mdfprintcolor{frametitlebackgroundcolor}
139 ; \LWR@orignewline

```

Convert and print the title rule:

```

140 \ifbool{mdf@frametitulerule}{%
141 border-bottom:
142 \LWR@mdfprintlength{frametitulerulewidth}
143 solid
144 \LWR@mdfprintcolor{frametitulerulecolor}
145 ; \LWR@orignewline
146 }{}%

```

Finish the custom style and the opening <div> tag:

```
147]{mdframedtitle}%
```

Print the title inside the <div>:

```
148 \mdf@frametitlefont{\LWR@textcurrentfont{#1}}%
```

Close the <div>:

```

149 \end{BlockClass}%
150 \LWR@traceinfo{\LWR@mdframedtitleenv end}%
151 }

```

```
\LWR@mdfsubtitlecommon {<sub -or- subsub>} [<options>] {<title>}
```

Common code for \LWR@mdfsubtitle and \LWR@mdfsubsubtitle.

Encapsulate the subtitle inside a <div> of class mdframedsubtitle:

```

152 \NewDocumentCommand{\LWR@mdfsubtitlecommon}{m o m}
153 {% the following empty line is required
154
155 \LWR@traceinfo{\LWR@mdframedsubtitlecommon start}%

```

Open a <div> with a custom class and custom style:

```
156 \begin{BlockClass}[%
```

Convert and print the background color:

```

157 background:
158 \LWR@mdfprintcolor{#1titlebackgroundcolor}
159 ; \LWR@orignewline

```

Convert and print the above line:

```

160 \ifbool{mdf@#1titleaboveline}{%
161 border-top:
162 \LWR@mdfprintlength{#1titleabovelinewidth}
163 solid
164 \LWR@mdfprintcolor{#1titleabovelinecolor}
165 ; \LWR@orignewline
166 }{}%

```

Convert and print the below line:

```

167 \ifbool{mdf@#1titlebelowline}{%
168 border-bottom:
169 \LWR@mdfprintlength{#1titlebelowlinewidth}
170 solid
171 \LWR@mdfprintcolor{#1titlebelowlinecolor}
172 ; \LWR@orignewline
173 }{}%

```

Finish the custom style and the opening <div> tag:

```
174]{mdframed#1title}%
```

Perform the original subtitle action:

```
175 \IfNoValueTF{#2}
```

```
176 {\@nameuse{LWR@origmdf#1title}}{\csuse{mdf@#1titlefont}{\LWR@textcurrentfont{#3}}}%
```

```
177 {\@nameuse{LWR@origmdf#1title}[#2]}{\csuse{mdf@#1titlefont}{\LWR@textcurrentfont{#3}}}%
```

Close the <div>:

```
178 \end{BlockClass}%
```

```
179 \LWR@traceinfo{LWR@mdframedsubtitlecommon end}%
```

```
180 }
```

`\LWR@mdfsubtitle` [*<options>*] {*<title>*}

```
181 \newcommand*\LWR@mdfsubtitle}{%
```

```
182 \LWR@mdfsubtitlecommon{sub}%
```

```
183 }
```

```
184 \let\mdfsubtitle\LWR@mdfsubtitle
```

`\LWR@mdfsubsubtitle` [*<options>*] {*<title>*}

```
185 \newcommand*\LWR@mdfsubsubtitle}{%
```

```
186 \LWR@mdfsubtitlecommon{subsub}%
```

```
187 }
```

```
188 \let\mdfsubsubtitle\LWR@mdfsubsubtitle
```

### § 317.9 New environments

`\LWR@mdthisenv` Stores the environment of the frame about to be created:

```
189 \newcommand*\LWR@mdthisenv}{mdframed}
```

`\newmdenv` [*<options>*] {*<env-name>*}

Modified from the original to remember the environment.

```
190 \renewrobustcmd*\newmdenv[2][]{%
```

```
191 \newenvironment{#2}%
```

```
192 {%
```

```
193 \mdfsetup{#1}%
```

```
194 \renewcommand*\LWR@mdthisenv}{md#2}%
```

```
195 \begin{mdframed}%
```

```
196 }
```

```
197 {\end{mdframed}}%
```

```
198 }
```

`\surroundwithmdframed` [*<options>*] {*<environment>*}

Modified from the original to remember the environment.

```
199 \renewrobustcmd*\surroundwithmdframed[2][]{%
```

```
200 \BeforeBeginEnvironment{#2}{%
```

```
201 \renewcommand*\LWR@mdthisenv}{md#2}%
```

```
202 \begin{mdframed}[#1]}%
```

```
203 \AfterEndEnvironment{#2}{\end{mdframed}}%
```

204 }

\mdtheorem [*mdframed-options*] [*envname*] [*numberedlike*] [*caption*] [*within*]

Modified from the original to remember the environment.

```

205 \DeclareDocumentCommand{\mdtheorem}{ O{} m o m o }%
206 {\ifcsdef{#2}%
207 {\mdf@PackageWarning{Environment #2 already exists\MessageBreak}}%
208 {%
209 \IfNoValueTF {#3}%
210 {%#3 not given -- number relationship
211 \IfNoValueTF {#5}%
212 {%#3+#5 not given
213 \@definecounter{#2}%
214 \expandafter\xdef\csname the#2\endcsname{\@thmcounter{#2}}%
215 \newenvironment{#2}[1][{}]{%
216 \refstepcounter{#2}%
217 \ifstrempy{##1}%
218 {\let\@temptitle\relax}%
219 {%
220 \def\@temptitle{\mdf@theoremseparator%
221 \mdf@theoremspace%
222 \mdf@theoremtitlefont%
223 \LWR@textcurrentfont{##1}}% lwarp
224 \mdf@thm@caption{#2}{#4}{\csname the#2\endcsname}{##1}}%
225 }%
226 \begin{mdframed}[#1,frametitle={\strut#4\ \csname the#2\endcsname%
227 \@temptitle}]]%
228 {\end{mdframed}}%
229 \newenvironment{#2*}[1][{}]{%
230 \ifstrempy{##1}{\let\@temptitle\relax}{\def\@temptitle{: \ ##1}}%
231 \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]]%
232 {\end{mdframed}}%
233 }%
234 {%#5 given -- reset counter
235 \@definecounter{#2}\@newctr{#2}[#5]%
236 \expandafter\xdef\csname the#2\endcsname{\@thmcounter{#2}}%
237 \expandafter\xdef\csname the#2\endcsname{%
238 \expandafter\noexpand\csname the#5\endcsname \@thmcountersep%
239 \@thmcounter{#2}}%
240 \newenvironment{#2}[1][{}]{%
241 \refstepcounter{#2}%
242 \ifstrempy{##1}%
243 {\let\@temptitle\relax}%
244 {%
245 \def\@temptitle{\mdf@theoremseparator%
246 \mdf@theoremspace%
247 \mdf@theoremtitlefont%
248 \LWR@textcurrentfont{##1}}% lwarp
249 \mdf@thm@caption{#2}{#4}{\csname the#2\endcsname}{##1}}%
250 }
251 \begin{mdframed}[#1,frametitle={\strut#4\ \csname the#2\endcsname%
252 \@temptitle}]]%
253 {\end{mdframed}}%
254 \newenvironment{#2*}[1][{}]{%

```

```

255 \ifstrempy{##1}%
256 {\let\@temptitle\relax}%
257 {%
258 \def\@temptitle{\mdf@theoremseparator%
259 \mdf@theoremspace%
260 \mdf@theoremtitlefont%
261 \LWR@textcurrentfont{##1}}% lwarp
262 \mdf@thm@caption{#2}{#4}{\csname the#2\endcsname}{##1}}%
263 }%
264 \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]]%
265 {\end{mdframed}}%
266 }%
267 }%
268 {%#3 given -- number relationship
269 \global\@namedef{the#2}{\@nameuse{the#3}}%
270 \newenvironment{#2}[1][{%
271 \refstepcounter{#3}%
272 \ifstrempy{##1}%
273 {\let\@temptitle\relax}%
274 {%
275 \def\@temptitle{\mdf@theoremseparator%
276 \mdf@theoremspace%
277 \mdf@theoremtitlefont%
278 \LWR@textcurrentfont{##1}}% lwarp
279 \mdf@thm@caption{#2}{#4}{\csname the#2\endcsname}{##1}}%
280 }
281 \begin{mdframed}[#1,frametitle={\strut#4\ \csname the#2\endcsname%
282 \@temptitle}]]%
283 {\end{mdframed}}%
284 \newenvironment{#2*}[1][{%
285 \ifstrempy{##1}{\let\@temptitle\relax}{\def\@temptitle{: \ ##1}}%
286 \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]]%
287 {\end{mdframed}}%
288 }%
289 \BeforeBeginEnvironment{#2}{\renewcommand*\LWR@mdthisenv}{md#2}}% lwarp
290 \BeforeBeginEnvironment{#2*}{\renewcommand*\LWR@mdthisenv}{md#2}}% lwarp
291 }%
292 }

```

`\newmdtheoremenv` [*<1: mdframed-options>*] [*<2: envname>*] [*<3: numberedlike>*] [*<4: caption>*] [*<5: within>*]

Modified from the original to remember the environment.

```

293 \DeclareDocumentCommand\newmdtheoremenv{O{} m o m o }{%
294 \ifboolexpr{ test {\IfNoValueTF {#3}} and test {\IfNoValueTF {#5}} }%
295 {\newtheorem{#2}{#4}}%
296 {%
297 \IfValueT{#3}{\newtheorem{#2}[#3]{#4}}%
298 \IfValueT{#5}{\newtheorem{#2}{#4}[#5]}%
299 }%
300 \BeforeBeginEnvironment{#2}{%
301 \renewcommand*\LWR@mdthisenv}{md#2}%
302 \begin{mdframed}[#1]}%
303 \AfterEndEnvironment{#2}{%
304 \end{mdframed}}%

```

---

305 }

---

File 219 **lwarp-memhfixc.sty**

§ 318 Package **memhfixc**

Pkg memhfixc memhfixc is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{memhfixc}[2013/05/30]

---

File 220 **lwarp-metalogo.sty**

§ 319 Package **metalogo**

*(Emulates or patches code by ANDREW GILBERT MOSCHOU.)*

Pkg metalogo metalogo is used in print mode, and emulated in HTML.

**for HTML output:** 1 \LWR@ProvidesPackagePass{metalogo}[2010/05/29]

```

2 \newcommand*{\LWR@HTML@setlogokern}[2]{}
3 \newcommand*{\LWR@HTML@setlogodrop}[2][XeTeX]{}
4 \newcommand*{\LWR@HTML@setLaTeXa}[1]{}
5 \newcommand*{\LWR@HTML@setLaTeXee}[1]{}
6 \newcommand*{\LWR@HTML@seteverylogo}[1]{}
7 \newcommand*{\LWR@HTML@everylogo}[1]{}
8
9 \LWR@formatted{setlogokern}
10 \LWR@formatted{setlogodrop}
11 \LWR@formatted{setLaTeXa}
12 \LWR@formatted{setLaTeXee}
13 \LWR@formatted{seteverylogo}
14 \LWR@formatted{everylogo}

```

---

File 221 **lwarp-metalogox.sty**

§ 320 Package **metalogox**

*(Emulates or patches code by BRIAN DUNN.)*

Pkg metalogox metalogox is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{metalogox}[2019/01/20]

\AtBeginDocument, adjust the logo setting according to the font which is active at that moment.

```

2 \AtBeginDocument{
3 \let\LWR@metalogox@currentformatting\LWR@formatting
4 \renewcommand*\LWR@formatting}{print}%
5 \autoadjustlogos*
6 \let\LWR@formatting\LWR@metalogox@currentformatting
7 }

```

File 222 **lwarp-mhchem.sty**

§ 321 Package **mhchem**

(Emulates or patches code by MARTIN HENSEL.)

Pkg mhchem mhchem is patched for use by lwarp.

**without MATHJAX** Without MATHJAX, mhchem expressions are converted to svg math. Inline expressions use hashed filenames to allow reuse, and assume that any mhchem options are global.

**MATHJAX with mhchem extension** For MATHJAX, the mhchem extension is used if the mhchem expression is used inside a math expression:

$$\text{\ce{C6H5-CHO}}$$

not inside math

If *not* used inside a math expression, lwarp converts standalone mhchem expressions into svg math images.

**MATHJAX without mhchem extension** If the MATHJAX mhchem extension is not used, expressions inside math must be placed between `\displaymathother` and `\displaymathnormal`:

```

\displaymathother
[\ce{ . . . } \] . . . $ \ce { . . . } $
\displaymathnormal

```



**nested math**

When producing HTML output without the MATHJAX mhchem extension, lwarp does not support the use of nested dollar signs in mhchem expressions.

For some examples from the mhchem manual, change as follows:

|                                                 |       |
|-------------------------------------------------|-------|
| <code>\ce{NaOH(aq,\infty)}</code>               | % old |
| <code>\ce{NaOH(aq,\infty)}</code>               | % new |
| <code>\ce{Fe(CN)_{\frac{6}{2}}}</code>          | % old |
| <code>\ce{Fe(CN)_{\frac{6}{2}}}</code>          | % new |
| <code>\ce{NO_x}</code>                          | % old |
| <code>\ce{NO_x}</code>                          | % new |
| <code>\ce{NO_x}</code>                          | % old |
| <code>\ce{NO_x}</code>                          | % new |
| <code>\ce{\\$cis\{-}[PtCl2(NH3)2]}</code>       | % old |
| <code>\ce{\mathit{cis}\{-}[PtCl2(NH3)2]}</code> | % new |

for HTML output: 1 \LWR@ProvidesPackagePass{mhchem}[2018/06/22]

The original definition of `\ce`:

```
2 \LetLtxMacro\LWR@mhchem@origce\ce
```

The new definition, called from the new `\ce` after math shift is set. The starred `lateximage` uses a hashed filename for the svg image. The `alt` tag is set to the `mhchem` expression.

```
3 \newcommand{\LWR@mhchem@HTML@ce}[1]{%
4 \begin{lateximage}*[\textbackslash{}ce{\LWR@HTMLsanitize{#1}\}]%
5 \LWR@mhchem@origce{#1}%
6 \end{lateximage}%
7 \endgroup%
8 \addtocounter{LWR@mhchem@cedepth}{-1}%
9 }
```

Only set math shift if outer depth:

```
10 \newcounter{LWR@mhchem@cedepth}
11 \setcounter{LWR@mhchem@cedepth}{0}
```

The new `\ce`. Sets math shift then continues.

```
12 \renewcommand{\ce}{%
13 \begingroup%
14 \ifnumequal{\value{LWR@mhchem@cedepth}}{0}{%
15 \catcode'\$=3% math shift
16 }{%
17 \addtocounter{LWR@mhchem@cedepth}{1}%
18 \LWR@mhchem@HTML@ce%
19 }
```

The original definition of `\cesplit`:

```
20 \LetLtxMacro\LWR@mhchem@origcesplit\cesplit
```

The new definition, called from the new `\cesplit` after math shift is set. The starred `lateximage` uses a hashed filename for the svg image. The `alt` tag is set to the `mhchem` expression.

```
21 \newcommand*{\LWR@mhchem@HTML@cesplit}[2]
22 {%
23 \begin{lateximage}*[\textbackslash{}cesplit{\LWR@HTMLsanitize{#2}\}]%
24 \LWR@mhchem@origcesplit{#1}{#2}%
25 \end{lateximage}%
26 \endgroup%
27 }
```

Only set math shift if outer depth:

```
28 \newcounter{LWR@mhchem@cesplitdepth}
29 \setcounter{LWR@mhchem@cesplitdepth}{0}
```



The new `\cesplit`. Sets math shift then continues.

```
30 \renewcommand{\cesplit}{%
31 \begingroup%
32 \ifnumequal{\value{LWR@mhchem@cesplitdepth}}{0}{%
33 \catcode'\$=3% math shift
34 }{}%
35 \addtocounter{LWR@mhchem@cesplitdepth}{1}%
36 \LWR@mhchem@HTML@cesplit%
37 }
```

Resore originals inside a lateximage:

```
38 \appto\LWR@restoreorigformatting{%
39 \LetLtxMacro\ce\LWR@mhchem@origce%
40 \LetLtxMacro\cesplit\LWR@mhchem@origcesplit%
41 }
```

---

File 223 **lwarp-microtype.sty**

§ 322 Package **microtype**

*(Emulates or patches code by R SCHLICHT.)*

Pkg microtype **microtype** is pre-loaded by **lwarp**. All user options and macros are ignored and disabled.

**for HTML output:** Discard all options for **lwarp-microtype**:

```
1 \LWR@ProvidesPackageDrop{microtype}[2018/01/14]

2 \DeclareDocumentCommand{\DeclareMicrotypeSet}{o m m}{}
3 \DeclareDocumentCommand{\UseMicrotypeSet}{o m}{}
4 \DeclareDocumentCommand{\DeclareMicrotypeSetDefault}{o m}{}
5 \DeclareDocumentCommand{\SetProtrusion}{o m m}{}
6 \DeclareDocumentCommand{\SetExpansion}{o m m}{}
7 \DeclareDocumentCommand{\SetTracking}{o m m}{}
8 \DeclareDocumentCommand{\SetExtraKerning}{o m m}{}
9 \DeclareDocumentCommand{\SetExtraSpacing}{o m m}{}
10 \DeclareDocumentCommand{\DisableLigatures}{o m}{}
11 \DeclareDocumentCommand{\DeclareCharacterInheritance}{o m m}{}
12 \DeclareDocumentCommand{\DeclareMicrotypeVariants}{m}{}
13 \DeclareDocumentCommand{\DeclareMicrotypeAlias}{m m}{}
14 \DeclareDocumentCommand{\LoadMicrotypeFile}{m}{}
15 \DeclareDocumentCommand{\DeclareMicrotypeBabelHook}{m m}{}
16 \DeclareDocumentCommand{\microtypesetup}{m}{}
17 \DeclareDocumentCommand{\microtypecontext}{m}{}
18 \DeclareDocumentCommand{\textmicrotypecontext}{m m}{#2}
19 \ifpackageloaded{letterspace}{\let\MT@textls\relax}{%
20 \DeclareDocumentCommand{\lsstyle}{}{}
21 \DeclareDocumentCommand{\textls}{o +m}{}
22 \DeclareDocumentCommand{\lslig}{m}{#1}
23 }
```

---

```

24 \def\DeclareMicrotypeSet#1#{\@gobbletwo}
25 \def\DeclareMicrotypeVariants#1#{\@gobble}
26 \@onlypreamble\DeclareMicrotypeSet
27 \@onlypreamble\UseMicrotypeSet
28 \@onlypreamble\DeclareMicrotypeSetDefault
29 \@onlypreamble\DisableLigatures
30 \@onlypreamble\DeclareMicrotypeVariants
31 \@onlypreamble\DeclareMicrotypeBabelHook

```

---

File 224 **lwarp-midfloat.sty**

§ 323 Package **midfloat**

*(Emulates or patches code by SIGITAS TOLUŠIS.)*

Pkg midfloat midfloat is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{midfloat}[2012/05/29]

```

2 \newenvironment{strip}[1][{}]{}
3 \newskip\stripsep

```

---

File 225 **lwarp-midpage.sty**

§ 324 Package **midpage**

Pkg midpage midpage is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{midpage}[2009/09/03]

```

2 \newenvironment{midpage}
3 {\begin{BlockClass}[%
4 \LWR@print@mbbox{margin-top:6ex} ; \LWR@print@mbbox{margin-bottom:6ex}%
5]{midpage}}
6 {\end{BlockClass}}

```

---

File 226 **lwarp-minitoc.sty**

§ 325 Package **minitoc**

Pkg minitoc minitoc is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{minitoc}[2018/07/12]

mtcoff disables minitoc.

```

2 \usepackage{mtcoff}

```

---

File 227 **lwarp-morefloats.sty**

§ 326 Package **morefloats**

Pkg morefloats morefloats is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{morefloats}[2015/07/22]

---

File 228 **lwarp-moreverb.sty**

§ 327 Package **moreverb**

*(Emulates or patches code by ROBIN FAIRBAIRNS.)*

Pkg moreverb moreverb is supported with some patches.

**for HTML output:**

```

1 \begin{warpHTML}

2 \LWR@ProvidesPackagePass{moreverb}[2008/06/03]

3 \BeforeBeginEnvironment{verbatimtab}{%
4 \LWR@forcenewpage
5 \LWR@atbeginverbatim{3}{Verbatim}%
6 }
7 \AfterEndEnvironment{verbatimtab}{%
8 \LWR@afterendverbatim{1}%
9 }
10
11
12 \LetLtxMacro\LWRMV@orig@verbatimtabinput\verbatimtabinput
13
14 \renewcommand{\@verbatimtabinput}[2][]{%
15 \LWR@forcenewpage
16 \LWR@atbeginverbatim{3}{Verbatim}%
17 \LWRMV@orig@verbatimtabinput[#1]{#2}%
18 \LWR@afterendverbatim{1}%
19 }
20
21 \BeforeBeginEnvironment{listing}{%
22 \LWR@forcenewpage
23 \LWR@atbeginverbatim{3}{programlisting}%
24 }
25
26 \AfterEndEnvironment{listing}{%
27 \LWR@afterendverbatim{1}%
28 }
29
30 \BeforeBeginEnvironment{listingcont}{%
```

```

31 \LWR@forcenewpage
32 \LWR@atbeginverbatim{3}{programlisting}%
33 }
34
35 \AfterEndEnvironment{listingcont}{%
36 \LWR@afterendverbatim{1}%
37 }

38 \LetLtxMacro\LWRMV@listinginput\@listinginput
39
40 \renewcommand{\@listinginput}[3][[]]{
41 \LWR@forcenewpage
42 \LWR@atbeginverbatim{3}{programlisting}%
43 \LWRMV@listinginput[#1]{#2}{#3}%
44 \LWR@afterendverbatim{1}%
45 }
46
47
48 \renewenvironment*{boxedverbatim}
49 {
50 \LWR@forcenewpage
51 \LWR@atbeginverbatim{3}{boxedverbatim}%
52 \verbatim%
53 }
54 {
55 \endverbatim%
56 \LWR@afterendverbatim{1}%
57 }

58 \end{warpHTML}

```

---

File 229 **lwarp-mparhack.sty**

§ 328 Package **mparhack**

Pkg mparhack Ignored.

**for HTML output:** Discard all options for lwarp-mparhack:

```
1 \LWR@ProvidesPackageDrop{mparhack}[2005/04/17]
```

---

File 230 **lwarp-multicap.sty**

§ 329 Package **multicap**

Pkg multicap multicap is emualted.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{multicap}[2002/05/04]

```

2 \newcommand*\mfcaption{\captionof{figure}}
3 \newcommand*\mtcaption{\captionof{table}}
4 \newcounter{mcapsize}
5 \newcounter{mcapskip}
6 \newlength{\abvmcapskip}
7 \newlength{\blwmcapskip}

```

File 231 **lwarp-multicol.sty**

§ 330 Package **multicol**

*(Emulates or patches code by FRANK MITTELBACH.)*

Pkg multicol multicol is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{multicol}[2018/12/27]

Multicols are converted into a 1–3 column display, browser-supported.

The optional multicols heading is placed inside a <div> of class multicolsheading.

The content is placed inside a <div> of class multicols.

```
2 \begin{warpHTML}
```

Env multicols \* {<numcols>} [<heading>]

```
3 \NewDocumentEnvironment{multicols}{s m o}
```

HTML <div> class to contain everything:

```
4 {
5 \LWR@forcenewpage
6 \BlockClass{multicols}

```

Optional HTML <div> class for the heading:

```
7 \IfValueT{#3}{\begin{BlockClass}{multicolsheading}#3\end{BlockClass}}%
```

Change \linewidth to compensate for expected size:

```
8 \setlength{\linewidth}{\linewidth/#2}
```

Locally force any minipages to be fullwidth:

```
9 \booltrue{LWR@forceminipagefullwidth}
10 }

```

When done with the environment, close the <div>:

```
11 {\endBlockClass}
```

Emulated null functions which are not used in HTML:

```
12 \newcommand*\columnbreak{}
13 \newcommand*\RLmulticolcolumns{}

```

```

14 \newcommand*\LRmulticolcolumns{}
15
16 \newlength{\premulticols}
17 \newlength{\postmulticols}
18 \newlength{\multicolsep}
19 \newlength{\multicolbaselineskip}
20 \newlength{\multicoltolerance}
21 \newlength{\multicolpretolerance}
22 \newcommand*\columnseprulecolor{\normalcolor}
23 \newcounter{columnbadness}
24 \newcounter{finalcolumnbadness}
25 \newcounter{collectmore}
26 \newcounter{unbalance}
27 \newlength{\multicolovershoot}
28 \newlength{\multicolundershoot}

29 \NewDocumentCommand{\docolaction}{s o m m}{%
30 \IfValueTF{#2}{#2}{#3}%
31 }

32 \end{warpHTML}

```

---

File 232 **lwarp-multicolrule.sty**

§ 331 Package **multicolrule**

Pkg multicolrule multicolrule is ignored.

**for HTML output:**

```

1 \RequirePackage{multicol}
2
3 \LWR@ProvidesPackageDrop{multicolrule}[2019/01/01]

4 \newcommand*\SetMCRule[1]{}
5 \NewDocumentCommand{\DeclareMCRulePattern}{m m}{}

```

---

File 233 **lwarp-multirow.sty**

§ 332 Package **multirow**

*(Emulates or patches code by PIET VAN OOSTRUM, ØYSTEIN BACHE, JERRY LEICHTER.)*

Pkg multirow multirow is emulated during HTML output, and used as-is while inside a `lateximage`.

- [vposn](#)
  - Note that recent versions of `multirow` include a new optional `vposn` argument.
- [multirow cells](#)
  - For `multirow`, insert `\mrowcell` into any empty multi-row cells. This will be a null function for the print output, and is a placeholder for parsing the table for HTML output. An error is generated if this is missed.

```

... & \multirow{2}{.5in}{text} & ...
... & \mrowcell & ...

```

### colored cells

- The `multirow` documentation regarding colored cells recommends using a negative number of rows. This will not work with `lwarp`, so `\warpprintonly` and `\warpHTMLonly` must be used to make versions for print and HTML.

### with `\multicolumn`

⚠ `\multicolumn & \multirow`

- See section 332.2 for `\multicolumnrow`.

`lwarp` does not support directly combining `\multicolumn` and `\multirow`. Use `\multicolumnrow` instead. To create a 2 column, 3 row cell:

```
\multicolumnrow{2}{c}[c]{3}[0]{1in}[0pt]{Text}
```

The two arguments for `\multicolumn` come first, followed by the five arguments for `\multirow`, many of which are optional, followed by the contents.

⚠ skipped cells

As per `\multirow`, skipped cells to the right of the `\multicolumnrow` statement are not included in the source code on the same line. On the following lines, `\mcolrowcell` must be used for each cell of each column and each row to be skipped. An error is generated if this is missed.

⚠ empty cells

```

... & \multicolumnrow{2}{c}[c]{3}[0]{1in}[0pt]{Text} & ...
... & \mcolrowcell & \mcolrowcell & ...
... & \mcolrowcell & \mcolrowcell & ...

```

In a `lateximage`, `\LWR@restoreorigformatting` restores the original print-mode versions.

See section 73.24 for the print-mode versions.

### for HTML output:

Remove the placeholder macro which was used if `multirow` was not loaded:

```

1 \LetLtxMacro\multirow\relax
2 \LWR@ProvidesPackagePass{multirow}[2018/08/03]

```

`\LWR@multirowborder` Set to left or right to create a thick border for the cell, for use by `bigdelim`:

```
3 \newcommand{\LWR@multirowborder}{}
```

## § 332.1 Multirow

`\multirow` [*⟨vpos⟩*] [*⟨numrows⟩*] [*⟨bigstruts⟩*] [*⟨width⟩*] [*⟨fixup⟩*] [*⟨text⟩*]

```

4 \NewDocumentCommand{\LWR@HTML@multirow}{O{c} m o o +m}%
5 {%
6 \LWR@traceinfo{*** LWR@HTML@multirow #1 #2 #4}%
7 \booltrue{LWR@usedmultirow}%
8 \LWR@maybenewtablerow%
9 \LWR@tabularleftedge%

```

Print the start of a new table data cell:

```
10 \LWR@htmltag{td rowspan="#2" %
```

The vertical alignment, if given:

```
11 \IfValueT{#1}{%
12 \ifstrequal{#1}{b}{style="\LWR@print@box{vertical-align:bottom}" }{%
13 \ifstrequal{#1}{t}{style="\LWR@print@box{vertical-align:top}" }{%
14 }%
```

The left/right border, if given:

```
15 \ifdefvoid{\LWR@multirowborder}{%
16 style="\LWR@print@box{border-\LWR@multirowborder:} 2px dotted black ; %
17 \LWR@print@box{padding-\LWR@multirowborder:} 2px" %
18 }%
```

A class adds the column spec and the rule:

```
19 class="td%
```

Append this column's spec:

```
20 \LWR@getexparray{\LWR@tablecolspec}{\arabic{\LWR@tableLaTeXcolindex}}%
```

If this column has a cmidrule, add “rule” to the end of the HTML class tag. Also add the vertical bar class.

```
21 \LWR@addcmidruletrim%
22 \LWR@addleftmostbartag%
23 \LWR@printbartag{\arabic{\LWR@tableLaTeXcolindex}}%
24 "%
```

```
25 \LWR@tdstartstyles%
26 \LWR@addcmidrulewidth%
27 \LWR@addcdashline%
28 \LWR@addtabularrulecolors%
29 \LWR@tdendstyles%
30 }%
```

The column's < spec:

```
31 \LWR@getexparray{\LWR@colbeforespec}{\arabic{\LWR@tableLaTeXcolindex}}%
```

While printing the text, redefine \ to generate a new line

```
32 \begingroup\LetLtxMacro{\}{\LWR@endofline}#6\endgroup%
33 \LWR@stoppars%
34 \global\boolfalse{\LWR@intabularmetadata}%
35 \renewcommand{\LWR@multirowborder}{%
36 \LWR@traceinfo{*** LWR@HTML@multirow done}%
37 }%
```



```
38
39 \LWR@formatted{multirow}
```

### § 332.2 Combined multicolumn and multirow

```
\multicolumnrow {<1:cols>} {<2:halign>} [<3:vpos>] {<4:numrows>} [<5:bigstruts>] {<6:width>} [<7:fixup>]
{<8:text>}
```

`\@ifpackageloaded{multirow}` determines if v2.0 or later of `multirow` was used, which included the `\ProvidesPackage` macro.

The HTML version follows.

`\AtBeginDocument` because the print version had to see if `multirow` was loaded before determining how to define `\LWR@print@multicolumnrow`.

```
40 \AtBeginDocument{
41
42 \NewExpandableDocumentCommand{\LWR@HTML@multicolumnrow}{m m O{} m O{} m O{} +m}{%
43 \booltrue{LWR@usedmultirow}%
```

Figure out how many extra HTML columns to add for @ and ! columns:

```
44 \LWR@tabularhtmlcolumns{\arabic{LWR@tableLaTeXcolindex}}{#1}
```

Create the multicolumn/multirow tag:

```
45 \begingroup%
46 \LetLtxMacro{\}\{\LWR@endofline}%
47 \LWR@domulticolumn[#3][#4][#1]{\arabic{LWR@tabhtmlcoltotal}}{#2}{#8}%
48 \endgroup%
```

Move to the next L<sup>A</sup>T<sub>E</sub>X column:

```
49 \addtocounter{LWR@tableLaTeXcolindex}{#1}%
50 \addtocounter{LWR@tableLaTeXcolindex}{-1}%
```

Skip any trailing @ or ! columns for this cell:

```
51 \global\booltrue{LWR@skipatbang}%
52 }
53
54 \LWR@expandableformatted{multicolumnrow}
55
56 }% \AtBeginDocument
```

---

File 234 **lwarp-multitoc.sty**

§ 333 Package **multitoc**

Pkg multitoc multitoc is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{multitoc}[1999/06/08]

```
2 \newcommand{\multicolumntoc}{2}
3 \newcommand{\multicolumnlot}{2}
4 \newcommand{\multicolumnlof}{2}
5 \newcommand*{\immediateaddtocontents}[2]{}
```

---

File 235 **lwarp-musicography.sty**

§ 334 Package **musicography**

*(Emulates or patches code by ANDREW A. CASHNER.)*

Pkg musicography musicography is patched for use by lwarp.

Images are used for the meter symbols, since the HTML fonts tend not to be the correct size. The HTML alt tag copies C and 3/2, etc. Hashes are used for the meter images, which are then reused as necessary.



Note that browser support for musical symbols may be buggy. Copy/paste into a text editor works well.

**for HTML output:** 1 \LWR@ProvidesPackagePass{musicography}[2018/05/21]

```
2 \RenewDocumentCommand{\musSymbol}{ O{\musFont} m m m m }{%
3 \begin{lateximage}%
4 {#1\kern#2\raisebox{#3}{#5}\kern#4}%
5 \end{lateximage}%
6 }
7
8 \RenewDocumentCommand{\musStemmedNote}{ m m }{%
9 \begin{lateximage}%
10 \musSymbol{0.05em}{0.5ex}{0.2em}{#1\musStem}%
11 \end{lateximage}%
12 }
13
14 \RenewDocumentCommand{\musFlaggedNote}{ m m }{%
15 \begin{lateximage}%
16 \musSymbol{0.05em}{0.5ex}{0pt}{#1\musStem}%
17 \musSymbol{0pt}{0pt}{0.9em}{#2}%
18 \end{lateximage}%
19 }
```

```

20
21 \RenewDocumentCommand{\musDottedNote}{ m }{%
22 \begin{lateximage}%
23 #1\musDot%
24 \end{lateximage}%
25 }
26
27 \RenewDocumentCommand{\musMeter}{ m m }{%
28 \begin{lateximage}*[#1/#2][#1#2]%
29 \musStack{#1}{#2}\kern0.05em%
30 \end{lateximage}%
31 }
32
33 \RenewDocumentCommand{\meterCplus}{ m }{%
34 \begin{lateximage}*[C#1]%
35 \meterC{\kern-0.7pt#1%
36 \end{lateximage}%
37 }
38
39 \RenewDocumentCommand{\meterC}{ }{%
40 \begin{lateximage}*[C]%
41 \musSymbolMeter{\symbol{83}}%
42 \end{lateximage}%
43 }
44
45 \RenewDocumentCommand{\meterCutC}{ }{%
46 \begin{lateximage}*[C|]%
47 \musSymbolMeter{\symbol{82}}%
48 \end{lateximage}%
49 }
50
51 \RenewDocumentCommand{\meterCThreeTwo}{ }{%
52 \begin{lateximage}*[C3/2]%
53 \meterCplus{\musStack{3}{2}}%
54 \end{lateximage}%
55 }
56
57 \RenewDocumentCommand{\musFlat} {}{\HTMLUnicode{266D}}
58 \RenewDocumentCommand{\musDoubleFlat} {}{\HTMLUnicode{1D12B}}
59 \RenewDocumentCommand{\musSharp} {}{\HTMLUnicode{266F}}
60 \RenewDocumentCommand{\musDoubleSharp}{}{\HTMLUnicode{1D12A}}
61 \RenewDocumentCommand{\musNatural} {}{\HTMLUnicode{266E}}
62
63 \RenewDocumentCommand{\musWhole}{}{\HTMLUnicode{1D15D}}
64 \RenewDocumentCommand{\musHalf}{}{\HTMLUnicode{1D15E}}
65 \RenewDocumentCommand{\musQuarter}{}{\HTMLUnicode{1D15F}}
66 \RenewDocumentCommand{\musEighth}{}{\HTMLUnicode{1D160}}
67 \RenewDocumentCommand{\musSixteenth}{}{\HTMLUnicode{1D161}}
68
69 \RenewDocumentCommand{\musWholeDotted}{}{\HTMLUnicode{1D15D}\HTMLUnicode{1D16D}}
70 \RenewDocumentCommand{\musHalfDotted}{}{\HTMLUnicode{1D15E}\HTMLUnicode{1D16D}}
71 \RenewDocumentCommand{\musQuarterDotted}{}{\HTMLUnicode{1D15F}\HTMLUnicode{1D16D}}
72 \RenewDocumentCommand{\musEighthDotted}{}{\HTMLUnicode{1D160}\HTMLUnicode{1D16D}}
73 \RenewDocumentCommand{\musSixteenthDotted}{}{\HTMLUnicode{1D161}\HTMLUnicode{1D16D}}

```

File 236 **lwarp-nameauth.sty**

§ 335 Package **nameauth**

(Emulates or patches code by CHARLES P. SCHAUM.)

Pkg nameauth nameauth is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{nameauth}[2017/03/22]

lwarp formatting is inserted in the following.

```

2 \renewcommand*\@nameauth@Hook[1]
3 {%
4 \if@nameauth@Lock
5 \@nameauth@InHooktrue%
6 \protected@edef\test{#1}%
7 \expandafter\@nameauth@TestDot\expandafter{\test}%
8 \if@nameauth@InAKA
9 \if@nameauth@AlwaysFormat
10 \@nameauth@FirstFormattrue%
11 \else
12 \unless\if@nameauth@AKAFormat
13 \@nameauth@FirstFormatfalse\fi
14 \fi
15 \if@nameauth@MainFormat
16 \if@nameauth@FirstFormat
17 \bgroup\NamesFormat{%
18 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}% lwarp
19 }\egroup%
20 \else
21 \bgroup\MainNameHook{%
22 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}% lwarp
23 }\egroup%
24 \fi
25 \else
26 \if@nameauth@FirstFormat
27 \bgroup\FrontNamesFormat{%
28 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}% lwarp
29 }\egroup%
30 \else
31 \bgroup\FrontNameHook{%
32 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}% lwarp
33 }\egroup%
34 \fi
35 \fi
36 \else
37 \if@nameauth@AlwaysFormat
38 \@nameauth@FirstFormattrue%
39 \fi
40 \if@nameauth@MainFormat

```

```

41 \if@nameauth@FirstFormat
42 \bgroup\NamesFormat{%
43 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}% lwarp
44 }\egroup%
45 \else
46 \bgroup\MainNameHook{%
47 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}% lwarp
48 }\egroup%
49 \fi
50 \else
51 \if@nameauth@FirstFormat
52 \bgroup\FrontNamesFormat{%
53 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}% lwarp
54 }\egroup%
55 \else
56 \bgroup\FrontNameHook{%
57 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}% lwarp
58 }\egroup%
59 \fi
60 \fi
61 \fi
62 \@nameauth@FirstFormatfalse%
63 \@nameauth@InHookfalse%
64 \fi
65 }

```

---

File 237 **lwarp-nameref.sty**

§ 336 Package **nameref**

Pkg nameref nameref is emulated by lwarp.

**for HTML output:** Discard all options for lwarp-nameref:

```

1 \typeout{Using the lwarp html version of package ‘nameref’, discarding options.}
2 \typeout{ Are not using ProvidesPackage, so that other packages}
3 \typeout{ do not attempt to patch lwarp’s version of ‘nameref’..}
4 \DeclareOption*{}
5 \ProcessOptions\relax

```

---

File 238 **lwarp-natbib.sty**

§ 337 Package **natbib**

*(Emulates or patches code by PATRICK W. DALY.)*

Pkg natbib natbib is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{natbib}[2010/09/13]

Replace math < and > with \textless and \textgreater:

A macro to compare:

```
2 \newcommand{\LWRNB@NAT@open}{${<$}
```

To patch \NAT@open and \NAT@close

```
3 \newcommand{\LWRNB@patchnatbibopenclose}{
4 \ifdefstrequal{\NAT@open}{\LWRNB@NAT@open}
5 {
6 \renewcommand{\NAT@open}{\textless}
7 \renewcommand{\NAT@close}{\textgreater}
8 }{}
9 }
```

Do it now in case angle was selected as an option:

```
10 \LWRNB@patchnatbibopenclose
```

Also patch \setcitestyle to patch after settings are made:

```
11 \let\LWRNB@origsetcitestyle\setcitestyle
12
13 \renewcommand{\setcitestyle}[1]{%
14 \LWRNB@origsetcitestyle{#1}%
15 \LWRNB@patchnatbibopenclose%
16 }
```

File 239 **lwarp-nccfancyhdr.sty**

§ 338 Package **nccfancyhdr**

*(Emulates or patches code by ALEXANDER I. ROZHENKO.)*

Pkg nccfancyhdr **nccfancyhdr** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{nccfancyhdr}[2004/12/07]

```
2 \newcommand*{\headrulewidth}{}
3 \newcommand*{\footrulewidth}{}
4 \newcommand{\headstrutheight}{}
5 \newcommand{\footstrutheight}{}
6 \newcommand*{\headrule}{}
7 \newcommand*{\footrule}{}
8
9 \newdimen\headwidth
10 \newcommand*{\extendedheaders}{}
11 \newcommand*{\normalheaders}{}
12
13 \newcommand*{\fancyhead}[2][{}]{
14 \newcommand*{\fancyfoot}[2][{}]{
15 \newcommand*{\fancyhf}[2][{}]{
16 \newcommand*{\fancyfoot}[2][{}]{
```

```

17 \newcommand*{\lhead}[2][{}
18 \newcommand*{\chead}[2][{}
19 \newcommand*{\rhead}[2][{}
20 \newcommand*{\lfoot}[2][{}
21 \newcommand*{\cfoot}[2][{}
22 \newcommand*{\rfoot}[2][{}
23
24 \newcommand{\nouppercase}[1]{#1}
25
26 \NewDocumentCommand{\fancycenter}{o o m m}{}
27
28 \NewDocumentCommand{\newpagestyle}{m o m}{}
29
30 \newcommand*{\iffloatpage}[2]{#2}
31 \newcommand*{\ifftopfloat}[2]{#2}
32 \newcommand*{\iffbotfloat}[2]{#2}

```

---

File 240 **lwarp-needspace.sty**

§ 339 Package **needspace**

*(Emulates or patches code by PETER WILSON.)*

Pkg needspace **needspace** is not used during HTML conversion.

**for HTML output:** Discard all options for lwarp-needspace:

```

1 \LWR@ProvidesPackageDrop{needspace}[2010/09/12]
2
3 \DeclareDocumentCommand{\needspace}{m}{}
4 \DeclareDocumentCommand{\Needspace}{s m}{}

```

---

File 241 **lwarp-nextpage.sty**

§ 340 Package **nextpage**

*(Emulates or patches code by PETER WILSON.)*

Pkg nextpage **nextpage** is nullified.

**for HTML output:** Discard all options for lwarp-nextpage.

```

1 \LWR@ProvidesPackageDrop{nextpage}[2009/09/03]
2
3 \DeclareDocumentCommand{\cleartoevenpage}{o}{}
4 \DeclareDocumentCommand{\movetoevenpage}{o}{}
5 \DeclareDocumentCommand{\cleartooddpage}{o}{}
6 \DeclareDocumentCommand{\movetooddpage}{o}{}

```

---

File 242 **lwarp-nicefrac.sty**

§ 341 Package **nicefrac**

*(Emulates or patches code by AXEL REICHERT.)*

Pkg nicefrac nicefrac is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{nicefrac}[1998/08/04]

2 \DeclareRobustCommand*\LWR@HTML@UnitsNiceFrac}[3][[]]{%
3 {% localize font selection
4 #1{%
5 \LWR@textcurrentfont{%
6 \InlineClass{numerator}{#2}%
7 /%
8 \InlineClass{denominator}{#3}%
9 }%
10 }%
11 }%
12 }
13
14 \LWR@formatted{@UnitsNiceFrac}
15
16 \DeclareRobustCommand*\LWR@HTML@UnitsUglyFrac}[3][[]]{%
17 {% localize font selection
18 #1{\LWR@textcurrentfont{#2/#3}}%
19 }%
20 }
21
22 \LWR@formatted{@UnitsUglyFrac}

```

For Mathjax:

```

23 \CustomizeMathJax{\newcommand{\nicefrac}[3][[]]{#2/#3}}

```

---

File 243 **lwarp-niceframe.sty**

§ 342 Package **niceframe**

Pkg niceframe niceframe is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{niceframe}% the original date is in yyyy/dd/mm format

2 \newcommand{\LWR@niceframe}[3]{
3 \setlength{\LWR@templengthone}{#1}
4 \begin{BlockClass}[max-width:\LWR@printlength{\LWR@templengthone}]{#3}
5 #2

```



---

```

6 \end{BlockClass}
7 }
8
9 \newcommand{\niceframe}[2][\textwidth]{\LWR@niceframe{#1}{#2}{niceframe}}
10 \newcommand{\curlyframe}[2][\textwidth]{\LWR@niceframe{#1}{#2}{curlyframe}}
11 \newcommand{\artdecoframe}[2][\textwidth]{\LWR@niceframe{#1}{#2}{artdecoframe}}
12
13 \newcommand{\generalframe}[9]{\LWR@niceframe{\textwidth}{#9}{generalframe}}

```

---

File 244 **lwarp-nomenc1.sty**

§ 343 Package **nomenc1**

(Emulates or patches code by BORIS VEYTSMAN, BERND SCHANDL, LEE NETHERTON, CV RADHAKRISHNAN.)

Pkg nomenc1 nomenc1 is patched for use by lwarp.

To process the HTML nomenclature:

```
makeindex <project>_html.nlo -s nomenc1.list -o <project>_html.nls
```

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{nomenc1}[2005/09/22]
2 \def\@@@nomenc1ature[#1]#2#3{%
3 \def\@tempa{#2}\def\@tempb{#3}%
4 \protected@write\@nomenc1aturefile{%
5 {\string\@nomenc1atureentry{#1\@nom@verb\@tempa @[\@nom@verb\@tempa]}%
6 \begingroup\@nom@verb\@tempb\protect\nomeqref{\theequation}%
7 |nompageref{\theLWR@previousautopagelabel}}% lwarp
8 \endgroup
9 \@esphack}
10
11 \renewcommand*{\pagedeclaration}[1]{, \nameref{autopage-#1}}

```

---

File 245 **lwarp-nonfloat.sty**

§ 344 Package **nonfloat**

(Emulates or patches code by KAI RASCHER.)

Pkg nonfloat nonfloat is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{nonfloat}[1999/07/05]
2 \LetLtxMacro\topcaption\caption
3 \newcommand{\figcaption}{\def\@capttype{figure}\caption}
4 \newcommand{\tabcaption}{\def\@capttype{table}\topcaption}
5 \newenvironment{narrow}[2]{}{}

```

---

File 246 **lwarp-nonumonpart.sty**

§ 345 Package **nonumonpart**

Pkg nonumonpart nonumonpart is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{nonumonpart}[2011/04/15]

---

File 247 **lwarp-nopageno.sty**

§ 346 Package **nopageno**

Pkg nopageno nopageno is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{nopageno}[1989/01/01]

---

File 248 **lwarp-notes.sty**

§ 347 Package **notes**

Pkg notes notes is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{notes}[2002/10/29]

```

2 \newcommand*{\LWR@notes@onenote}[2]{%
3 \newenvironment{#1}
4 {
5 \BlockClass{notes#1}
6 \begin{BlockClass}{notesicon}\textcircled{~#2~}\end{BlockClass}
7 \BlockClass{notescontents}
8 }
9 {\endBlockClass\endBlockClass}
10 }
11
12 \LWR@notes@onenote{importantnote}{!}
13
14 \LWR@notes@onenote{warningnote}{--}
15
16 \LWR@notes@onenote{informationnote}{i}
```

---

File 249 **lwarp-notespages.sty**

§ 348 Package **notespages**

Pkg notespages notespages is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{notespages}[2016/08/21]

```

2 \newcommand*\npnotesname{}
3 \newcommand*\npnotestext{}
4 \newcommand*\remainingtextheight{}
5 \newdimen\remainingtextheight
6 \newcommand*\notestitletext{}
7 \newcommand*\notesareatext{}
8 \newcommand*\npnpinfo[1]{}
9 \newcommand*\tracingnmarks{}
10 \newcommand*\notespage[1][1]{}
11 \newcommand*\notespages[1][1]{}
12 \newcommand*\notesfill[1][1]{}
13 \newcommand*\setnotespages[1]{}
14 \newcommand*\definotesoption[2]{}
15 \newcommand*\definotesstyle[2]{}
16 \newcommand*\definetitlestyle[2]{}
17 \newcommand*\nppatchchapter[1]{}
18 \newcommand*\npunpatchchapter{}

```

---

File 250 **lwarp-nowidow.sty**

§ 349 Package **nowidow**

*(Emulates or patches code by RAPHAËL PINSON.)*

Pkg nowidow nowidow is not used during HTML conversion.

Discard all options for lwarp-nowidow:

**for HTML output:** 1 \LWR@ProvidesPackageDrop{nowidow}[2011/09/20]

```

\nowidow [⟨lines⟩]
\setnowidow [⟨lines⟩]

2 \newcommand*\nowidow[1][1]{}
3 \newcommand*\setnowidow[1][1]{}

\noclub [⟨lines⟩]
\setnoclub [⟨lines⟩]

```

---

```
4 \newcommand*\noclub}[1][{}]{
5 \newcommand*\setnoclub}[1][{}]{
```

---

File 251 **lwarp-nttheorem.sty**

§ 350 Package **nttheorem**

(Emulates or patches code by WOLFGANG MAY, ANDREAS SCHEDLER.)

Pkg nttheorem nttheorem is patched for use by lwarp.

---

Table 15: Ntheorem package — css styling of theorems and proofs


**Theorem:** <div> of class theorembody<theoremstyle>


**Theorem Header:** <span> of class theoremheader<style>

where <theoremstyle> is plain, break, etc.

---


### § 350.1 Limitations

 **Font control** This conversion is not total. Font control is via css, and the custom L<sup>A</sup>T<sub>E</sub>X font settings are ignored.

 **Equation numbering** nttheorem has a bug with equation numbering in  $\mathcal{AMS}$  environments when the option thref is used. lwarp does not share this bug, so equations with \split, etc, are numbered correctly with lwarp's HTML output, but not with the print output. It is recommended to use cleveref instead of nttheorem's thref option.

### § 350.2 Options

Options amsthm or standard choose which set of theorems and proofs to initialize.

 **Disabled options** The options thmmarks and amsmath are disabled, since they heavily modify the underlying math code. Theorem marks are emulated. The AMS-math modifications are not done.

Option thref is disabled because cleveref functions are used instead. \thref is emulated.

Option hyperref is disabled because lwarp emulated hyperref.

**for HTML output:**

Some disabled options:

```
1 \DeclareOption{thref}{}
2
3
4 \newbool{LWR@nttheoremmarks}
5 \boolfalse{LWR@nttheoremmarks}
6
7 \DeclareOption{thmmarks}{
8 \booltrue{LWR@nttheoremmarks}
```

```

9 \newif\ifsetendmark\setendmarktrue
10 }
11
12
13 \newbool{LWR@theoremamsthm}
14 \boolfalse{LWR@theoremamsthm}
15
16 \DeclareOption{amsthm}{\booltrue{LWR@theoremamsthm}}
17
18
19 \DeclareOption{amsmath}{}
20 \DeclareOption{hyperref}{}
21
22 \LWR@ProvidesPackagePass{ntheorem}[2011/08/15]

```

### § 350.3 Remembering the theorem style

Storage for the style being used for new theorems.

```

23 \newcommand{\LWR@newtheoremstyle}{plain}

24 \AtBeginDocument{
25 \ifpackageloaded{cleveref}{
26 \gdef\@thm#1#2#3{%
27 \if@thmmarks
28 \stepcounter{end\InTheoType ctr}%
29 \fi
30 \renewcommand{\InTheoType}{#1}%
31 \if@thmmarks
32 \stepcounter{curr#1ctr}%
33 \setcounter{end#1ctr}{0}%
34 \fi
35 \refstepcounter[#1]{#2}% <<< cleveref modification
36 \theorem@prework
37 \LWR@forcenewpage% lwarp
38 \BlockClass{theorembody#1}\LWR@thisthmstyle% lwarp
39 \trivlist % latex's \trivlist, calling latex's \@trivlist unchanged
40 \ifuse@newframeskips % cf. latex.ltx for topsepadd: \@trivlist
41 \ifthm@inframe
42 \thm@topsep\theoremframepreskipamount
43 \thm@topsepadd\theoremframepostskipamount
44 \else
45 \thm@topsep\theoremframepreskipamount
46 \thm@topsepadd\theoremframepostskipamount
47 \fi
48 \else% oldframeskips
49 \thm@topsep\theoremframepreskipamount
50 \thm@topsepadd \theoremframepostskipamount
51 \ifvmode\advance\thm@topsepadd\partopsep\fi
52 \fi
53 \@topsep\thm@topsep
54 \@topsepadd\thm@topsepadd
55 \advance\linewidth -\theorem@indent
56 \advance\linewidth -\theorem@rightindent
57 \advance\@totalleftmargin \theorem@indent

```

```

58 \parshape \@ne \@totalleftmargin \linewidth
59 \@ifnextchar[{\@ythm{#1}{#2}{#3}}{\@xthm{#1}{#2}{#3}}
60 }
61 }{% not @ifpackageloaded{cleveref}
62 \gdef\@thm#1#2#3{%
63 \if@thmmarks
64 \stepcounter{end\InTheoType ctr}%
65 \fi
66 \renewcommand{\InTheoType}{#1}%
67 \if@thmmarks
68 \stepcounter{curr#1ctr}%
69 \setcounter{end#1ctr}{0}%
70 \fi
71 \refstepcounter{#2}%
72 \theorem@prework
73 \LWR@forcenewpage% lwarp
74 \BlockClass{theorembody#1}\LWR@thisthmstyle% lwarp
75 \trivlist % latex's \trivlist, calling latex's \trivlist unchanged
76 \ifuse@newframeskips % cf. latex.ltx for topsepadd: \@trivlist
77 \ifthm@inframe
78 \thm@topsep\theoreminframepreskipamount
79 \thm@topsepadd\theoreminframepostskipamount
80 \else
81 \thm@topsep\theorempreskipamount
82 \thm@topsepadd\theorempostskipamount
83 \fi
84 \else% oldframeskips
85 \thm@topsep\theorempreskipamount
86 \thm@topsepadd \theorempostskipamount
87 \ifvmode\advance\thm@topsepadd\partopsep\fi
88 \fi
89 \@topsep\thm@topsep
90 \@topsepadd\thm@topsepadd
91 \advance\linewidth -\theorem@indent
92 \advance\linewidth -\theorem@rightindent
93 \advance\@totalleftmargin \theorem@indent
94 \parshape \@ne \@totalleftmargin \linewidth
95 \@ifnextchar[{\@ythm{#1}{#2}{#3}}{\@xthm{#1}{#2}{#3}}
96 }
97 }
98 }% AtBeginDocument

```

Patched to remember the style being used for new theorems:

```

99 \gdef\theoremstyle#1{%
100 \@ifundefined{th@#1}{\@warning
101 {Unknown theoremstyle '#1'. Using 'plain'}}%
102 \theorem@style{plain}
103 \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
104 }%
105 {
106 \theorem@style{#1}
107 \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
108 }
109 }

```

Patched to remember the style for this theorem type, and set it later when the environment is started.

```

110
111 \gdef\xnthm#1#2[#3]{%
112 \ifthm@tempif
113 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
114 \expandafter\ifundefined{c@#1}%
115 {\@definecounter{#1}}{%
116 \@newctr{#1}[#3]%
117 \expandafter\xdef\csname the#1\endcsname{%
118 \expandafter\noexpand\csname the#3\endcsname \@thmcountersep
119 {\noexpand\csname\the\theoremnumbering\endcsname{#1}}}%
120 \expandafter\gdef\csname mkheader@#1\endcsname
121 {\csname setparms@#1\endcsname
122 \@thm{#1}{#1}{#2}
123 }%
124 \global\@namedef{end#1}{\@endtheorem}
125 \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
126 \fi
127 }
128
129 \gdef\ynthm#1#2{%
130 \ifthm@tempif
131 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
132 \expandafter\ifundefined{c@#1}%
133 {\@definecounter{#1}}{%
134 \expandafter\xdef\csname the#1\endcsname
135 {\noexpand\csname\the\theoremnumbering\endcsname{#1}}}%
136 \expandafter\gdef\csname mkheader@#1\endcsname
137 {\csname setparms@#1\endcsname
138 \@thm{#1}{#1}{#2}
139 }%
140 \global\@namedef{end#1}{\@endtheorem}
141 \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
142 \fi
143 }
144
145 \gdef\othm#1[#2]#3{%
146 \ifundefined{c@#2}{\@nocounterr{#2}}%
147 {\ifthm@tempif
148 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
149 \global\@namedef{the#1}{\@nameuse{the#2}}%
150 \expandafter\protected@xdef\csname num@addtheoremline#1\endcsname{%
151 \noexpand\@num@addtheoremline{#1}{#3}}%
152 \expandafter\protected@xdef\csname nonum@addtheoremline#1\endcsname{%
153 \noexpand\@nonum@addtheoremline{#1}{#3}}%
154 \theoremkeyword{#3}%
155 \expandafter\protected@xdef\csname #1Keyword\endcsname
156 {\the\theoremkeyword}%
157 \expandafter\gdef\csname mkheader@#1\endcsname
158 {\csname setparms@#1\endcsname
159 \@thm{#1}{#2}{#3}
160 }%
161 \global\@namedef{end#1}{\@endtheorem}

```

```

162 \AtBeginEnvironment{#1}{\edef\LWR@thissthmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
163 \fi}
164 }

```

### § 350.4 HTML cross-referencing

Mimics a float by incrementing the float counter and generating an HTML anchor. These are used for list-of-theorem cross-references.

```

165 \newcommand{\LWR@inctheorem}{%
166 \addtocounter{LWR@thisautoid}{1}%
167 \LWR@stoppars%
168 \LWR@htmltag{a id="\LWR@print@mbbox{autoid-\arabic{LWR@thisautoid}}"}\LWR@htmltag{/a}%
169 \LWR@startpars%
170 }

```

### § 350.5 \newtheoremstyle

The following are patched for css.

These were in individual files thp.sty for plain, thmb.sty for margin break, etc. They are gathered together here.

Each theorem is encased in a BlockClass environment of class theorembody<style>.

Each header is encased in an \InlineClass of class theoremheader<style>.

```

171 \gdef\newtheoremstyle#1#2#3{%
172 \expandafter\@ifundefined{th@#1}%
173 {\expandafter\gdef\csname th@#1\endcsname{%
174 \def\@begintheorem####1####2{%
175 \LWR@inctheorem% lwarp
176 #2}%
177 \def\@opargbegintheorem####1####2####3{%
178 \LWR@inctheorem% lwarp
179 #3}%
180 }%
181 }%
182 {\PackageError{\basename}{Theorem style #1 already defined}\@eha}
183 }

```

### § 350.6 Standard styles

```

184 \renewtheoremstyle{plain}%
185 {\item[
186 \InlineClass{theoremheaderplain}{##1\ ##2\theorem@separator}]}%
187 {\item[
188 \InlineClass{theoremheaderplain}{##1\ ##2\ (##3)\theorem@separator}]}
189
190 \renewtheoremstyle{break}%
191 {\item[
192 \InlineClass{theoremheaderbreak}{##1\ ##2\theorem@separator}\newline
193]}%
194 {\item[
195 \InlineClass{theoremheaderbreak}%

```



```

196 {##1\ ##2\ (##3)\theoremseparator}\newline
197]}
198
199 \renewtheoremstyle{change}%
200 {\item[
201 \InlineClass{theoremheaderchange}{##2\ ##1\theoremseparator}]]%
202 {\item[
203 \InlineClass{theoremheaderchange}{##2\ ##1\ (##3)\theoremseparator}]]
204
205 \renewtheoremstyle{changebreak}%
206 {\item[
207 \InlineClass{theoremheaderchangebreak}%
208 {##2\ ##1\theoremseparator}\newline
209]}%
210 {\item[
211 \InlineClass{theoremheaderchangebreak}%
212 {##2\ ##1\ (##3)\theoremseparator}\newline
213]}
214
215 \renewtheoremstyle{margin}%
216 {\item[
217 \InlineClass{theoremheadermargin}{##2 \quad ##1\theoremseparator}
218]}%
219 {\item[
220 \InlineClass{theoremheadermargin}{##2 \quad ##1\ (##3)\theoremseparator}
221]}
222
223 \renewtheoremstyle{marginbreak}%
224 {\item[
225 \InlineClass{theoremheadermarginbreak}%
226 {##2 \quad ##1\theoremseparator}\newline
227]}%
228 {\item[
229 \InlineClass{theoremheadermarginbreak}%
230 {##2 \quad ##1\ (##3)\theoremseparator}\newline
231]}
232
233 \renewtheoremstyle{nonumberplain}%
234 {\item[
235 \InlineClass{theoremheaderplain}{##1\theoremseparator}]]%
236 {\item[
237 \InlineClass{theoremheaderplain}{##1\ (##3)\theoremseparator}]]
238
239 \renewtheoremstyle{nonumberbreak}%
240 {\item[
241 \InlineClass{theoremheaderbreak}{##1\theoremseparator}\newline
242]}%
243 {\item[
244 \InlineClass{theoremheaderbreak}{##1\ (##3)\theoremseparator}\newline
245]}
246
247 \renewtheoremstyle{empty}%
248 {\item[]}]%
249 {\item[
250 \InlineClass{theoremheaderplain}{##3}]]

```

```

251
252 \renewtheoremstyle{emptybreak}%
253 {\item[]}%
254 {\item[
255 \InlineClass{theoremheaderplain}{##3}] \ \newline}

```

### § 350.7 Additional objects

The following manually adjust the css for the standard configuration objects which are not a purely plain style:

```
256 \ifbool{LWR@theoremamsthm}{}{%
```

Upright text via CSS:

```

257 \newtheoremstyle{plainupright}%
258 {\item[
259 \InlineClass{theoremheaderplain}{##1\ ##2\theorem@separator}]]}%
260 {\item[
261 \InlineClass{theoremheaderplain}{##1\ ##2\ (##3)\theorem@separator}]]}

```

Upright text and small caps header via CSS:

```

262 \newtheoremstyle{nonumberplainuprightsc}%
263 {\item[
264 \InlineClass{theoremheadersc}{##1\theorem@separator}]]}%
265 {\item[
266 \InlineClass{theoremheadersc}{##1\ (##3)\theorem@separator}]]}
267 }% not amsthm

```

### § 350.8 Renewed standard configuration

The following standard configuration is renewed using the new css:

```

268 \ifbool{LWR@theoremamsthm}{}{%

269 \ifx\thm@usestd\@undefined
270 \else
271 \theoremnumbering{arabic}
272 \theoremstyle{plain}
273 \RequirePackage{latexsym}
274 \theoremsymbol{\Box}
275 \theorembodyfont{\itshape}
276 \theoremheaderfont{\normalfont\bfseries}
277 \theoremseparator{}
278 \renewtheorem{Theorem}{Theorem}
279 \renewtheorem{theorem}{Theorem}
280 \renewtheorem{Satz}{Satz}
281 \renewtheorem{satz}{Satz}
282 \renewtheorem{Proposition}{Proposition}
283 \renewtheorem{proposition}{Proposition}
284 \renewtheorem{Lemma}{Lemma}
285 \renewtheorem{lemma}{Lemma}
286 \renewtheorem{Korollar}{Korollar}

```

```

287 \renewtheorem{korollar}{Korollar}
288 \renewtheorem{Corollary}{Corollary}
289 \renewtheorem{corollary}{Corollary}
290
291 \theoremstyle{plainupright}
292 \theorembodyfont{\upshape}
293 \theoremsymbol{\HTMLUnicode{25A1}}% UTF-8 white box
294 \renewtheorem{Example}{Example}
295 \renewtheorem{example}{Example}
296 \renewtheorem{Beispiel}{Beispiel}
297 \renewtheorem{beispiel}{Beispiel}
298 \renewtheorem{Bemerkung}{Bemerkung}
299 \renewtheorem{bemerkung}{Bemerkung}
300 \renewtheorem{Anmerkung}{Anmerkung}
301 \renewtheorem{anmerkung}{Anmerkung}
302 \renewtheorem{Remark}{Remark}
303 \renewtheorem{remark}{Remark}
304 \renewtheorem{Definition}{Definition}
305 \renewtheorem{definition}{Definition}
306
307 \theoremstyle{nonumberplainuprightsc}
308 \theoremsymbol{\HTMLUnicode{220E}}% UTF-8 end-of-proof
309 \renewtheorem{Proof}{Proof}
310 \renewtheorem{proof}{Proof}
311 \renewtheorem{Beweis}{Beweis}
312 \renewtheorem{beweis}{Beweis}
313 \qedsymbol{\HTMLUnicode{220E}}% UTF-8 end-of-proof
314
315 \theoremsymbol{}
316 \fi
317}% not amsthm

```

### § 350.9 **amsthm option**

Only if the `amsthm` option was given:

```

318 \ifbool{LWR@theoremamsthm}{
319
320 \gdef\th@plain{%
321 \def\theorem@headerfont{\normalfont\bfseries}\itshape%
322 \def\@begintheorem##1##2{%
323 \LWR@intheorem% lwarp
324 \item[
325 \InlineClass{theoremheaderplain}{##1\ ##2.}
326]}%
327 \def\@opargbegintheorem##1##2##3{%
328 \LWR@intheorem% lwarp
329 \item[
330 \InlineClass{theoremheaderplain}{##1\ ##2\ (##3).}
331]}}
332
333 \gdef\th@nonumberplain{%
334 \def\theorem@headerfont{\normalfont\bfseries}\itshape%
335 \def\@begintheorem##1##2{%
336 \LWR@intheorem% lwarp

```

```

337 \item[
338 \InlineClass{theoremheaderplain}{##1.}
339]}%
340 \def\@opargbegintheorem##1##2##3{%
341 \LWR@intheorem% lwarp
342 \item[
343 \InlineClass{theoremheaderplain}{##1\ (##3).}
344]}}
345
346 \gdef\th@definition{%
347 \def\theorem@headerfont{\normalfont\bfseries}\normalfont%
348 \def\@begintheorem##1##2{%
349 \LWR@intheorem% lwarp
350 \item[
351 \InlineClass{theoremheaderdefinition}{##1\ ##2.}
352]}%
353 \def\@opargbegintheorem##1##2##3{%
354 \LWR@intheorem% lwarp
355 \item[
356 \InlineClass{theoremheaderdefinition}{##1\ ##2\ (##3).}
357]}}
358
359 \gdef\th@nonumberdefinition{%
360 \def\theorem@headerfont{\normalfont\bfseries}\normalfont%
361 \def\@begintheorem##1##2{%
362 \LWR@intheorem% lwarp
363 \item[
364 \InlineClass{theoremheaderdefinition}{##1.}
365]}%
366 \def\@opargbegintheorem##1##2##3{%
367 \LWR@intheorem% lwarp
368 \item[
369 \InlineClass{theoremheaderdefinition}{##1\ (##3).}
370]}}
371
372 \gdef\th@remark{%
373 \def\theorem@headerfont{\itshape}\normalfont%
374 \def\@begintheorem##1##2{%
375 \LWR@intheorem% lwarp
376 \item[
377 \InlineClass{theoremheaderremark}{##1\ ##2.}
378]}%
379 \def\@opargbegintheorem##1##2##3{%
380 \LWR@intheorem% lwarp
381 \item[
382 \InlineClass{theoremheaderremark}{##1\ ##2\ (##3).}
383]}}
384
385 \gdef\th@nonumberremark{%
386 \def\theorem@headerfont{\itshape}\normalfont%
387 \def\@begintheorem##1##2{%
388 \LWR@intheorem% lwarp
389 \item[
390 \InlineClass{theoremheaderremark}{##1.}
391]}%

```

```

392 \def\@opargbegintheorem##1##2##3{%
393 \LWR@intheorem% lwarp
394 \item[
395 \InlineClass{theoremheaderremark}{##1\ (##3).}
396]}}
397
398 \gdef\th@proof{%
399 \def\theorem@headerfont{\normalfont\bfseries}\itshape%
400 \def\@begintheorem##1##2{%
401 \LWR@intheorem% lwarp
402 \item[
403 \InlineClass{theoremheaderproof}{##1.}
404]}%
405 \def\@opargbegintheorem##1##2##3{%
406 \LWR@intheorem% lwarp
407 \item[
408 \InlineClass{theoremheaderproof}{##1\ (##3).}
409]}}
410
411
412
413 \newcounter{proof}%
414 \if@thmmarks
415 \newcounter{currproofctr}%
416 \newcounter{endproofctr}%
417 \fi
418
419 \gdef\proofSymbol{\openbox}
420
421 \newcommand{\proofname}{Proof}
422
423 \newenvironment{proof}[1][\proofname]{
424 \th@proof
425 \def\theorem@headerfont{\itshape}%
426 \normalfont
427 \theoremsymbol{\HTMLUnicode{220E}}% UTF-8 end-of-proof
428 \@thm{proof}{proof}{#1}
429 }%
430 {\@endtheorem}
431
432 }{}% amsthm option

```

## § 350.10 Ending a theorem

Patched for CSS:

```

433 \let\LWR@origendtheorem\@endtheorem
434 \renewcommand{\@endtheorem}{%
435 \ifbool{LWR@theoremmarks}{%
436 \ifsetendmark%
437 \InlineClass{theoremendmark}{\csname\InTheoType Symbol\endcsname}%
438 \setendmarkfalse%
439 \fi%
440 }{}%
441 \LWR@origendtheorem% also does \@endtrivlist

```

```

442 \ifbool{LWR@theoremmarks}{\global\setendmarktrue}{}%
443 \endBlockClass%
444 }

```

### § 350.11 **\NoEndMark**

```

445 \gdef\NoEndMark{\global\setendmarkfalse}

```

### § 350.12 **List-of**

Redefined to reuse the float mechanism to add list-of-theorem links:

```
\thm@thmline {<1: printed type>} {<2: #>} {<3: optional>} {<4: page>}
```

```

446 \renewcommand{\thm@thmline@noname}[4]{%
447 \hypertocfloat{1}{theorem}{thm}{#2 #3}{}%
448 }
449
450 \renewcommand{\thm@thmline@name}[4]{%
451 \hypertocfloat{1}{theorem}{thm}{#1 #2 #3}{}%
452 }

```

This was redefined by `ntheorem` when loaded, so it is now redefined for `lwarp`:

```

453 \def\thm@thmline{\thm@thmline@name}

```

Patch for css:

```

454 \def\listtheorems#1{
455 \LWR@html@elementclass{nav}{lohtm}%
456 \begingroup
457 \c@tocdepth=-2%
458 \def\thm@list{#1}\thm@processlist
459 \endgroup
460 \LWR@html@elementclassend{nav}{lohtm}%
461 }

```

### § 350.13 **Symbols**

Proof QED symbol:

```

462 \newcommand{\qed}{\quad\the\qedsymbol}
463
464 \AtBeginDocument{
465 \@ifundefined{LWR@orig@openbox}{
466 \LetLtxMacro\LWR@orig@openbox\openbox
467 \LetLtxMacro\LWR@orig@blacksquare\blacksquare
468 \LetLtxMacro\LWR@orig@Box\Box
469
470 \def\openbox{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
471 \def\blacksquare{\text{\HTMLUnicode{220E}}}% UTF-8 end-of-proof
472 \def\Box{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
473
474 \appto\LWR@restoreorigformatting%

```

```

475 \LetLtxMacro\openbox\LWR@orig@openbox%
476 \LetLtxMacro\blacksquare\LWR@orig@blacksquare%
477 \LetLtxMacro\Box\LWR@orig@Box%
478 }% appto
479 }{}% @ifundefined
480 }% AtBeginDocument

```

### § 350.14 **Cross-referencing**

```
\thref {<label>}
```

```
481 \newcommand*{\thref}[1]{\cref{#1}}%
```

---

### File 252 **lwarp-octave.sty**

### § 351 Package **octave**

*(Emulates or patches code by ANDREW A. CASHNER.)*

Pkg octave **octave** is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{octave}[2017/10/31]

Remove the leading 1pt kern:

```

2 \RenewDocumentCommand{\@PrintTicks}{ m }{%
3 \kern-1pt% lwarp
4 \@TickNum = #1%
5 \loop
6 \@Tick{}%
7 \advance\@TickNum by -1
8 \ifnum\@TickNum > 0
9 \repeat
10 }

```

Use unicode for the prime character:

```
11 \RenewDocumentCommand{\@Tick}{}{\HTMLUnicode{2032}}
```

Catch the inline font:

```

12 \RenewDocumentCommand{\pitch}{ m o m }{%
13 \if@OctaveNumber%
14 {%
15 \pitchfont{%
16 \LWR@textcurrentfont{% lwarp
17 \MakeUppercase{#1}%
18 \IfValueTF{#2}{#2}{}\textsubscript{#3}%
19 }%
20 }%
21 }%
22 \else%

```

```

23 {%
24 \pitchfont{%
25 \LWR@textcurrentfont{% lwarp
26 \@GetOctaveTick{#1}[#2]{#3}%
27 }%
28 }%
29 }%
30 \fi%
31 }

```

The original was hard to adapt to lwarp's handling of &.

```

32 \StartDefiningTabulars
33 \renewcommand{\octavetable}{%
34 \begin{tabular}{ll}
35 \octaveprimes \pitch{C}{0} & \octavenumbers \pitch{C}{0} \\
36 \octaveprimes \pitch{C}{1} & \octavenumbers \pitch{C}{1} \\
37 \octaveprimes \pitch{C}{2} & \octavenumbers \pitch{C}{2} \\
38 \octaveprimes \pitch{C}{3} & \octavenumbers \pitch{C}{3} \\
39 \octaveprimes \pitch{C}{4} & \octavenumbers \pitch{C}{4} \\
40 \octaveprimes \pitch{C}{5} & \octavenumbers \pitch{C}{5} \\
41 \octaveprimes \pitch{C}{6} & \octavenumbers \pitch{C}{6} \\
42 \octaveprimes \pitch{C}{7} & \octavenumbers \pitch{C}{7} \\
43 \end{tabular}
44 }
45 \StopDefiningTabulars

```

---

File 253 **lwarp-overpic.sty**

§ 352 Package **overpic**

*(Emulates or patches code by ROLF NIEPRASCHK.)*

Pkg overpic overpic is patched for use by lwarp.



**scaling**

The macros `\overpicfontsize` and `\overpicfontskip` are used during HTML generation. These are sent to `\fontsize` to adjust the font size for scaling differences between the print and HTML versions of the document. Renew these macros before using the `overpic` and `Overpic` environments.

See section 85.2 for the print-mode version of `\overpicfontsize` and `\overpicfontskip`.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{overpic}[2017/10/06]
2 \newcommand*\overpicfontsize{12}
3 \newcommand*\overpicfontskip{14}
4
5 \BeforeBeginEnvironment{overpic}{%
6 \begin{lateximage}%
7 \fontsize{\overpicfontsize}{\overpicfontskip}%
8 \selectfont%
9 }

```



---

```

10
11 \AfterEndEnvironment{overpic}{\end{lateximage}}
12
13 \BeforeBeginEnvironment{Overpic}{%
14 \begin{lateximage}%
15 \fontsize{\overpicfontsize}{\overpicfontskip}%
16 \selectfont%
17 }
18
19 \AfterEndEnvironment{Overpic}{\end{lateximage}}

```

---

File 254 **lwarp-pagegrid.sty**

§ 353 Package **pagegrid**

Pkg pagegrid pagegrid is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pagegrid}[2016/05/16]

2 \newcommand*{\pagegridsetup}[1]{}

```

---

File 255 **lwarp-pagenote.sty**

§ 354 Package **pagenote**

Pkg pagenote pagenote works as-is, but the page option is disabled.

**for HTML output:**

```

1 \DeclareOption{page}{}
2 \LWR@ProvidesPackagePass{pagenote}[2009/09/03]

```

---

File 256 **lwarp-pagesel.sty**

§ 355 Package **pagesel**

Pkg pagesel pagesel is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pagesel}[2016/05/16]

```

---

File 257 **lwarp-paralist.sty**

§ 356 Package **paralist**

*(Emulates or patches code by BERND SCHANDL.)*

Pkg paralist paralist is supported with minor changes.

for HTML output: 1 \LWR@ProvidesPackagePass{paralist}[2017/01/22]

The compact environments are identical to the regular ones:

```
2 \LetLtxMacro\compactitem\itemize
3 \LetLtxMacro\compactenum\enumerate
4 \LetLtxMacro\compactdesc\description
5 \LetLtxMacro\endcompactitem\enditemize
6 \LetLtxMacro\endcompactenum\endenumerate
7 \LetLtxMacro\endcompactdesc\enddescription
```

For the inline environments, revert `\item` to its original print-mode version:

```
8 \AtBeginEnvironment{inparaitem}{\LetLtxMacro\item\LWR@origitem}
9 \AtBeginEnvironment{inparaenum}{\LetLtxMacro\item\LWR@origitem}
10 \AtBeginEnvironment{inparadesc}{\LetLtxMacro\item\LWR@origitem}
```

Manual formatting of the description labels:

```
11 \def\paradescriptionlabel#1{{\normalfont\textbf{#1}}}
```

File 258 **lwarp-parnotes.sty**

§ 357 Package **parnotes**

*(Emulates or patches code by CHELSEA HUGHES.)*

Pkg parnotes parnotes is supported with some patches.

for HTML output: 1 \LWR@ProvidesPackagePass{parnotes}[2016/08/15]

```
2 \long\def\PN@parnote@real#1#2{%
3 \parnotemark{#1}%
4 % Unless this is the first parnote in \PN@text, add a separator first
5 \unless\ifx\PN@text\@empty\g@addto@macro\PN@text{\parnoteintercmd}\fi
6 % Redefine \@currentlabel to the parnote label, so \label works
7 \g@addto@macro\PN@text{%
8 \phantomsection%
9 \def\@currentlabel{#1}%
10 \def\cref@currentlabel{% lwarp
11 [parnotemark][\arabic{parnotemark}][\the parnotemark%
12]%
13 }%
14 \g@addto@macro\PN@text{%
15 \LWR@textcurrentfont{% lwarp
16 \parnotemark{#1}\nolinebreak\thinspace#2%
17 }%
18 }%
19 }
20
```

```

21 \def\PN@parnotes@real{%
22 % We call \par later, so this avoids recursion with \PN@parnotes@auto
23 \PN@inparnotestrue
24 \unless\ifvmode\par\fi
25 % Avoid page breaks between a paragraph and its parnotes
26 \nopagebreak\addvspace{\parnotevskip}%
27 \LWR@forcenewpage% lwarp
28 \begin{BlockClass}{footnotes}% lwarp
29 {\parnotefmt{\PN@text}\par}%
30 \end{BlockClass}% lwarp
31 \global\def\PN@text{%
32 \addvspace{\parnotevskip}%
33 %
34 % These can be enabled or disabled by package options
35 %
36 \PN@disable@indent
37 \PN@reset@optional
38 \PN@inparnotesfalse
39 }
40
41 \AtBeginDocument{
42 \crefname{parnotemark}{paragraph note}{paragraph notes}%
43 \Crefname{parnotemark}{Paragraph note}{Paragraph notes}
44 }

```

---

File 259 **lwarp-parskip.sty**

§ 358 Package **parskip**

Pkg parskip parskip is ignored.

**for HTML output:** Discard all options for lwarp-parskip.

```
1 \LWR@ProvidesPackageDrop{parskip}[2001/04/09]
```

---

File 260 **lwarp-pbox.sty**

§ 359 Package **pbox**

*(Emulates or patches code by SIMON LAW.)*

Pkg pbox pbox is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pbox}[2011/12/07]

```

2 \NewDocumentCommand{\pbox}{0{t} 0{} 0{t} m +m}{%
3 \global\booltrue{LWR@minipagefullwidth}%
4 \parbox[#1][#2][#3]{#4}{#5}%
5 }
6

```

```

7 \newcommand{\settomewidth}[3][\columnwidth]{%
8 \settowidth{#2}{#3}%
9 }
10
11 \newcommand{\widthofpbox}[1]{%
12 \widthof{#1}%
13 }

```

---

File 261 **lwarp-pdfcomment.sty**

§ 360 Package **pdfcomment**

Pkg pdfcomment pdfcomment is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pdfcomment}[2016/06/13]

```

2 \newenvironment{pdfsidelinecomment}[2][{}]{%
3 \newcommand{\pdfcomment}[2][{}]{%
4 \newcommand{\pdfmargincomment}[2][{}]{%
5 \newcommand{\pdfmarkupcomment}[3][{}]{#2}
6 \newcommand{\pdfreetextcomment}[2][{}]{%
7 \newcommand{\pdfsquarecomment}[2][{}]{%
8 \newcommand{\pdfcirclecomment}[2][{}]{%
9 \newcommand{\pdflinecomment}[2][{}]{%
10 \newcommand{\pdftooltip}[3][{}]{#2}
11 \newcommand{\pdfcommentsetup}[2][{}]{%
12 \newcommand{\listofpdfcomments}[1][{}]{%
13 \newcommand{\setliststyle}[1]{%
14 \newcommand{\defineliststyle}[2]{%
15 \newcommand{\defineavatar}[2]{%
16 \newcommand{\definestyle}[2]{%

```

---

File 262 **lwarp-pdflscope.sty**

§ 361 Package **pdfscape**

Pkg pdfscape pdfscape is ignored.

**for HTML output:** Discard all options for lwarp-pdfscape:

```

1 \LWR@ProvidesPackageDrop{pdfscape}[2016/05/14]

```

---

File 263 **lwarp-pdfmarginpar.sty**

§ 362 Package **pdfmarginpar**

Pkg pdfmarginpar pdfmarginpar is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pdfmarginpar}[2011/08/05]

2 \newcommand{\pdfmarginpar}[2][{}]{
3 \newcommand{\pdfmarginparset}[1]{}
```

---

File 264 **lwarp-pdfpages.sty**

§ 363 Package **pdfpages**

*(Emulates or patches code by ANDREAS MATTHIAS.)*

Pkg pdfpages pdfpages is patched for use by lwarp.

Option link and linkname work:

---

```

\hyperlink{<filename>.pdf.<pagenumber>}{some text}
\hyperlink{<linkname>.<pagenumber>}{some text}
```

---

Options which make no sense in HTML are disabled.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{pdfpages}[2017-10-31]
```

Disable option which have no meaning for HTML output:

```

2 \define@key{pdfpages}{fitpaper}[false]{
3 \define@key{pdfpages}{landscape}[false]{
4 \define@key{pdfpages}{openright}[false]{
5 \define@key{pdfpages}{signature}{
6 \define@key{pdfpages}{signature*}{
7 \define@key{pdfpages}{booklet}[false]{
8 \define@key{pdfpages}{rotateoversize}[false]{
9 \define@key{pdfpages}{doublepages}[false]{
10 \define@key{pdfpages}{doublepagestwist}[false]{
11 \define@key{pdfpages}{doublepagestwistodd}[false]{
12 \define@key{pdfpages}{doublepagestwist*}[false]{
13 \define@key{pdfpages}{doublepagestwistodd*}[false]{
14 \define@key{pdfpages}{duplicatepages}[2]{
15 \define@key{pdfpages}{thread}[false]{
16 \define@key{pdfpages}{threadname}{
17 \define@key{pdfpages}{linkfit}{
18 \define@key{pdfpages}{linktodoc}[false]{
19 \define@key{pdfpages}{linktodocfit}{
20 \define@key{pdfpages}{linkfilename}{
21 \define@key{pdfpages}{survey}[false]{
22 \define@key{pdfpages}{survey-nolink}[false]{
23 \define@key{pdfpages}{newwindow}[false]{
```

Use print mode while measuring the page numbers:

```

24 \xpretocmd{\AM@getpagecount}{\LWR@restoreorigformatting}{}{}
```

Emulate a bit of eso-pic:

```

25 \newif\ifESO@texcoord
26
27 \newcommand{\ESO@HookIIBG}{}
28
29 \renewcommand{\AM@AddToShipoutPicture}{\g@addto@macro\ESO@HookIIBG}
30
31 \renewcommand{\ClearShipoutPicture}{}

```

\LWR@esopic@newpage    At each \newpage.

```

32 \newcommand*{\LWR@esopic@newpage}{%

```

Is there something to draw?

```

33 \ifdefvoid{\ESO@HookIIBG}%
34 {}%
35 {%

```

If the link option was specified, add a hyper target:

```

36 \ifAM@link%
37 \hypertarget{\AM@linkname.\AM@page}{}%
38 \fi%

```

Draw inside a picture environment of the size of a virtual page:

```

39 \begingroup%
40 \setlength{\unitlength}{1in}%
41 \begin{picture}(8,10.5)%
42 \ESO@HookIIBG%
43 \end{picture}%
44 \endgroup%
45 \global\let\ESO@HookIIBG\empty%
46 }
47 }

```

\AM@output    Patched to use \LWR@esopic@newpage.

```

48 \xpatchcmd{\AM@output}
49 {\newpage}
50 {\LWR@esopic@newpage}
51 {}
52 {\LWR@patcherror{pdfpages}{AM@output-1}}
53
54 \xpatchcmd{\AM@output}
55 {\newpage}
56 {\LWR@esopic@newpage}
57 {}
58 {\LWR@patcherror{pdfpages}{AM@output-2}}
59
60 \xpatchcmd{\AM@output}
61 {\newpage}
62 {\LWR@esopic@newpage}
63 {}
64 {\LWR@patcherror{pdfpages}{AM@output-3}}

```

`\includepdf` Patched to set a reasonable paper size.

```
65 \xpretocmd{\includepdf}{%
66 \begingroup%
67 \setlength{\paperwidth}{8in}%
68 \setlength{\paperheight}{10.5in}%
69 }{}{}
70
71 \xapptocmd{\includepdf}{%
72 \endgroup%
73 }{}{}
```

`\includepdfmerge` Patched to set a reasonable paper size.

```
74 \xpretocmd{\includepdfmerge}{%
75 \begingroup%
76 \setlength{\paperwidth}{8in}%
77 \setlength{\paperheight}{10.5in}%
78 }{}{}
79
80 \xapptocmd{\includepdfmerge}{%
81 \endgroup%
82 }{}{}
```

`\AM@hyper@begin@i` Hyper links are created by `\LWR@esopic@newpage`, so don't create them here:

```
83 \renewcommand{\AM@hyper@begin@i}{}
```

File 265 **lwarp-pdfprivacy.sty**

§ 364 Package **pdfprivacy**

Pkg pdfprivacy pdfprivacy is ignored.

**for HTML output:** 1 `\LWR@ProvidesPackageDrop{pdfprivacy}[2017/12/03]`

File 266 **lwarp-pdfrenderer.sty**

§ 365 Package **pdfrenderer**

Pkg pdfrenderer pdfrenderer is ignored.

**for HTML output:** 1 `\LWR@ProvidesPackageDrop{pdfrenderer}[2016/05/17]`

```
2 \newcommand*{\pdfrenderer}[1]{}
3 \newcommand{\textpdfrenderer}[2]{#2}
```

---

File 267 **lwarp-pdfsync.sty**

§ 366 Package **pdfsync**

*(Emulates or patches code by J. LAURENS.)*

Pkg pdfsync Emulated.

**for HTML output:** Discard all options for lwarp-pdfsync:

```
1 \LWR@ProvidesPackageDrop{pdfsync}[2008/01/26]
2 \newcommand*{\pdfsync}{}
3 \newcommand*{\pdfsyncstart}{}
4 \newcommand*{\pdfsyncstop}{}

```


---

File 268 **lwarp-pdftricks.sty**

§ 367 Package **pdftricks**

*(Emulates or patches code by C. V. RADHAKRISHNAN, C. V. RAJAGOPAL, ANTOINE CHAMBERT-LOIR.)*

Pkg pdftricks pdftricks is patched for use by lwarp.

 **convert image files** The pdftricks image files <jobname>-fig\*.pdf must be converted to .svg, or else a missing file error will occur. The image files must also be converted again whenever they change. To convert the images:

Enter ⇒ **lwarpmk pdftosvg <jobname>-fig\*.pdf**

**for HTML output:** 1 \LWR@ProvidesPackagePass{pdftricks}[2003/08/10]

Reuse the print-mode images:

```
2 \def\PDFTfigname{\BaseJobname-fig\thepsfig}

```

If the .pdf images have not yet been converted to .svg then an error about a missing file will occur. Warn the user to convert the images.

```
3 \PackageWarning{lwarp-pdftricks}{
4 When the pdftricks images change,
5 remember to convert PDF images to SVG using 'lwarpmk pdftosvg *-fig.pdf',
6 }
7
8 \AfterEndDocument{\typeout{***}}
9 \AfterEndDocument{\typeout{*** Note: If pdftricks images are not found, new, or updated,}}
10 \AfterEndDocument{\typeout{*** \space use 'lwarpmk pdftosvg \BaseJobname-fig*.pdf'}}
11 \AfterEndDocument{\typeout{***}}

```



---

File 269 **lwarp-pdfx.sty**

§ 368 Package **pdfx**

Pkg pdfx pdfx is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pdfx}[2017/05/18]

---

File 270 **lwarp-perpage.sty**

§ 369 Package **perpage**

*(Emulates or patches code by DAVID KASTRUP.)*

Pkg perpage perpage is mostly ignored, but support is added for footnote counters.

There is no page number in HTML, so most counters are not reset. If the document redefines `\the<countname>` to include `\theperpage`, it is necessary to place that redefinition inside a `warpprint` environment to avoid modifying the HTML definitions.

`\AddAbsoluteCounter` must not be inside `warpprint`, as the counter must be added for HTML also, although it is not incremented.

[footnote numbering](#) To have footnote numbers reset each time footnotes are printed:

```
\setcounter{footnoteReset}{1}
```

For `bigfoot`, `manyfoot`, or `perpage`:

```
\MakePerPage{footnoteX}
— or —
\MakeSortedPerPage{footnoteX}
```

The footnotes are reset when they are printed, according to section level as set by `FootnoteDepth`, which is not necessarily by HTML page. This is recommended for `\alph`, `\Alph`, or `\fnsymbol` footnotes, due to the limited number of symbols which are available.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{perpage}[2014/10/25]

```
2 \newcommand\AddAbsoluteCounter[1]
3 {
4 \ifundefined{c@abs#1}{%
5 \expandafter\newcount\csname c@abs#1\endcsname
6 \global\value{abs#1}\@ne
7 \global\expandafter\let\csname cl@abs#1\endcsname\@empty
8 \expandafter\xdef\csname theabs#1\endcsname{%
9 \noexpand\number \csname c@abs#1\endcsname
```

```

10 }%
11 % \global\@namedef{c@pabs@#1}{\pp@cl@begin
12 % \stepcounter{abs#1}%
13 % \pp@cl@end}%
14 % \@addtoreset{pabs@#1}{#1}
15 }
16 {}
17 }
18
19 \AddAbsoluteCounter{page}
20 \def\theabspage{1}
21
22 \newcommand*{\MakePerPage[2][1]{%
23 \ifltxcounter{#2Reset}{%
24 \setcounter{#2Reset}{#1}%
25 }{
26
27 }%
28 }
29
30 \newcommand*{\MakeSorted[1]}{
31
32 \newcommand*{\MakeSortedPerPage[2][1]{%
33 \ifltxcounter{#2Reset}{%
34 \setcounter{#2Reset}{#1}%
35 }{
36 }%
37 }
38
39 \newcommand*{\theperpage}{1}


```

---

File 271 **lwarp-pfnote.sty**

§ 370 Package **pfnote**

Pkg pfnote pfnote is emulated.

 **pfnote numbers** While emulating pfnote, lwarp is not able to reset HTML footnote numbers per page number to match the printed version, as HTML has no concept of page numbers. lwarp therefore uses continuous footnote numbering even for pfnote.

**for HTML output:** 1 \LWR@ProvidesPackageDrop[pfnote][1999/07/14]

---

File 272 **lwarp-phfqit.sty**

§ 371 Package **phfqit**

*(Emulates or patches code by PHILIPPE FAIST.)*

Pkg phfqit phfqit is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{phfqit}[2017/08/16]
2 \LetLtxMacro\LWR@origbitstring\bitstring
3
4 \renewcommand\bitstring[1]{%
5 \InlineClass[%
6 text-decoration: overline underline ;
7]{bitstring}{#1}%
8 % \phfqit@bitstring{#1}%
9 }
10
11 \appto\LWR@restoreorigformatting{%
12 \LetLtxMacro\bitstring\LWR@origbitstring%
13 }
```

---

File 273 **lwarp-pifont.sty**

§ 372 Package **pifont**

*(Emulates or patches code by WALTER SCHMIDT.)*

Pkg pifont pifont is patched for use by lwarp.

Hashed inline images are used, as there may not be Unicode support for all icons.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{pifont}[2005/04/12]
2 \renewcommand{\Pisymbol}[2]{%
3 \begin{lateximage}*[(Pisymbol)][pisymbol#1#2]%
4 {\Pifont{#1}\char#2}%
5 \end{lateximage}%
6 }
7
8 \newcommand{\LWR@HTML@Pifill}[2]{
9 \Pisymbol{#1}{#2} \Pisymbol{#1}{#2} \Pisymbol{#1}{#2}
10 }
11 \LWR@formatted{Pifill}
12
13 \newcommand{\LWR@HTML@Piline}[2]{%
14 \par\noindent\hspace*{0.5in}
15 \Pifill{#1}{#2} \Pifill{#1}{#2} \Pifill{#1}{#2}
16 }
17 \LWR@formatted{Piline}
```

---

File 274 **lwarp-placeins.sty**

§ 373 Package **placeins**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg placeins **placeins** is not used during HTML conversion.

Discard all options for lwarp-placeins:

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{placeins}[2005/04/18]
2 \newcommand*\FloatBarrier{}
```

---

File 275 **lwarp-plarydshln.sty**

## § 374 Package **plarydshln**

Pkg plarydshln **plarydshln** is emulated by lwarp-arydshln.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{plarydshln}[2018/10/20]
2 \LWR@origRequirePackage{lwarp-arydshln}
```

---

File 276 **lwarp-plext.sty**

## § 375 Package **plext**

Pkg plext **plext** is preloaded by jrtarticle and related classes.

**for HTML output:**

```
1 \LWR@Loadbefore{plext}
2
3 \LWR@ProvidesPackagePass{plext}[2017/07/21]

4 \let\tate\relax
5
6 \DeclareExpandableDocumentCommand{\rensuji}{s o m}{#3}
7
8 % \layoutfloat(width,height)[pos]#4
9 \DeclareDocumentCommand{\layoutfloat}{d() o m}{}
10
11 % \DeclareLayoutCaption{type} <dir>(width)[pos1pos2]
12 \DeclareDocumentCommand{\DeclareLayoutCaption}{m d<> d() o}{}
13
14 \LetLtxMacro\pcaption\caption
15
16 % \layoutcaption<dir>(width)[pos]
17 \DeclareDocumentCommand{\layoutcaption}{d<> d() o}{}
18
19 \let\captiondir\relax
```

Add the optional <t/y> direction:

```
20 \RenewDocumentEnvironment{LWR@HTML@minipage}{d<> O{t} O{} O{t} m}
21 {\LWR@HTML@sub@minipage{#2}{#3}{#4}{#5}}
```

```

22 {\endLWR@HTML@sub@minipage}
23
24 \RenewDocumentCommand{\LWR@HTML@parbox}{d<> O{t} O{ } O{t} m +m}
25 {
26 \LWR@traceinfo{parbox of width #4}%
27 \begin{minipage}[#2][#3][#4]{#5}%
28 #6
29 \end{minipage}%
30 }
31
32 % \pbox <t/y> [width] [l/r] {contents}
33 \RenewDocumentCommand{\pbox}{d<> O{0pt} O{c} m}{%
34 \global\booltrue{LWR@minipagefullwidth}%
35 \parbox{#2}{#4}%
36 }

```

picture, as modified by `pext`, is encapsulated by the `lwarp` core.

File 277 **lwarp-plextarydshln.sty**

§ 376 Package **plextarydshln**

Pkg `plextarydshln` `plextarydshln` is emulated by `lwarp-arydshln`.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{plextarydshln}[2018/10/20]
2 \LWR@origRequirePackage{lwarp-arydshln}

```

File 278 **lwarp-plextcolortbl.sty**

§ 377 Package **plextcolortbl**

Pkg `plextcolortbl` `plextcolortbl` is emulated by `lwarp-colortbl`.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{plextcolortbl}[2018/09/19]
2 \LWR@origRequirePackage{lwarp-colortbl}

```

File 279 **lwarp-prelim2e.sty**

§ 378 Package **prelim2e**

*(Emulates or patches code by MARTIN SCHRÖDER.)*

Pkg `prelim2e` Emulated.

**for HTML output:**

Discard all options for lwarp-prelim2e:

```
1 \LWR@ProvidesPackageDrop{prelim2e}[2009/05/29]
2 \newcommand{\PrelimText}{}
3 \newcommand{\PrelimTextStyle}{}
4 \newcommand{\PrelimWords}{}

```

---

File 280 **lwarp-prettyref.sty**

§ 379 Package **prettyref**

*(Emulates or patches code by KEVIN S. RULAND.)*

Pkg prettyref prettyref is patched for use by lwarp.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{prettyref}[1998/07/09]
2 \newreformat{fig}{Figure \ref{#1}}
3 \newreformat{tab}{Table \ref{#1}}

```

---

File 281 **lwarp-preview.sty**

§ 380 Package **preview**

Pkg preview preview is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{preview}[2017/04/24]
2 \newenvironment{preview}{}{}
3 \newenvironment{nopreview}{}{}
4 \NewDocumentCommand{\PreviewMacro}{s o o +m}{}
5 \NewDocumentCommand{\PreviewEnvironment}{s o o +m}{}
6 \newcommand{\PreviewSnarfEnvironment}[2][{}]{
7 \NewDocumentCommand{\PreviewOpen}{s o}{}
8 \NewDocumentCommand{\PreviewClose}{s o}{}
9 \let\ifPreview\iffalse% \fi for syntax highlighting

```


---

File 282 **lwarp-psfrag.sty**

§ 381 Package **psfrag**

*(Emulates or patches code by MICHAEL C. GRANT, DAVID CARLISLE.)*

Pkg psfrag psfrag is patched for use by lwarp.

 **use psfrags** The psfrags environment is modified to use lateximage to encapsulate the image.

Always use a `psfrags` environment to contain any local `\psfrag` macros and the associated `\includegraphics` or `\epsfig` calls. Outside of a `psfrags` environment, `psfrags` adjustments will not be seen by `lwarp`.



Tip: Use a mono-spaced font for the tags in the EPS file.

**for HTML output:** 1 \LWR@ProvidesPackagePass{psfrag}[1998/04/11]

A `lateximage` captures the modified image from the document.

```
2 \BeforeBeginEnvironment{psfrags}{%
3 \begin{lateximage}[(-psfrags-~\packagediagramname)]%
4 }
5
6 \AfterEndEnvironment{psfrags}{\end{lateximage}}
```

File 283 **lwarp-psfragx.sty**

§ 382 Package **psfragx**

*(Emulates or patches code by PASCAL KOCKAERT.)*

Pkg psfragx **psfragx** is patched for use by `lwarp`.

**for HTML output:** 1 \LWR@ProvidesPackagePass{psfragx}[2012/05/02]

A `lateximage` captures the modified image from the document.

```
2 \def\pfx@includegraphicx#1#2{%
3 \begin{lateximage}[(-psfragx-~\packagediagramname)]%
4 \mbox{\pfx@overpix{#1}{#2}\endpfx@overpix}%
5 \end{lateximage}%
6 }
7
8 \def\@@@overpix[#1]<#2>[#3]#4{%
9 \begin{lateximage}[(-psfragx-~\packagediagramname)]%
10 \pfx@overpix{#1,ovpfgd={#2},ovpbgd={#3}}{#4}%
11 }
12
13 \def\endoverpix{%
14 \endpfx@overpix%
15 \end{lateximage}%
16 }
```

File 284 **lwarp-pst-eps.sty**

§ 383 Package **pst-eps**

*(Emulates or patches code by HERBERT VOSS.)*

Pkg pst-eps **pst-eps** is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{pst-eps}[2005/05/20]
2 \renewenvironment{TeXtoEPS}{}{}
3 \renewcommand{\PSTtoEPS}[3][{}]
```

---

File 285 **lwarp-pstool.sty**

§ 384 Package **pstool**

*(Emulates or patches code by ZEBB PRIME, WILL ROBERTSON.)*

Pkg pstool **pstool** is patched for use by lwarp.

`\graphicspath` is ignored, and the file directory must be stated.

 **path and filename** The filename must not have a file extension.

Use

```
Enter => lwarpmk html
```

followed by

```
Enter => lwarpmk limages
```

.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{pstool}[2018/01/20]
```

Each image is placed inside a `lateximage` to capture the results of `psfrag`.

```

2 \renewcommand\pstool@alwaysprocess[3][{}%
3 \begin{lateximage}[(-pstool-~\packagediagramname)]%
4 \includegraphics{#2.pdf}%
5 \end{lateximage}%
6 }
7 \let\txMacro\pstool@neverprocess\pstool@alwaysprocess
8 \let\txMacro\pstool@maybeprocess\pstool@alwaysprocess
9
10 \renewcommand\pstool@@psfragfig[4]{%
11 \begin{lateximage}[(-pstool-~\packagediagramname)]%
12 \includegraphics{#2.pdf}%
13 \end{lateximage}%
14 }
```




---

File 286 **lwarp-pstricks.sty**

§ 385 Package **pstricks**

*(Emulates or patches code by TIMOTHY VAN ZANDT.)*

Pkg pstricks pstricks is patched for use by lwarp.

 **use pspicture** All pstricks content should be contained inside a pspicture environment.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{pstricks}[2018/01/06]
2 \BeforeBeginEnvironment{pspicture}{\begin{lateximage}[(pspicture)]}
3 \AfterEndEnvironment{pspicture}{\end{lateximage}}
```

---

File 287 **lwarp-pxatbegshi.sty**

§ 386 Package **pxatbegshi**

Pkg pxatbegshi pxatbegshi is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{pxatbegshi}[2017/11/04]
2 \LWR@origRequirePackage{lwarp-atbegshi}
```

---

File 288 **lwarp-pxeveryshi.sty**

§ 387 Package **pxeveryshi**

Pkg pxeveryshi pxeveryshi is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{pxeveryshi}[2012/05/19]
2 \LWR@origRequirePackage{lwarp-everyshi}
```

---

File 289 **lwarp-pxftnright.sty**

§ 388 Package **pxftnright**

Pkg pxftnright pxftnright is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{pxftnright}[2017/02/28]
```

---

```
2 \LWR@origRequirePackage{lwarp-ftnright}
```

---

File 290 **lwarp-pxjahyper.sty**

§ 389 Package **pxjahyper**

Pkg pxjahyper pxjahyper is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pxjahyper}[2018/07/15]

---

File 291 **lwarp-quotchap.sty**

§ 390 Package **quotchap**

*(Emulates or patches code by KARSTEN TINNEFELD, JAN KLEVER.)*

Pkg quotchap quotchap is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{quotchap}[2012/10/20]

```
2 \newcommand{\@quotchap}{}
3 \newlength{\LWR@quotchapwidth}
4
5 \let\@printcites\relax
6
7 \newcommand*{\@iprintcites}{%
```

Place the quotes inside a <div> of class quotchap, of the maximum selected width:

```
8 \begin{BlockClass}[max-width: \LWR@printlength{\LWR@quotchapwidth}]{quotchap}
9 %\begin{minipage}{\LWR@quotchapwidth}
10 \@quotchap
11 %\end{minipage}
12 \end{BlockClass}
```

Deactivate the quote printing:

```
13 \global\let\@printcites\relax
14 }
15
16 \NewEnviron{savequote}[1][\linewidth]{%
```

Remember the width, adjusted for HTML, and make the length assignment global, per:

<https://tex.stackexchange.com/questions/300823/>

[why-is-setlength-ineffective-inside-a-tabular-environment](https://tex.stackexchange.com/questions/300823/why-is-setlength-ineffective-inside-a-tabular-environment)

```
17 \setlength{\LWR@quotchapwidth}{#1*2}%
18 \global\LWR@quotchapwidth=\LWR@quotchapwidth%
```

Remember the body, and activate the quote printing:

```
19 \global\let\@quotchap\BODY
20 \global\let\@printcites\@iprintcites%
21 }
```

The quotation author is placed inside a <div> of class qauthor:

```
22 \newcommand{\qauthor}[1]{\begin{BlockClass}{qauthor}{#1}\end{BlockClass}}
```

\qsetcnfont is ignored:

```
23 \newcommand{\qsetcnfont}[1]{}

```

---

File 292 **lwarp-quoting.sty**

§ 391 Package **quoting**

*(Emulates or patches code by THOMAS TITZ.)*

Pkg quoting quoting is patched for use by lwarp.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{quoting}[2014/01/28]
2 \xpatchcmd{\quoting}{\quo@begintext}
3 {\begin{LWR@blocktextcurrentfont}\quo@begintext}
4 {}
5 {\LWR@patcherror{quoting}{quoting}}
6
7 \xpatchcmd{\endquoting}{\quo@endtext}
8 {\quo@endtext\end{LWR@blocktextcurrentfont}}
9 {}
10 {\LWR@patcherror{imakeidx}{endquoting}}
```

---

File 293 **lwarp-ragged2e.sty**

§ 392 Package **ragged2e**

*(Emulates or patches code by MARTIN SCHRÖDER.)*

Pkg ragged2e ragged2e is not used during HTML conversion.

Discard all options for lwarp-ragged2e:

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{ragged2e}[2009/05/21]
2 \LetLtxMacro\Centering\centering
3 \LetLtxMacro\RaggedLeft\raggedleft
4 \LetLtxMacro\RaggedRight\raggedright
```

```

5 \newcommand*\justifying{}
6 \newlength{\CenteringLeftskip}
7 \newlength{\RaggedLeftLeftskip}
8 \newlength{\RaggedRightLeftskip}
9 \newlength{\CenteringRightskip}
10 \newlength{\RaggedLeftRightskip}
11 \newlength{\RaggedRightRightskip}
12 \newlength{\CenteringParfillskip}
13 \newlength{\RaggedLeftParfillskip}
14 \newlength{\RaggedRightParfillskip}
15 \newlength{\JustifyingParfillskip}
16 \newlength{\CenteringParindent}
17 \newlength{\RaggedLeftParindent}
18 \newlength{\RaggedRightParindent}
19 \newlength{\JustifyingParindent}
20 \newenvironment*{Center}\center{\endcenter}
21 \newenvironment*{FlushLeft}\flushleft{\endflushleft}
22 \newenvironment*{FlushRight}\flushright{\endflushright}
23 \newenvironment*{justify}\justifying{\endjustifying}

```

---

File 294 **lwarp-realscripts.sty**

§ 393 Package **realscripts**

*(Emulates or patches code by WILL ROBERTSON.)*

Pkg realscripts **realscripts** is emulated. See `lwarp.css` for the `<span>` of class `supsubscript`.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{realscripts}[2016/02/13]
2 \let\realsuperscript\textsuperscript
3 \let\realsubscript\textsubscript
4
5 \let\fakesuperscript\textsuperscript
6 \let\fakesubscript\textsubscript
7
8 \newlength{\subsupersep}
9
10 \newcommand*\LWR@realscriptsalign{}
11
12 \newcommand*\LWR@setrealscriptsalign}[1]{%
13 \renewcommand*\LWR@realscriptsalign}{}%
14 \ifthenelse{\equal{#1}{c}}{%
15 \renewcommand*\LWR@realscriptsalign{%
16 \LWR@print@mbox{text-align:center} ; %
17 }%
18 }{%
19 \ifthenelse{\equal{#1}{r}}{%
20 \renewcommand*\LWR@realscriptsalign{%
21 \LWR@print@mbox{text-align:right} ; %
22 }%
23 }{%
24 }

```

```

25
26 \DeclareDocumentCommand \textsubsuperscript {s O{l} mm} {%
27 \LWR@setrealscriptsalign{#2}%
28 \InlineClass[\LWR@realscriptsalign]{supsubscript}{%
29 #4\textsubscript{#3}%
30 }%
31 }
32
33 \DeclareDocumentCommand \textsupersubscript {s O{l} mm} {%
34 \LWR@setrealscriptsalign{#2}%
35 \InlineClass[\LWR@realscriptsalign]{supsubscript}{%
36 \textsubscript{#4}#3%
37 }%
38 }

```

---

File 295 **lwarp-refcheck.sty**

§ 394 Package **refcheck**

Pkg refcheck refcheck is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{refcheck}[2013/02/14]

```

2 \def\showrefnames{}
3 \def\norefnames{}
4 \def\showcitenames{}
5 \def\nocitenames{}
6 \def\setonmsgs{}
7 \def\setoffmsgs{}
8 \def\checkunlbd{}
9 \def\ignoreunlbd{}
10 \newcommand*{\refcheckxrdoc}[2][{}]{

```

---

File 296 **lwarp-register.sty**

§ 395 Package **register**

*(Emulates or patches code by MATTHEW LOVELL.)*

Pkg register register is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{register}[2019/01/01]

```

2 \xpatchcmd{\register}
3 {\centering}
4 {\begin{center}\begin{lateximage}[(-register--\packagediagramname)]}
5 {}
6 {\LWR@patcherror{register}{register}}
7

```

```

8 \xpatchcmd{\endregister}
9 {\leftskip}
10 {%
11 \end{lateximage}\end{center}%
12 \leftskip%
13 }%
14 {}
15 {\LWR@patcherror{register}{endregister}}
16
17 \expandafter\xapptocmd\csname register*\endcsname
18 {\begin{center}\begin{lateximage}[(-register~\packagediagramname)]}
19 {}
20 {\LWR@patcherror{register}{register*}}
21
22 \expandafter\xpatchcmd\csname endregister*\endcsname
23 {\leftskip}
24 {%
25 \end{lateximage}\end{center}%
26 \leftskip%
27 }%
28 {}
29 {\LWR@patcherror{register}{endregister*}}
30
31 \setlength{\regWidth}{5in}

```

---

File 297 **lwarp-reysize.sty**

§ 396 Package **reysize**


(Emulates or patches code by DONALD ARSENEAU, BERNIE COSELL, MATT SWIFT.)

Pkg reysize reysize is patched for use by lwarp.

For HTML, only the inline macros are supported: `\textlarger`, `\textsmaller`, and `\textscale`. Each becomes an inline span of a modified font-size.

`\reysize`, `\larger`, `\smaller`, and `\relscale` are ignored.

While creating SVG math for HTML, the original definitions are temporarily restored, and so should work as expected.

 **not small** The HTML browser's setting for minimum font size may limit how small the output will be displayed.

**for HTML output:** 1 \LWR@ProvidesPackagePass{reysize}[2013/03/29]

```

2 \let\LWR@origreysize\reysize
3 \let\LTxMacro\LWR@origlarger\larger
4 \let\LTxMacro\LWR@origsmaller\smaller
5 \let\LWR@relscale\relscale
6 \let\LTxMacro\LWR@origtextlarger\textlarger
7 \let\LTxMacro\LWR@origtextsmaller\textsmaller
8 \let\LWR@textscale\textscale

```

```

9
10 \appto\LWR@restoreorigformatting{%
11 \let\relsize\LWR@origrelsize%
12 \LetLtxMacro\larger\LWR@origlarger%
13 \LetLtxMacro\smaller\LWR@origsmaller%
14 \let\relscale\LWR@relscale%
15 \LetLtxMacro\textlarger\LWR@origtextlarger%
16 \LetLtxMacro\textsmaller\LWR@origtextsmaller%
17 \let\textscale\LWR@textscale%
18 }
19
20 \newcounter{LWR@relsizetemp}
21
22 \renewcommand*\relsize}[1]{%
23 \renewcommand*\larger}[1][1]{%
24 \renewcommand*\smaller}[1][1]{%
25 \renewcommand*\relscale}[1]{%
26
27 \renewcommand*\textlarger}[2][1]{%
28 \setcounter{LWR@relsizetemp}{100+(#1*20)}%
29 \InlineClass[font-size:\arabic{LWR@relsizetemp}\%]{textlarger}{#2}%
30 }
31
32 \renewcommand*\textsmaller}[2][1]{%
33 \setcounter{LWR@relsizetemp}{100-(#1*20)}%
34 \InlineClass[font-size:\arabic{LWR@relsizetemp}\%]{textsmaller}{#2}%
35 }
36
37 \renewcommand*\textscale}[2]{%
38 \setcounter{LWR@relsizetemp}{100*\real{#1}}%
39 \InlineClass[font-size:\arabic{LWR@relsizetemp}\%]{textscale}{#2}%
40 }


```

---

File 298 **lwarp-repeatindex.sty**

§ 397 Package **repeatindex**

Pkg repeatindex repeatindex is emulated for lwarp.

 **style file** lwarp must be used with a special style file:

```
\usepackage[makeindex,makeindexStyle={lwarp_repeatindex}]{lwarp}
```

where lwarp\_repeatindex.ist may be copied from the following modified version of lwarp.ist:

```

preamble
"\begin{theindex}
 \providecommand*\lettergroupDefault[1]{%
 \providecommand*\lettergroup[1]{%
 \par\textbf{#1}\par
 \nopagebreak

```

```

 }
 "
 headings_flag 1
 heading_prefix "
 \lettergroup{"
 heading_suffix "}"
 delim_0 "], \hyperindexref{"
 delim_1 " ", \hyperindexref{"
 delim_2 " ", \hyperindexref{"
 delim_n "}, \hyperindexref{"
 delim_r "} -- \hyperindexref{"
 delim_t "}"
 item_0 "\n \item ["

```

(The modifications are the `delim_0` and `item_0` entries.)

**for HTML output:** 1 \LWR@ProvidesPackageDrop{repeatindex}[2001/10/13]

In the `lwarp` core, `\LWR@indexitem` is modified to accept the optional `\item` argument.

```

2 \RequirePackage{makeidx}
3 \def\entryprefix{\itshape}
4 \def\entrypostfix{\dots}

```

---

File 299 **lwarp-resizegather.sty**

§ 398 Package **resizegather**

Pkg `resizegather` `resizegather` is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{resizegather}[2016/05/16]

```

2 \newcommand*{\resizegathersetup}[1]{}

```

---

File 300 **lwarp-rmpage.sty**

§ 399 Package **rmpage**

Pkg `rmpage` `rmpage` is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{rmpage}[1997/09/29]



File 301 **lwarp-romanbar.sty**

§ 400 Package **romanbar**

*(Emulates or patches code by H.-MARTIN MÜNCH.)*

Pkg romanbar romanbar is patched for use by lwarp.

An inline class with an overline and underline is used.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{romanbar}[2012/01/01]

2 \DeclareRobustCommand{\Roman@bar}[1]{% #1 is in Roman, i.e. MMXII
3 \InlineClass[%
4 text-decoration: overline underline ;
5]{romanbar}{#1}%
6 }
```

File 302 **lwarp-romanbarpagenumber.sty**

§ 401 Package **romanbarpagenumber**

Pkg romanbarpagenumber romanbarpagenumber is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{romanbarpagenumber}[2015/02/06]
```

File 303 **lwarp-rotating.sty**

§ 402 Package **rotating**

*(Emulates or patches code by ROBIN FAIRBAIRNS, SEBASTIAN RAHTZ, LEONOR BARROCA.)*

Pkg rotating rotating is emulated.

All rotations are ignored in HTML output.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{rotating}[2016/08/11]
2 \RequirePackage{graphicx}

3 \LetLtxMacro\sidewaystable\table
4 \let\endsidewaystable\endtable
5
6 \LetLtxMacro\sidewaysfigure\figure
7 \let\endsidewaysfigure\endfigure
8
```

```

9 \newenvironment*{sideways}{}{}
10 \newenvironment*{turn}[1]{}{}
11 \newenvironment*{rotate}[1]{}{}
12 \NewDocumentCommand{\turnbox}{m +m}{#2}
13 \let\rotcaption\caption
14 \let\@makerotcaption\@makecaption

```

File 304 **lwarp-rotfloat.sty**

§ 403 Package **rotfloat**

(Emulates or patches code by AXEL SOMMERFELDT.)

Pkg rotfloat rotfloat is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{rotfloat}[2004/01/04]
2
3 \RequirePackage{float}

```

`\newfloat`  $\langle 1: type \rangle \langle 2: placement \rangle \langle 3: ext \rangle [\langle 4: within \rangle]$

Emulates the `\newfloat` command from the `float` package. Sideways floats are `\let` to the same as regular floats.

“placement” is ignored.

```

4 \RenewDocumentCommand{\newfloat}{m m m o}{%
5 \IfValueTF{#4}%
6 {%
7 \DeclareFloatingEnvironment[fileext=#3,within=#4]{#1}%
8 }%
9 {%
10 \DeclareFloatingEnvironment[fileext=#3]{#1}%
11 }%
12 \csletcs{sideways#1}{#1}%
13 \csletcs{endsideways#1}{end#1}%

```

Remember the float style:

```

14 \csedef{LWR@floatstyle@#1}{\LWR@floatstyle}%
15 \csedef{LWR@floatstyle@sideways#1}{\LWR@floatstyle}%

```

`newfloat` package automatically creates the `\listof` command for new floats, but `float` does not, so remove `\listof` here in case it is manually created later:

```

16 \cslet{listof#1s}\relax%
17 \cslet{listof#1es}\relax%
18 \cslet{listofsideways#1s}\relax%
19 \cslet{listofsideways#1es}\relax%
20 }

```

---

File 305 **lwarp-rviewport.sty**

§ 404 Package **rviewport**

Pkg rviewport rviewport is honored inside a `lateximage`, and otherwise ignored for HTML output.

If rviewport is important for an image, enclose the image inside a `lateximage` environment.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{rviewport}[2011/08/27]
2 \define@key{igraph}{rviewport}{}

```

---

File 306 **lwarp-savetrees.sty**

§ 405 Package **savetrees**

Pkg savetrees Emulated.

**for HTML output:** Discard all options for lwarp-savetrees:

```
1 \LWR@ProvidesPackageDrop{savetrees}[2016/04/13]

```

---

File 307 **lwarp-scalefnt.sty**

§ 406 Package **scalefnt**

*(Emulates or patches code by D. CARLISLE.)*

Pkg scalefnt scalefnt is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{scalefnt}
2 \DeclareRobustCommand\scalefont[1]{}

```

---

File 308 **lwarp-schemata.sty**

§ 407 Package **schemata**

*(Emulates or patches code by CHARLES P. SCHAUM.)*

Pkg schemata schemata is patched for use by lwarp.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{schemata}[2016/01/25]

```

```

2 \LetLtxMacro\LWR@schemata@origschema\schema
3 \LetLtxMacro\LWR@schemata@origSchema\Schema
4
5 \renewcommand{\schema}[3][open]{%
6 \begin{lateximage}%
7 \LWR@print@normalsize
8 \LWR@schemata@origschema[#1]{#2}{#3}%
9 \end{lateximage}%
10 }
11
12 \renewcommand{\Schema}[5][open]{%
13 \begin{lateximage}%
14 \LWR@print@normalsize
15 \LWR@schemata@origSchema[#1]{#2}{#3}{#4}{#5}%
16 \end{lateximage}%
17 }

```

---

File 309 **lwarp-scrextend.sty**

§ 408 Package **scrextend**

Pkg scrextend scrextend is emulated.

This package may be loaded standalone, but is also loaded automatically if koma-script classes are in use. `\DeclareDocumentCommand` is used to overwrite the koma-script definitions.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{scrextend}[2018/03/30]
2 \DeclareDocumentCommand{\setkomafont}{m m}{}
3 \DeclareDocumentCommand{\addkomafont}{m m}{}
4 \DeclareDocumentCommand{\usekomafont}{m}{}
5
6 \DeclareDocumentCommand{\usefontofkomafont}{m}{}
7 \DeclareDocumentCommand{\useencodingofkomafont}{m}{}
8 \DeclareDocumentCommand{\usesizeofkomafont}{m}{}
9 \DeclareDocumentCommand{\usefamilyofkomafont}{m}{}
10 \DeclareDocumentCommand{\useseriesofkomafont}{m}{}
11 \DeclareDocumentCommand{\useshapeofkomafont}{m}{}
12
13 \AtBeginDocument{
14 \let\LWR@maketitle\maketitle
15 \DeclareDocumentCommand{\maketitle}{o}{\LWR@maketitle}
16 }
17
18 \DeclareDocumentCommand{\extratitle}{m}{}
19 \DeclareDocumentCommand{\titlehead}{m}{}
20 \DeclareDocumentCommand{\subject}{m}{}
21 \DeclareDocumentCommand{\publishers}{m}{\published{#1}}
22 \DeclareDocumentCommand{\uppertitleback}{m}{}
23 \DeclareDocumentCommand{\lowertitleback}{m}{}
24 \DeclareDocumentCommand{\dedication}{m}{}

```

```

25
26 \DeclareDocumentCommand{\ifthispageodd}{m m}{#1}
27
28 \DeclareDocumentCommand{\titlepagestyle}{}{}
29
30 \DeclareDocumentCommand{\cleardoublepageusingstyle}{m}{}
31 \DeclareDocumentCommand{\cleardoubleemptypage}{}{}
32 \DeclareDocumentCommand{\cleardoubleplainpage}{}{}
33 \DeclareDocumentCommand{\cleardoublestandardpage}{}{}
34 \DeclareDocumentCommand{\cleardoubleoddpager}{}{}
35 \DeclareDocumentCommand{\cleardoubleoddpagerusingstyle}{m}{}
36 \DeclareDocumentCommand{\cleardoubleoddpageremptypage}{}{}
37 \DeclareDocumentCommand{\cleardoubleoddpagerplainpage}{}{}
38 \DeclareDocumentCommand{\cleardoubleoddpagerstandardpage}{}{}
39 \DeclareDocumentCommand{\cleardoubleevenpage}{}{}
40 \DeclareDocumentCommand{\cleardoubleevenpageusingstyle}{m}{}
41 \DeclareDocumentCommand{\cleardoubleevenemptypage}{}{}
42 \DeclareDocumentCommand{\cleardoubleevenplainpage}{}{}
43 \DeclareDocumentCommand{\cleardoubleevenstandardpage}{}{}
44
45 \DeclareDocumentCommand{\multiplefootnoteseparator}{}{}%
46 \begin{group}\let\thefootnotemark\multfootsep\@makefnmark\endgroup
47 }
48
49 \DeclareDocumentCommand{\multfootsep}{}{, }
50
51 \DeclareDocumentCommand{\footref}{m}{}%
52 \begin{group}
53 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
54 \end{group}
55 \@footnotemark
56 }
57
58 \DeclareDocumentCommand{\deffootnote}{o m m m}{}
59 \DeclareDocumentCommand{\deffootnotemark}{m}{}
60 \DeclareDocumentCommand{\setfootnoterule}{o m}{}
61 \DeclareDocumentCommand{\raggedfootnote}{}{}
62
63 \DeclareDocumentCommand{\dictum}{o m}{
64 \begin{LWR@BlockClassWP}{\LWR@print@mbbox{text-align:right}}{}{\dictum}
65 #2
66 \IfValueT{#1}
67 {
68 \ifbool{FormatWP}
69 {\begin{BlockClass}[\LWR@print@mbbox{border-top:} 1px solid gray]{dictumauthor}}
70 {\begin{BlockClass}{dictumauthor}}
71 \dictumauthorformat{#1}
72 \end{BlockClass}
73 }
74 \end{LWR@BlockClassWP}
75 }
76
77 \DeclareDocumentCommand{\dictumwidth}{}{}
78 \DeclareDocumentCommand{\dictumauthorformat}{m}{(#1)}
79 \DeclareDocumentCommand{\dictumrule}{}{}

```

```

80 \DeclareDocumentCommand{\raggeddictum}{}{}
81 \DeclareDocumentCommand{\raggeddictumtext}{}{}
82 \DeclareDocumentCommand{\raggeddictumauthor}{}{}
83
84 \DeclareDocumentEnvironment{labeling}{o m}
85 {%
86 \def\sc@septext{#1}%
87 \list{}{}%
88 \let\makelabel\labelinglabel%
89 }
90 {
91 \endlist
92 }
93
94 \DeclareDocumentCommand{\labelinglabel}{m}{%
95 #1 \quad \sc@septext%
96 }
97
98 \let\addmargin\relax
99 \let\endaddmargin\relax
100 \cslet{addmargin*}{\relax}
101 \cslet{endaddmargin*}{\relax}
102
103 \NewDocumentEnvironment{addmargin}{s O{} m}
104 {
105 \setlength{\LWR@templengthtwo}{#3}
106 \ifblank{#2}
107 {
108 \begin{BlockClass}[
109 \LWR@print@mbx{margin-left:\LWR@printlength{\LWR@templengthtwo}} ;
110 \LWR@print@mbx{margin-right:\LWR@printlength{\LWR@templengthtwo}}
111]{addmargin}
112 }
113 {
114 \setlength{\LWR@templengthone}{#2}
115 \begin{BlockClass}[
116 \LWR@print@mbx{margin-left:\LWR@printlength{\LWR@templengthone}} ;
117 \LWR@print@mbx{margin-right:\LWR@printlength{\LWR@templengthtwo}}
118]{addmargin}
119 }
120 }
121 {\end{BlockClass}}

```

Ref to create a starred environment:

<https://tex.stackexchange.com/questions/45401/use-the-s-star-argument-with-newdocumentenvironment>

```

122
123 \ExplSyntaxOn
124 \cs_new:cpn {addmargin*} {\addmargin*}
125 \cs_new_eq:cN {endaddmargin*} \endaddmargin
126 \ExplSyntaxOff
127
128 \DeclareDocumentCommand{\marginline}{m}{\marginpar{#1}}

```

---

File 310 **lwarp-scrhack.sty**

§ 409 Package **scrhack**

Pkg scrhack scrhack is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{scrhack}[2018/03/30]

---

File 311 **lwarp-scrlayer.sty**

§ 410 Package **scrlayer**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg scrlayer scrlayer is emulated.

 **Not fully tested! Please send bug reports!**

**for HTML output:** 1 \LWR@ProvidesPackageDrop{scrlayer}[2018/03/30]

```

2 \newcommand*\DeclareSectionNumberDepth}[2]{}
3 \newcommand*\DeclareLayer}[2][{}
4 \newcommand*\DeclareNewLayer}[2][{}
5 \newcommand*\ProvideLayer}[2][{}
6 \newcommand*\RedeclareLayer}[2][{}
7 \newcommand*\ModifyLayer}[2][{}
8 \newcommand*\layerhalign{}
9 \newcommand*\layervalign{}
10 \newcommand*\layerxoffset{}
11 \newcommand*\layeryoffset{}
12 \newcommand*\layerwidth{}
13 \newcommand*\layerheight{}
14 \providecommand*\LenToUnit[1]{\strip@pt\dimexpr#1*\p@/\unitlength}
15 \newcommand*\putUL}[1]{}
16 \newcommand*\putUR}[1]{}
17 \newcommand*\putLL}[1]{}
18 \newcommand*\putLR}[1]{}
19 \newcommand*\putC}[1]{}
20 \newcommand*\GetLayerContents}[1]{}
21 \newcommand*\IfLayerExists}[3]{#3}
22 \newcommand*\DestroyLayer}[1]{}
23 \newcommand*\layercontentsmeasure{}
24 \newcommand*\currentpagestyle{}
25 \newcommand*\BeforeSelectAnyPageStyle}[1]{}
26 \newcommand*\AfterSelectAnyPageStyle}[1]{}
27 \newcommand*\DeclarePageStyleAlias}[2]{}
28 \newcommand*\DeclareNewPageStyleAlias}[2]{}
29 \newcommand*\ProvidePageStyleAlias}[2]{}

```

```

30 \newcommand*\RedeclarePageStyleAlias}[2]{}
31 \newcommand*\DestroyPageStyleAlias}[1]{}
32 \newcommand*\GetRealPageStyle}[1]{}
33 \newcommand*\DeclarePageStyleByLayers}[3][[]]{}
34 \newcommand*\DeclareNewPageStyleByLayers}[3][[]]{}
35 \newcommand*\ProvidePageStyleByLayers}[3][[]]{}
36 \newcommand*\RedeclarePageStyleByLayers}[3][[]]{}
37 \NewDocumentCommand{\ForEachLayerOfPageStyle}{s m m}{}
38 \newcommand*\AddLayersToPageStyle}[2]{}
39 \newcommand*\AddLayersAtBeginOfPageStyle}[2]{}
40 \newcommand*\AddLayersAtEndOfPageStyle}[2]{}
41 \newcommand*\RemoveLayersFromPageStyle}[2]{}
42 \newcommand*\AddLayersToPageStyleBeforeLayer}[3]{}
43 \newcommand*\AddLayersToPageStyleAfterLayer}[3]{}
44 \newcommand*\UnifyLayersAtPageStyle}[1]{}
45 \newcommand*\ModifyLayerPageStyleOptions}[2]{}
46 \newcommand*\AddToLayerPageStyleOptions}[2]{}
47 \newcommand{\IfLayerPageStyleExists}[3]{#3}
48 \newcommand{\IfRealLayerPageStyleExists}[3]{#3}
49 \newcommand{\IfLayerAtPageStyle}[4]{#4}
50 \newcommand{\IfSomeLayerAtPageStyle}[4]{#4}
51 \newcommand{\IfLayersAtPageStyle}[4]{#4}
52 \newcommand*\DestroyRealLayerPageStyle}[1]{}
53 \@ifundefined{footheight}{\newlength\footheight}{}
54 \DeclareDocumentCommand{\automark}{s o m}{}
55 \DeclareDocumentCommand{\manualmark}{}{}
56 \DeclareDocumentCommand{\MakeMarkcase}{m}{#1}

57 \newcommand{\partmarkformat}{}
58 \if@chapter
59 \newcommand{\chaptermarkformat}{}
60 \fi
61 \newcommand{\sectionmarkformat}{}
62 \DeclareDocumentCommand{\GenericMarkFormat}{m}{}

63 \newcommand*\@mkleft}[1]{}
64 \newcommand*\@mkright}[1]{}
65 \newcommand*\@mkdouble}[1]{}
66 \newcommand*\@mkboth}[2]{}
67 \newcommand*\scrLayerInitInterface}[1][[]]{}
68 \newcommand{\scrLayerAddToInterface}[3][[]]{}
69 \newcommand{\scrLayerAddCsToInterface}[3][[]]{}
70 \newcommand{\scrLayerOnAutoRemoveInterface}[2][[]]{}

```

---

File 312 **lwarp-scrlayer-notecolumn.sty**

§ 411 Package **scrlayer-notecolumn**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg scrlayer-notecolumn **scrlayer-notecolumn** is emulated.



 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:** 1 \LWR@ProvidesPackageDrop{sclayer-notecolumn}[2018/02/02]

```

2 \newcommand*\DeclareNoteColumn}[2][{}]{
3 \newcommand*\DeclareNewNoteColumn}[2][{}]{
4 \newcommand*\ProvideNoteColumn}[2][{}]{
5 \newcommand*\RedeclareNoteColumn}[2][{}]{
6 \NewDocumentCommand{\makenote}{s o m}{\marginpar{#3}}
7 \newcommand*\syncwithnotecolumn}[1][{}]{
8 \newcommand*\syncwithnotecolumns}[1][{}]{
9 \newcommand*\clearnotecolumn}[1][{}]{
10 \newcommand*\clearnotecolumns}[1][{}]{

```

File 313 **lwarp-sclayer-scrpage.sty**

§ 412 Package **sclayer-scrpage**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg sclayer-scrpage sclayer-scrpage is emulated.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:** 1 \LWR@ProvidesPackageDrop{sclayer-scrpage}[2018/03/30]

```

2 \@ifundefined{footheight}{\newlength\footheight}{}
3 \NewDocumentCommand{\lehead}{s o m}{}
4 \NewDocumentCommand{\cehead}{s o m}{}
5 \NewDocumentCommand{\rehead}{s o m}{}
6 \NewDocumentCommand{\lohead}{s o m}{}
7 \NewDocumentCommand{\cohead}{s o m}{}
8 \NewDocumentCommand{\rohead}{s o m}{}
9 \NewDocumentCommand{\lefoot}{s o m}{}
10 \NewDocumentCommand{\cefoot}{s o m}{}
11 \NewDocumentCommand{\refoot}{s o m}{}
12 \NewDocumentCommand{\lofoot}{s o m}{}
13 \NewDocumentCommand{\cofoot}{s o m}{}
14 \NewDocumentCommand{\rofoot}{s o m}{}
15 \NewDocumentCommand{\ohead}{s o m}{}
16 \NewDocumentCommand{\chead}{s o m}{}
17 \NewDocumentCommand{\ihead}{s o m}{}
18 \NewDocumentCommand{\ofoot}{s o m}{}
19 \NewDocumentCommand{\cfoot}{s o m}{}
20 \NewDocumentCommand{\ifoot}{s o m}{}
21 \DeclareDocumentCommand{\MakeMarkcase}{m}{#1}
22 \newcommand*\defpairofpagestyles}[3][{}]{
23 \newcommand*\newpairofpagestyles}[3][{}]{
24 \newcommand*\renewpairofpagestyles}[3][{}]{
25 \newcommand*\providepairofpagestyles}[3][{}]{

26 \newcommand*\clearmainofpairofpagestyles}{}

```

```

27 \newcommand*\clearplainofpairofpagestyles{}
28 \newcommand*\clearpairofpagestyles{}
29 \newcommand*\clearscrheadings{}
30 \newcommand*\clearscrheadfoot{}
31 \newcommand*\clearscrplain{}

32 \NewDocumentCommand\deftriplepagestyle{m o o m m m m m m}{}
33 \NewDocumentCommand\newtriplepagestyle{m o o m m m m m m}{}
34 \NewDocumentCommand\renewtriplepagestyle{m o o m m m m m m}{}
35 \NewDocumentCommand\providetripelapagestyle{m o o m m m m m m}{}
36 \newcommand*\defpagestyle}[3]{}
37 \newcommand*\newpagestyle}[3]{}
38 \newcommand*\providepagestyle}[3]{}
39 \newcommand*\renewpagestyle}[3]{}

```

---

File 314 **lwarp-scrpage2.sty**

§ 413 Package **scrpage2**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg scrpage2 **scrpage2** is emulated.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:** 1 \LWR@ProvidesPackageDrop{scrpage2}[2018/03/30]

```

2 \@ifundefined{footheight}{\newlength\footheight}{}
3 \NewDocumentCommand\lehead{o m}{}
4 \NewDocumentCommand\cehead{o m}{}
5 \NewDocumentCommand\rehead{o m}{}
6 \NewDocumentCommand\lohead{o m}{}
7 \NewDocumentCommand\cohead{o m}{}
8 \NewDocumentCommand\rohead{o m}{}
9 \NewDocumentCommand\lefoot{o m}{}
10 \NewDocumentCommand\cefoot{o m}{}
11 \NewDocumentCommand\refoot{o m}{}
12 \NewDocumentCommand\lofoot{o m}{}
13 \NewDocumentCommand\cofoot{o m}{}
14 \NewDocumentCommand\rofoot{o m}{}
15 \NewDocumentCommand\ohead{o m}{}
16 \NewDocumentCommand\chead{o m}{}
17 \NewDocumentCommand\ihead{o m}{}
18 \NewDocumentCommand\ofoot{o m}{}
19 \NewDocumentCommand\cfoot{o m}{}
20 \NewDocumentCommand\ifoot{o m}{}
21 \DeclareDocumentCommand\automark{o m}{}
22 \DeclareDocumentCommand\manualmark{}{}
23 \DeclareDocumentCommand\MakeMarkcase{m}{#1}
24 \NewDocumentCommand\deftripstyle{m o o m m m m m m}{}
25 \NewDocumentCommand\defpagestyle{s m m m}{}
26 \NewDocumentCommand\newpagestyle{s m m m}{}

```

```

27 \NewDocumentCommand{\renewpagestyle}{s m m m}{}
28 \NewDocumentCommand{\providepagestyle}{s m m m}{}
29 \newcommand{\partmarkformat}{}
30 \if@chapter
31 \newcommand{\chaptermarkformat}{}
32 \fi
33 \newcommand{\sectionmarkformat}{}
34 \newcommand{\subsectionmarkformat}{}
35 \newcommand{\subsubsectionmarkformat}{}
36 \newcommand{\paragraphmarkformat}{}
37 \newcommand{\subparagraphmarkformat}{}
38
39 \newcommand*{\clearscrheadings}{}
40 \newcommand*{\clearscrheadfoot}{}
41 \newcommand*{\clearscrplain}{}

```

---

File 315 **lwarp-section.sty**

§ 414 Package **section**

Pkg section **section** is ignored.

*(Emulates or patches code by OLIVER PRETZEL.)*

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{section}

2 \ifx\chapter\undefined
3 \def\chsize{\Large}\def\hdsiZe{\huge}\else
4 \def\chsize{\huge}\def\hdsiZe{\Huge}
5 \fi
6 \let\ttsiZe\LARGE
7 \let\ausiZe\large
8 \let\dasiZe\large
9 \let\secsiZe\Large
10 \let\subsiZe\large
11 \let\hdpos\raggedright
12 \newcounter{hddepth}
13 \let\fpind\relax
14 \def\ttfnt{}
15 \def\hdfnt{}
16 \def\fefnt{}
17 \def\thfnt{}
18 \def\pgfnt{}
19 \def\hmkfnt{}
20 \let\mkcse\uppercase
21 \def\hddot{}
22 \def\cpdot{:}
23 \def\nmdot{}
24 \ifx\secindent\undefined
25 \newdimen\secindent
26 \newskip\secpreskp
27 \newskip\secpstskp
28 \newdimen\subindent

```

```

29 \newskip\subpreskp
30 \newskip\subpstskp
31 \newskip\parpstskp
32 \newcount\c@hddepth
33 \fi

```

---

File 316 **lwarp-sectionbreak.sty**

§ 415 Package **sectionbreak**

*(Emulates or patches code by MICHAL HOFTICH.)*

Pkg sectionbreak sectionbreak is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{sectionbreak}[2018-01-03]

2 \renewcommand\asterism{\HTMLunicode{2042}}
3
4 \renewcommand\pre@sectionbreak{}
5 \renewcommand\post@sectionbreak{}
6
7 \renewcommand\print@sectionbreak[1]{%
8 \begin{center}
9 #1
10 \end{center}
11 }
12

```

---

File 317 **lwarp-sectsty.sty**

§ 416 Package **sectsty**

*(Emulates or patches code by ROWLAND McDONNELL.)*

Pkg sectsty sectsty is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{sectsty}[2002/02/25]

2 \newcommand*\partfont [1] {}
3 \newcommand*\partnumberfont [1] {}
4 \newcommand*\parttitlefont [1] {}
5 \newcommand*\chapterfont [1] {}
6 \newcommand*\chapternumberfont [1] {}
7 \newcommand*\chaptertitlefont [1] {}
8 \newcommand*\sectionfont [1] {}
9 \newcommand*\subsectionfont [1] {}
10 \newcommand*\subsubsectionfont [1] {}
11 \newcommand*\paragraphfont [1] {}
12 \newcommand*\subparagraphfont [1] {}
13 \newcommand*\minisecfont [1] {}

```

```
14 \newcommand*{\allsectionsfont}[1] {}
15 \newcommand{\nohang}{}

```

`\sectionrule` is only to be used in `*font` commands, thus it is ignored.

```
16 \newcommand*{\sectionrule}[5]{}
17
18 \def\ulemheading#1#2{}

```

### File 318 **lwarp-semantic-markup.sty**

## § 417 Package **semantic-markup**

*(Emulates or patches code by ANDREW A. CASHNER.)*

Pkg semantic-markup semantic-markup is patched for use by lwarp.



If using the `endnotes` option, add `\theendnotes` where desired.

**for HTML output:** 1 \LWR@ProvidesPackagePass{semantic-markup}[2018/05/21]

The endnotes must be printed by the user before the end of the document, since the end is after the HTML footer, etc.

```
2 \ifendnotes
3 \RenewDocumentCommand{\SetupEndnotes}{}{%
4 \let\footnote=\endnote
5 \AtEndDocument{\DoBeforeEndnotes{\EndnoteFont\theendnotes}}%
6 }
7 \fi

```

HTML unicode characters from musicography are used.

```
8 \RequirePackage{musicography}
9
10 \let\fl\musFlat
11 \let\sh\musSharp
12 \let\na\musNatural

```

The `\musfig` is placed inside a hashed image, with a simple `alt` tag.

```
13 \RequirePackage{amsmath}
14
15 \RenewDocumentCommand{\musfig}{ m m }{%
16 \LWR@subsingledollar*%
17 {#1/#2}% alt tag
18 {musfig}% addl' hashing
19 {% contents
20 \LWR@origensuredmath{%
21 \genfrac{}{}{0pt}{1}{\text{#1}}{\text{#2}}}%
22 }%
23 }%

```

```
24 }
```

The `\meter` is taken from `musicography`, and becomes a hashed image with a simple `alt` tag.

```
25 \RenewDocumentCommand{\meter}{ m m }{%
26 \musMeter{#1}{#2}%
27 }
```

---

File 319 **lwarp-setspace.sty**

§ 418 Package **setspace**

*(Emulates or patches code by ROBIN FAIRBAIRNS.)*

Pkg setspace **setspace** is not used during HTML conversion.

Discard all options for `lwarp-setspace`:

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{setspace}[2011/12/19]
2
3 \newcommand*\setstretch[1]{}
4 \newcommand*\SetSinglespace[1]{}
5 \newcommand*\singlespacing{}
6 \newcommand*\onehalfspacing{}
7 \newcommand*\doublespacing{}
8
9 \newenvironment{singlespace}
10 {
11 \LWR@forcenewpage
12 \BlockClass{singlespace}
13 }
14 {\endBlockClass}
15
16 \newenvironment{singlespace*}
17 {
18 \LWR@forcenewpage
19 \BlockClass{singlespace}
20 }
21 {\endBlockClass}
22
23 \newenvironment{spacing}[1]{
24
25 }{
26
27 }
28
29 \newenvironment{onehalfspace}
30 {
31 \LWR@forcenewpage
32 \BlockClass{onehalfspace}
33 }
34 {\endBlockClass}
```

---

```

35
36 \newenvironment*{doublespace}
37 {
38 \LWR@forcenewpage
39 \BlockClass{doublespace}
40 }
41 {\endBlockClass}

```

---

File 320 **lwarp-shadow.sty**

§ 419 Package **shadow**

*(Emulates or patches code by MAURO ORLANDINI.)*

Pkg shadow shadow is emulated.

**for HTML output:** Discard all options for lwarp-shadow:

```

1 \LWR@ProvidesPackageDrop{shadow}[2003/02/19]

2 \newdimen\sboxsep
3 \newdimen\sboxrule
4 \newdimen\sdim
5
6 \newcommand{\shabox}[1]{%
7 \InlineClass{shabox}{#1}%
8 }

```

---

File 321 **lwarp-showidx.sty**

§ 420 Package **showidx**

Pkg showidx showidx is ignored.

**for HTML output:** Discard all options for lwarp-showidx:

```

1 \LWR@ProvidesPackageDrop{showidx}[2014/09/29]

```

\@wrindex is redefined \@AtBeginDocument by the lwarp core.

---

File 322 **lwarp-showkeys.sty**

§ 421 Package **showkeys**

*(Emulates or patches code by DAVID CARLISLE, MORTEN HØGHOLM.)*

Pkg showkeys showkeys is ignored.

**for HTML output:** Discard all options for lwarp-showkeys:

```
1 \LWR@ProvidesPackageDrop{showkeys}[2014/10/28]
2 \NewDocumentCommand{\showkeys}{s}{}

```

---

File 323 **lwarp-showtags.sty**

§ 422 Package **showtags**

Pkg showtags showtags is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{showtags}% no version is given
2 \newcommand{\thecitetag}[1]{}

```

---

File 324 **lwarp-sidecap.sty**

§ 423 Package **sidecap**

*(Emulates or patches code by ROLF NIEPRASCHK, HUBERT GÄSSLEIN.)*

Pkg sidecap sidecap is emulated.

**for HTML output:** Discard all options for lwarp-sidecap.

```
1 \LWR@ProvidesPackageDrop{sidecap}[2003/06/06]

```

See:

<http://tex.stackexchange.com/questions/45401/use-the-s-star-argument-with-newdocumentenvironment> regarding the creation of starred environments with xparse.

```
2 \NewDocumentEnvironment{Sctable}{soo}
3 {\IfValueTF{#3}{\table[#3]}\table}
4 {\endtable}
5
6 \ExplSyntaxOn
7 \cs_new:cpn {Sctable*} {\Sctable*}
8 \cs_new_eq:cN {endSctable*} \endSctable
9 \ExplSyntaxOff
10
11
12 \NewDocumentEnvironment{SCfigure}{soo}
13 {\IfValueTF{#3}{\figure[#3]}\figure}
14 {\endfigure}
15
16 \ExplSyntaxOn
17 \cs_new:cpn {SCfigure*} {\SCfigure*}

```



---

```

18 \cs_new_eq:cN {endSCfigure*} \endSCfigure
19 \ExplSyntaxOff
20
21
22 \newenvironment*{wide}{}{}

```

---

File 325 **lwarp-sidenotes.sty**

§ 424 Package **sidenotes**

*(Emulates or patches code by ANDY THOMAS, OLIVER SCHEBAUM.)*

Pkg sidenotes Patched for lwarp.

**for HTML output:** Load the original package:

```
1 \LWR@ProvidesPackagePass{sidenotes}
```

The following patch sidenotes for use with lwarp:

```

\sidecaption * [⟨entry⟩] [⟨offset⟩] {⟨text⟩}

2 \RenewDocumentCommand \sidecaption {s o o +m}
3 {
4 \LWR@stoppars
5 \begingroup
6 \captionsetup{style=sidecaption}
7 \IfBooleanTF{#1}
8 { % starred
9 \begin{BlockClass}[border:none ; box-shadow:none]{marginblock}
10 \caption*{#4}
11 \end{BlockClass}
12 }
13 { % unstarred
14 \IfNoValueOrEmptyTF{#2}
15 {\def\@sidenotes@sidecaption@tof{#4}}
16 {\def\@sidenotes@sidecaption@tof{#2}}
17 \begin{BlockClass}[border:none ; box-shadow:none]{marginblock}
18 \caption[\@sidenotes@sidecaption@tof]{#4}
19 \end{BlockClass}
20 }
21 \endgroup
22 \LWR@startpars
23 }

```

Borrowed from the lwarp version of keyfloat:

```

24 \NewDocumentEnvironment{KFLT@sidenotes@marginfloat}{0{-1.2ex} m}
25 {% start
26 \LWR@BlockClassWP{float:right; width:2in; margin:10pt}{}{marginblock}%
27 \captionsetup{type=#2}%
28 }
29 {%

```

```

30 \endLWR@BlockClassWP%
31 }
32
33 \RenewDocumentEnvironment{marginfigure}{o}
34 {\begin{KFLT sidenotes@marginfloat}{figure}}
35 {\end{KFLT sidenotes@marginfloat}}
36
37 \RenewDocumentEnvironment{margintable}{o}
38 {\begin{KFLT sidenotes@marginfloat}{table}}
39 {\end{KFLT sidenotes@marginfloat}}

```

The following were changed by sidenotes, and now are reset back to their lwarp-supported originals:

Restoring the definition from the L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> article.cls source:

```

40 \renewenvironment{figure*}
41 {\@dblfloat{figure}}
42 {\enddblfloat}
43
44 \renewenvironment{table*}
45 {\@dblfloat{table}}
46 {\enddblfloat}

```

---

File 326 **lwarp-SIunits.sty**

§ 425 Package **Slunits**

*(Emulates or patches code by MARCEL HELDOORN.)*

Pkg SIunits Slunits is patched for use by lwarp.

It is recommended to use `\unit` where possible, which combines the entire expression into a single `lateximage`, and adds the `alt` tag containing the L<sup>A</sup>T<sub>E</sub>X code, allowing for copy/paste. When units are used outside of the `\unit` macro, each unit macro will have its own `lateximage`, and each will have the `alt` tag set to “(`<\mathimagename>`)”, which defaults to “(math image)”.

**for HTML output:** 1 \LWR@ProvidesPackagePass{SIunits}[2007/12/02]

Patched for copy/paste with the HTML `alt` tag:

```

2 \DeclareRobustCommand{\unit}[2]{%
3 \@inunitcommandtrue% original
4 \LWR@subsingledollar*% lwarp
5 {% alt tag
6 \textbackslash{}unit\{\LWR@HTMLsanitize{#1}\}%
7 \{\LWR@HTMLsanitize{#2}\}% extra space
8 }%
9 {SIunits}% add'l hashing
10 {%
11 \LWR@origensuredmath{% lwarp modification

```

```

12 \SI@fstyle{#1\@qsk\period@active{#2}}% original
13 }%
14 }% contents
15 \@inunitcommandfalse% original
16 }

```


File 327 **lwarp-siunitx.sty**

§ 426 Package **siunitx**


(Emulates or patches code by JOSEPH WRIGHT.)

Pkg siunitx siunitx is patched for use by lwarp.

**fractions** Due to *pdftotext* limitations, fraction output is replaced by symbol output for per-mode and quotient-mode.

 **math mode required** Some units will require that the expression be placed inside math mode.

**NOTE:** As of this writing, the **siunitx** extension for **MATHJAX** is not currently hosted at any public CDN, thus **siunitx** is not usable with **MATHJAX** unless a local copy of this extension is created first. See `\MathJaxFileName` to select a custom MathJax script.

 **tabular** Tabular S columns are rendered as simple c columns, and tabular s columns are not supported. These may be replaced by c columns with each cell contained in `\num` or `\si`.

**for HTML output:**

```

1 \RequirePackage{xcolor}% for \convertcolorspec
2
3 \LWR@ProvidesPackagePass{siunitx}[2018/05/17]

```

```

4 \AtBeginDocument{% in case textcomp was not loaded
5 \DeclareSIUnit\bohr{\textit{a}\textsubscript{0}}
6 \DeclareSIUnit\clight{\textit{c}\textsubscript{0}}
7 \DeclareSIUnit\elementarycharge{\textit{e}}
8 \DeclareSIUnit\electronmass{\textit{m}\textsubscript{e}}
9 \DeclareSIUnit\hartree{\textit{E}\textsubscript{h}}
10 \DeclareSIUnit\planckbar{\LWR@siunitx@textplanckbar}
11 }% AtBeginDocument

```

`\@ensuredmath` is not supported inside an `\hbox`, so it must temporarily be restored to its original. Similar for `\mbox`. SVG math is created explicitly when necessary, using `\LWR@subsingledollar`.

```

12
13 \ExplSyntaxOn
14 %

```

Modified to set set HTML `\textcolor` if not black:

```

15 \cs_undefine:N __siunitx_print_aux:

```

```

16 \cs_new_protected:Npn __siunitx_print_aux:
17 {
18 \text
19 {
20 __siunitx_ensure_ltr:n
21 {
22 \color@begingroup
23 __siunitx_print_color:
24 __siunitx_font_shape:
25 __siunitx_font_weight:
26 \use:c
27 {
28 @@_ \l__siunitx_print_type_tl _
29 text \l__siunitx_font_family_tl :
30 }
31 \bool_if:NTF \l__siunitx_font_math_mode_bool
32 { __siunitx_print_math: }
33 {
34 \LWR@findcurrenttextcolor% lwarp
35 \ifdefstring{\LWR@tempcolor}{000000}% lwarp
36 {__siunitx_print_text:}% lwarp
37 {% lwarp
38 \LWR@textcurrentcolor{% lwarp
39 __siunitx_print_text:
40 }% lwarp
41 }% lwarp
42 }
43 \color@endgroup
44 }
45 }
46 }
47
48
49 \cs_undefine:N __siunitx_set_math_fam:n
50 \cs_new_protected:Npn __siunitx_set_math_fam:n #1 {
51 \int_new:c { c__siunitx_math #1 _int }
52 \group_begin:% lwarp
53 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
54 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
55 \hbox_set:Nn \l__siunitx_tmp_box
56 {
57 \ensuremath
58 {
59 \use:c { math #1 }
60 {
61 \int_gset:cn { c__siunitx_math #1 _int } { \fam }
62 }
63 }
64 }
65 \group_end:% lwarp
66 }
67
68 \cs_undefine:N __siunitx_combined_output:n
69 \cs_new_protected:Npn __siunitx_combined_output:n #1 {
70 \group_begin:% lwarp

```

```

71 \LetLtxMacro\@ensuredmath\LWR@origensuredmath% lwarp
72 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
73 \bool_if:NTF \l__siunitx_number_parse_bool
74 {
75 \tl_clear:N \l__siunitx_number_out_tl
76 \bool_set_false:N \l__siunitx_number_compound_bool
77 __siunitx_number_output_parse:n {#1}
78 }
79 {
80 __siunitx_unit_output_pre_print:

```

For parse-numbers=false:

```

81 % __siunitx_print:nn { number } { \ensuremath {#1} }
82 \LWR@subsingledollar% lwarp
83 \textbackslash(\LWR@HTMLsanitize{#1} \textbackslash)% lwarp
84){siunitx}{%
85 __siunitx_print:nn { number } {%
86 \LWR@origensuredmath{#1}%
87 }%
88 }% lwarp

89 __siunitx_unit_output_print:
90 }
91 \group_end:% lwarp
92 }
93 %

```

For quotients, the fraction code is replaced by the symbol code:

```

94 \cs_undefine:N __siunitx_number_output_quotient_fraction:
95 \cs_new_protected:Npn __siunitx_number_output_quotient_fraction: {
96 \bool_set_true:N \l__siunitx_number_compound_bool
97 __siunitx_number_output_quotient_aux_i:
98 \tl_set_eq:NN \l__siunitx_number_out_tl
99 \l__siunitx_number_numerator_tl
100 \tl_put_right:NV \l__siunitx_number_out_tl \l__siunitx_output_quotient_tl
101 \tl_put_right:NV \l__siunitx_number_out_tl
102 \l__siunitx_number_denominator_tl
103 __siunitx_number_output_single_aux:
104 }

```

For units, the fraction code is replaced by the symbol code:

```

105 \cs_undefine:N __siunitx_unit_format_fraction_fraction:
106 \cs_new_protected:Npn __siunitx_unit_format_fraction_fraction: {
107 __siunitx_unit_format_fraction_symbol_aux:
108 \int_compare:nNnT { \l__siunitx_unit_denominator_int } > { 1 }
109 {
110 \bool_if:NT \l__siunitx_unit_denominator_bracket_bool
111 {
112 \tl_put_left:NV \l__siunitx_unit_denominator_tl \l__siunitx_bracket_open_tl
113 \tl_put_right:NV \l__siunitx_unit_denominator_tl \l__siunitx_bracket_close_tl
114 }

```

```

115 }
116 \tl_set_eq:NN \l__siunitx_unit_tl \l__siunitx_unit_numerator_tl
117 \tl_put_right:NV \l__siunitx_unit_tl \l__siunitx_per_symbol_tl
118 \tl_put_right:NV \l__siunitx_unit_tl \l__siunitx_unit_denominator_tl
119 }

120 \cs_undefine:N __siunitx_angle_print_astronomy_aux:
121 \cs_new_protected:Npn __siunitx_angle_print_astronomy_aux: {
122 \prop_get:NnNT \l__siunitx_number_out_prop { mantissa-integer }
123 \l__siunitx_tmpa_tl
124 { __siunitx_print:nV { number } \l__siunitx_tmpa_tl }
125 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}% lwarp
126 {% lateximage
127 \hbox_set:Nn \l__siunitx_angle_marker_box
128 {
129 __siunitx_print:nn { number } { { \l__siunitx_output_decimal_tl } }
130 }
131 \hbox_set:Nn \l__siunitx_angle_unit_box
132 {
133 __siunitx_print:nV { unit } \l__siunitx_unit_tl
134 \skip_horizontal:n { -\scriptspace }
135 }
136 __siunitx_angle_print_astronomy_aux:n { marker }
137 __siunitx_angle_print_astronomy_aux:n { unit }
138 \hbox_set:Nn \l__siunitx_angle_marker_box
139 {
140 \box_use:N \l__siunitx_angle_marker_box
141 \box_use:N \l__siunitx_angle_unit_box
142 }
143 \dim_compare:nNnTF
144 { \l__siunitx_angle_marker_dim } > { \l__siunitx_angle_unit_dim }
145 { __siunitx_angle_print_astronomy_marker: }
146 { __siunitx_angle_print_astronomy_unit: }
147 }% lateximage
148 {% not a lateximage
149 __siunitx_print:nV { unit } \l__siunitx_unit_tl
150 __siunitx_print:nn { number } { { \l__siunitx_output_decimal_tl } }
151 }% not a lateximage
152 \prop_get:NnNT \l__siunitx_number_out_prop { mantissa-decimal }
153 \l__siunitx_tmpa_tl
154 { __siunitx_print:nV { number } \l__siunitx_tmpa_tl }
155 }

156 \RenewDocumentCommand \num { o m } {
157 \leavevmode
158 \group_begin:% lwarp
159 \LetLtxMacro\@ensuredmath\LWR@origensuredmath% lwarp
160 \LetLtxMacro\mbox\LWR@print@mbx% lwarp
161 \bool_set_false:N \l__siunitx_font_set_bool
162 \IfNoValueF {#1}
163 { \keys_set:nn { siunitx } {#1} }
164 __siunitx_number_output:n {#2}
165 \group_end:% lwarp
166 }
167

```

```

168 \RenewDocumentCommand \numrange { o m m } {
169 \leavevmode
170 \group_begin:% lwarp
171 \LetLtxMacro\@ensuredmath\LWR@origensuredmath% lwarp
172 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
173 \bool_set_false:N \l__siunitx_font_set_bool
174 \IfNoValueF {#1}
175 { \keys_set:nn { siunitx } {#1} }
176 __siunitx_range_numbers:nn {#2} {#3}
177 \group_end:% lwarp
178 }
179
180 \RenewDocumentCommand \ang { o > { \SplitArgument { 2 } { ; } } m } {
181 \group_begin:% lwarp
182 \LetLtxMacro\@ensuredmath\LWR@origensuredmath% lwarp
183 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
184 \IfNoValueF {#1}
185 { \keys_set:nn { siunitx } {#1} }
186 __siunitx_angle_output:nnn #2
187 \group_end:% lwarp
188 }
189
190 \RenewDocumentCommand \si { o m } {
191 \leavevmode
192 \group_begin:% lwarp
193 \LetLtxMacro\@ensuredmath\LWR@origensuredmath% lwarp
194 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
195 \bool_set_false:N \l__siunitx_font_set_bool
196 \IfNoValueTF {#1}
197 { __siunitx_unit_output:nn {#2} { } }
198 {
199 \keys_set:nn { siunitx } {#1}
200 __siunitx_unit_output:nn {#2} {#1}
201 }
202 \group_end:% lwarp
203 }
204
205
206 \RenewDocumentCommand{\SIrange}{o m m m}
207 {%
208 \leavevmode
209 \group_begin:% lwarp
210 \LetLtxMacro\@ensuredmath\LWR@origensuredmath% lwarp
211 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
212 \bool_set_false:N \l__siunitx_font_set_bool
213 \IfNoValueTF {#1}
214 { __siunitx_range_unit:nnnn {#4} { } {#2} {#3} }
215 {
216 \keys_set:nn { siunitx } {#1}
217 __siunitx_range_unit:nnnn {#4} {#1} {#2} {#3}
218 }
219 \group_end:% lwarp
220 }
221
222 \ExplSyntaxOff

```

File 328 **lwarp-soul.sty**

§ 427 Package **soul**

(Emulates or patches code by MELCHIOR FRANZ.)

Pkg soul Emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{soul}[2003/11/17]  
2 \RequirePackage{xcolor}% for \convertcolorspec

Storage for the colors to use:

```
3 \newcommand*\LWR@soululcolor{}
4
5 \newcommand*\LWR@soulstcolor{}
6
7 % \definecolor{\LWR@soulhlcolordefault}{HTML}{F8E800}
8 % \newcommand*\LWR@soulhlcolor{\LWR@soulhlcolordefault}
9 \newcommand*\LWR@soulhlcolor{}
```

\so {*text*}

Basic markup with css:

```
10 \newcommand{\so}[1]{%
11 \InlineClass(letter-spacing:.2ex){letterspacing}{#1}%
12 }
```

\caps {*text*}

```
13 \newcommand{\caps}[1]{%
14 \InlineClass%
15 (font-variant:small-caps;letter-spacing:.1ex)%
16 {capsspacing}{#1}%
17 }
```

\LWR@soulcolor {*text*} {*color*} {*class*} {*colorstyle*} {*FormatWPstyle*}

Add colors if not empty:

```
18 \newcommand{\LWR@soulcolor}[5]{%
19 \ifcsemtty{#2}%
20 {%
21 \InlineClass(#5){#3}{#1}%
22 }%
23 {%
24 \convertcolorspec{named}{\@nameuse{#2}}{HTML}\LWR@tempcolor%
25 \LWR@htmlspanclass[#5;#4:\LWR@origpound\LWR@tempcolor]{#3}{#1}%
26 }%
27 }
```



```

28 \newcommand{\ul}[1]{%
29 \LWR@soulcolor{#1}{LWR@soululcolor}{uline}{text-decoration-color}%
30 {text-decoration:underline; text-decoration-skip: auto;}%
31 }
32
33 \newcommand{\st}[1]{
34 \LWR@soulcolor{#1}{LWR@soulstcolor}{sout}{text-decoration-color}%
35 {text-decoration:line-through}%
36 }
37
38 \newcommand{\hl}[1]{
39 \LWR@soulcolor{#1}{LWR@soulhlcolor}{highlight}{background-color}%
40 {background:\LWR@origpound{ }F8E800}
41 }

```

## Nullified:

```

42 \newcommand*\soulaccent}[1]{}
43 \newcommand*\soulregister}[2]{}
44 \newcommand*\sloppyword}[1]{#1}
45 \newcommand*\sodef}[5]{\DeclareRobustCommand*#1[1]{\so{##1}}}
46 \newcommand*\resetso{}
47 \newcommand*\capsdef}[5]{}
48 \newcommand*\capsreset{}
49 \newcommand*\capssave}[1]{}
50 \newcommand*\capsselect}[1]{}
51 \newcommand*\setul}[2]{}
52 \newcommand*\resetul{}
53 \newcommand*\setuldepth}[1]{}
54 \newcommand*\setuloverlap}[1]{}

```

## Set colors:

```

55 \newcommand*\setulcolor}[1]{\renewcommand{\LWR@soululcolor}{#1}}
56 \newcommand*\setstcolor}[1]{\renewcommand{\LWR@soulstcolor}{#1}}
57 \newcommand*\sethlcolor}[1]{\renewcommand{\LWR@soulhlcolor}{#1}}

```

## Long versions of the user-level macros:

```

58 \let\textso\so
59 \let\textul\ul
60 \let\texthl\hl
61 \let\textcaps\caps

```

---

File 329 **lwarp-soulpos.sty**

§ 428 Package **soulpos**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg soulpos soulpos is emulated.

**for HTML output:**

```

1 \RequirePackage{soul}
2 \RequirePackage{soulutf8}
3 \LWR@ProvidesPackageDrop{soulpos}[2012/02/25]

4 \NewDocumentCommand{\ulposdef}{m o m}{}
5
6 \newdimen\ulwidth
7
8 \newcommand\ifulstarttype[1]{%
9 \expandafter\@secondoftwo%
10 }
11
12 \newcommand\ifulendtype[1]{%
13 \expandafter\@secondoftwo%
14 }
15
16 \newcommand{\ulstarttype}{0}
17 \newcommand{\ulendtype}{0}
18 \newcommand\ulpostolerance{0}%

```

---

File 330 **lwarp-soulutf8.sty**

§ 429 Package **soulutf8**

Pkg soulutf8 soulutf8 is emulated.

lwarp's HTML output naturally supports UTF-8 encoding.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{soulutf8}[2016/05/16]

---


File 331 **lwarp-splitidx.sty**

§ 430 Package **splitidx**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg splitidx splitidx is patched for use by lwarp.

If the `latexmk` option is selected for lwarp, `latexmk` will compile the document but will *not* compile the indexes. `lwarpmk printindex` and `lwarpmk htmlindex` will still be required.

 `\thepage` When using `\AtWriteToIndex` or `\AtNextWriteToIndex`, the user must not refer to `\thepage` during HTML output, as the concept of a page number is meaningless. Instead, do

```

\addtocounter{LWR@autoindex}{1}
\LWR@new@label{LWRindex-\arabic{LWR@autoindex}}

```

where the `\index`-like action occurs, and then refer to `\arabic{LWR@autoindex}` instead of `\thepage` where the reference should occur.

See section 519.17 in the `lwarp-patch-memoir` package for the `\@wrsindexhyp` macro as an example.

**for HTML output:** 1 `\LWR@ProvidesPackagePass{splitidx}[2016/02/18]`

```
2 \catcode'_ =12%
3 \xpatchcmd{\newindex}
4 {\jobname-#2.idx}
5 {\jobname-#2_html.idx}
6 {}
7 {\LWR@patcherror{splitidx}{@newindex}}
8 \catcode'_ =8%
```

Patched to use `lwarp`'s automatic indexing counter instead of `\thepage`:

```
9 \renewcommand*{\@wrsindex}[2][[]]{%
10 \ifx\relax#1\relax
11 \if@splitidx
12 \@wrsindex[idx]{#2}%
13 \else
14 \def\@tempa{#2}%
15 \if@verbinde\@onelevel@sanitize\@tempa\fi
16 \@wrindex{\@tempa}%
17 \fi
18 \else
19 \def\@tempa{#2}%
20 \csname index@#1@hook\endcsname
21 % \expandafter\ifx\csname @wrsindex\endcsname\relax
22 \addtocounter{LWR@autoindex}{1}% lwarp
23 \LWR@new@Label{LWRindex-\arabic{LWR@autoindex}}% lwarp
24 % \@@@wrsindex{#1}{\@tempa}{\thepage}%
25 \@@@wrsindex{#1}{\@tempa}{\arabic{LWR@autoindex}}%
26 % \else
27 % \def\@tempb{\@wrsindex{#1}}%
28 % \expandafter\@tempb\@tempa||\%
29 % \fi
30 \endgroup
31 \@esphack
32 \fi
33 }
```

`lwarp` defines sectioning commands with `xparse`, so the below patches are done as temporary redefinitions instead of being `\let`.

```
34 \xpatchcmd{\printsubindex}
35 {\let\section\subsection}
36 {\renewcommand*{\section}{\subsection}}
37 {}
38 {\LWR@patcherror{splitidx}{printsubindex-section}}
39
40 \xpatchcmd{\printsubindex}
41 {\let\chapter\section}
```

---

```

42 {\renewcommand*{\chapter}{\section}}
43 {}
44 {\LWR@patcherror{splitidx}{printsindex-chapter}}
45
46 \xpatchcmd{\printsindex}
47 {\let\@makechapterhead\section}
48 {\def\@makechapterhead{\section}}
49 {}
50 {\LWR@patcherror{splitidx}{printsindex-chapter}}

```

---

File 332 **lwarp-srcltx.sty**

§ 431 Package **srcltx**

Pkg srcltx srcltx is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{srcltx}[2006/11/12]

```

2 \newif\ifSRCOK \SRCOKfalse
3 \newcommand*\srcIncludeHook[1]{}
4 \newcommand*\srcInputHook[1]{}
5 \newcommand*\MainFile{}
6 \def\MainFile{\jobname.tex}
7 \newcommand*\CurrentInput{}
8 \gdef\CurrentInput{\MainFile}
9 \newcommand\Input{}
10 \let\Input\input

```

---

File 333 **lwarp-srctex.sty**

§ 432 Package **srctex**

Pkg srctex srctex is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{srctex}[2006/11/12]  
2 \LWR@origRequirePackage{lwarp-srcltx}

---

File 334 **lwarp-stabular.sty**

§ 433 Package **stabular**

*(Emulates or patches code by SIGITAS TOLUŠIS.)*

Pkg stabular stabular is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{stabular}[2014/03/20]

```
Env stabular [<vpos>] [<colspec>]
2 \newenvironment{stabular}[2][c]
3 {
4 \begin{tabular}[#1]{#2}
5 \renewcommand{\noalign}[1]{}
6 }
7 \end{tabular}}
```

```
Env stabular [<width>] [<vpos>] [<colspec>]
8 \NewDocumentEnvironment{stabular*}{m o m}
9 {
10 \begin{tabular}[#2]{#3}
11 \renewcommand{\noalign}[1]{}
12 }
13 \end{tabular}}
```

File 335 **lwarp-stfloats.sty**

§ 434 Package **stfloats**

Pkg stfloats stfloats is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{stfloats}[2017/03/27]

stfloats may have been preloaded by a ltj\* class.

The following are provided in case they have not yet been defined:

```
2 \providecommand*\fnbelowfloat{}
3 \providecommand*\fnunderfloat{}
4 \providecommand*\setbaselinefloat{}
5 \providecommand*\setbaselinefixed{}

```

Nullified for HTML:

```
6 \renewcommand*\fnbelowfloat{}
7 \renewcommand*\fnunderfloat{}
8 \renewcommand*\setbaselinefloat{}
9 \renewcommand*\setbaselinefixed{}

```

File 336 **lwarp-struktex.sty**

§ 435 Package **struktex**

*(Emulates or patches code by JOBST HOFFMANN.)*

Pkg struktex struktex is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{struktex}[2018/06/04]

2 \BeforeBeginEnvironment{struktogramm}{\begin{lateximage}[(struktogramm)]}
3 \AfterEndEnvironment{struktogramm}{\end{lateximage}}
4
5 \newenvironment{LWR@HTML@centernss}{\begin{center}}{\end{center}}
6 \LWR@formattedenv{centernss}
7
8 \newcommand{\LWR@HTML@CenterNssFile}[1]{%
9 \begin{center}
10 \input{#1.nss}
11 \end{center}
12 }
13 \LWR@formatted{CenterNssFile}
14
15 \newcommand{\LWR@HTML@centernssfile}{\LWR@HTML@CenterNssFile}
16 \LWR@formatted{centernssfile}

```

---

File 337 **lwarp-subcaption.sty**

§ 436 Package **subcaption**

*(Emulates or patches code by AXEL SOMMERFELDT.)*

Pkg subcaption subcaption is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{subcaption}[2018/05/01]

```

Tells lwarp to ignore minipage widths inside a subfigure or subtable. In print mode the minipages are used to place the items next to each other. In HTML they are placed side-by-side automatically.

```

2 \ifdef{\subcaption@minipage}{
3 \xpatchcmd{\subcaption@minipage}
4 {\minipage}
5 {\minipagefullwidth\minipage}
6 {}
7 {\LWR@patcherror{subcaption}{subcaption@minipage}}
8 }{}

```

Likewise for a \subcaptionbox:

```

9 \ifdef{\subcaptionbox}{
10 \xpretocmd{\subcaptionbox}
11 {\minipagefullwidth}
12 {}
13 {\LWR@patcherror{subcaption}{subcaptionbox}}
14 }{}

```

File 338 **lwarp-subfig.sty**

§ 437 Package **subfig**

(Emulates or patches code by STEVEN DOUGLAS COCHRAN.)

Pkg subfig subfig is supported and patched by lwarp.

⚠ **lof/lotdepth** At present, the package options for lofdepth and lotdepth are not working. These counters must be set separately after the package has been loaded.

In the document source, use `\hfill` and `\hspace* subfig>inline` between subfigures to spread them apart horizontally. The use of other forms of whitespace may cause paragraph tags to be generated, resulting in subfigures appearing on the following lines instead of all on a single line.

**for HTML output:** Accept all options for lwarp-subfig:

```
1 \LWR@ProvidesPackagePass{subfig}[2005/06/28]
```

```
\sf@@@subfloat {<1 type>} [<2 LOF entry>] [<3 caption>] {<4 contents>}
```

The outer minipage allows side-by-side subfloats with `\hfill` between.

```
2 \long\def\sf@@@subfloat#1[#2][#3]#4{%
3 \begin{minipage}{\linewidth}% lwarp
```

```
4 \IfValueTF{#2}{%
```

```
5 \LWR@setlatestname{#2}%
```

```
6 }{%
```

```
7 \IfValueTF{#3}{%
```

```
8 \LWR@setlatestname{#3}%
```

```
9 }{%
```

```
10 }%
```

```
11 \LWR@stoppars% lwarp
```

```
12 \ifundefined{FBsc@max}{%
```

```
13 {\FB@readaux{\let\FBsuboheight\relax}}%
```

```
14 \@tempcnta=\@ne
```

```
15 \if@minipage
```

```
16 \@tempcnta=\z@
```

```
17 \else\ifdim \lastskip=\z@ \else
```

```
18 \@tempcnta=\tw@
```

```
19 \fi\fi
```

```
20 \ifmaincaptiontop
```

```
21 \sf@top=\sf@nearskip
```

```
22 \sf@bottom=\sf@farskip
```

```
23 \else
```

```
24 \sf@top=\sf@farskip
```

```
25 \sf@bottom=\sf@nearskip
```

```
26 \fi
```

```
27 \leavevmode
```

```

28 % \setbox\@tempboxa \hbox{#4}%
29 % \@tempdima=\wd\@tempboxa
30 % \@ifundefined{FBsc@max}{}%
31 % {\global\advance\Xhsize-\wd\@tempboxa
32 % \dimen@=\ht\@tempboxa
33 % \advance\dimen@\dp\@tempboxa
34 % \ifdim\dimen@>\FBso@max
35 % \global\FBso@max\dimen@
36 % \fi}%

```

Do not use boxes, which interfere with lateximages:

```

37 % \vtop%
38 \bgroup
39 % \vbox%
40 \bgroup
41 \ifcase\@tempcnta
42 \@minipagefalse
43 \or
44 % \vskip\sf@top
45 \or
46 \ifdim \lastskip=\z@ \else
47 % \@tempskipb\sf@top\relax\@xaddvskip
48 \fi
49 \fi
50 \sf@ifpositiontop{%
51 \ifx \@empty#3\relax \else
52 \sf@subcaption{#1}{#2}{#3}%
53 % \vskip\sf@capskip
54 % \vskip\sf@captopadj
55 \fi\egroup
56 % \hrule width0pt height0pt depth0pt
57 \LWR@startpars% lwarp
58 % \box\@tempboxa
59 #4
60 \LWR@stoppars% lwarp
61 }{%
62 \LWR@startpars% lwarp
63 \@ifundefined{FBsc@max}%
64 {
65 % \box\@tempboxa
66 #4
67 }%
68 {\ifx\FBsuboheight\relax
69 % \box\@tempboxa
70 #4
71 \else
72 % \vbox to \FBsuboheight{\FBafil\box\@tempboxa\FBbfil}%
73 #4
74 \fi}%
75 \LWR@stoppars% lwarp
76 \egroup
77 \ifx \@empty#3\relax \else
78 % \vskip\sf@capskip
79 % \hrule width0pt height0pt depth0pt
80 \sf@subcaption{#1}{#2}{#3}%

```



```

81 \fi
82 }%
83 % \vskip\sf@bottom
84 \egroup
85 \@ifundefined{FBsc@max}{}%
86 {\addtocounter{FRobj}{-1}%
87 \ifnum\c@FRobj=0\else
88 \subfloatrowsep
89 \fi}%
90 \ifmaincaptiontop\else
91 \global\advance\@nameuse{c@\@capttype}\m@ne
92 \fi
93 \end{minipage}% lwarp
94 \LWR@startpars% lwarp
95 \endgroup\ignorespaces%
96]%

```

\sf@subcaption {<1 type>} {<2 LOF entry>} {<3 caption>}

```

97 \long\def\sf@subcaption#1#2#3{%
98 \LWR@stoppars% lwarp
99 \ifx \relax#2\relax \else
100 \bgroup
101 \let\label=\@gobble
102 \let\protect=\string
103 \def\@subcaplabel{%
104 \caption@lstfmt{\@nameuse{p@#1}}{\@nameuse{the#1}}}%
105 \sf@updatecaptionlist{#1}{#2}{\the\value{\@capttype}}{\the\value{#1}}%
106 \egroup
107 \fi
108 \bgroup
109 \ifx \relax#3\relax
110 \let\captionlabelsep=\relax
111 \fi
112 % \setbox0\vbox{%
113 % \hbext@the\@tempdima{%
114 %
115 % \hss
116 % \parbox[t]{\the\@tempdima}{%
117 % \caption@make
118 % {\@nameuse{sub\@capttype name}}%
119 % {\@nameuse{thesub\@capttype}}%
120 % {#3}
121 % }%
122 % \hss
123 % }
124 % }%
125 \@ifundefined{FBsc@max}{%
126 % {\box0}%
127 % {
128 % \parbox[t]{\the\@tempdima}{%
129 \LWR@traceinfo{sfsubcap B1}% lwarp
130 \LWR@figcaption% lwarp
131 \caption@make
132 {\@nameuse{sub\@capttype name}}%

```

```

133 {\@nameuse{thesub\@capttype}}%
134 {\LWR@isolate{#3}}%

135 \endLWR@figcaption% lwarp
136 \LWR@traceinfo{sfsubcap B2}% lwarp
137 % }%
138 }%
139 {\dimen@ht0%
140 \advance\dimen@dp0%
141 \ifdim\dimen@>\FBsc@max
142 \global\FBsc@max\dimen@
143 \fi
144 \FB@readaux{\let\FBsubcheight\relax}%
145 \ifx\FBsubcheight\relax
146 \def\next{
147 % \parbox[t]{\the\@tempdima}
148 }%
149 \else
150 \def\next{
151 % \parbox[t][\FBsubcheight][t]{\the\@tempdima}
152 }%
153 \fi
154 % \vbox{%
155 % \hbext@\the\@tempdima{%
156
157 % \hss
158 % \next{%
159 \LWR@traceinfo{sfsubcap C1}% lwarp
160 \caption@make
161 {\@nameuse{sub\@capttype name}}%
162 {\@nameuse{thesub\@capttype}}%
163 {#3}
164 \LWR@traceinfo{sfsubcap C1}% lwarp
165 % }%
166 % \hss
167
168 % }
169 % }
170 % }%
171 \egroup
172 \LWR@startpars% lwarp
173 }

```

`\subfloat@label` Patches for `\sf@sub@label`:

```

174 \def\subfloat@label{%
175 \LWR@ensuredoingapar% lwarp
176 \ifnnextchar(% %) match left parenthesis
177 {\sf@sub@label}
178 {\sf@sub@label(Sub\@capttype\space
179 \@ifundefined{thechapter}{\@nameuse{thechapter}\space}%
180 \@nameuse{p@sub\@capttype}%
181 \@nameuse{thesub\@capttype}.)}}

```

Patches for `\subref`.

`\sf@subref`     $\langle label \rangle$

The unstarred version uses a `\ref` link whose printed text comes from the `sub@<label>`:

```
182 \renewcommand{\sf@subref}[1]{%
183 \LWR@subnewref{#1}{sub#1}%
184 }
```

`\sf@@subref`     $\langle label \rangle$

The starred version uses the printed `sub@<label>` which is stored as if it were a page number:

```
185 \renewcommand{\sf@@subref}[1]{\LWR@orig@pageref{sub#1}}
```

Defining new subfloats. The `l@sub<type>` for each is redefined.

`\@newsfloat`    [ $\langle keys/values \rangle$ ]  $\langle float name \rangle$

```
186 \LetLtxMacro\LWR@orig@newsfloat\@newsfloat
187
188 \def\@newsfloat[#1]#2{%
189 \LWR@orig@newsfloat[#1]{#2}%
190 \renewcommand{\l@sub#2}[2]{\hypertocfloat{2}{sub#2}{\ext@sub#2}{##1}{##2}}%
191 }
```

Pre-defined for figures and tables:

`\l@subfigure`     $\langle text \rangle$   $\langle pagenum \rangle$

```
192 \renewcommand{\l@subfigure}[2]{\hypertocfloat{2}{subfigure}{lof}{#1}{#2}}
```

`\l@subtable`     $\langle text \rangle$   $\langle pagenum \rangle$

```
193 \renewcommand{\l@subtable}[2]{\hypertocfloat{2}{subtable}{lot}{#1}{#2}}
```

File 339    **lwarp-subfigure.sty**

§ 438    Package    **subfigure**

Pkg    subfigure    subfigure is emulated by subfig.

```
for HTML output: 1 \LWR@ProvidesPackageDrop{subfigure}[2002/03/15]
2 \RequirePackage{subfig}

3 \LetLtxMacro\subfigure\subfloat
4 \LetLtxMacro\subtable\subfloat
5 \LetLtxMacro\Subref\subref
6 \@ifundefined{figuretopcaptrue}{\newif\iffiguretopcap}{}
7 \newif\ifsubfiguretopcap
8 \newif\ifsubcaphang
9 \newif\ifsubcapcenter
```

```

10 \newif\ifsubcapcenterlast
11 \newif\ifsubcapnooneline
12 \newif\ifsubcapraggedright
13 \newskip\subfigtopskip
14 \newskip\subfigcapskip
15 \newdimen\subfigcaptopadj
16 \newskip\subfigbottomskip
17 \newdimen\subfigcapmargin
18 \newskip\subfiglabelskip
19 \newcommand*{\subcapsize}{}
20 \newcommand*{\subcaplabelfont}{}
21 \newcommand*{\subcapfont}{}

```


File 340 **lwarp-supertabular.sty**

§ 439 Package **supertabular**

(Emulates or patches code by JOHANNES BRAAMS, THEO JURRIENS.)

Pkg supertabular supertabular is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{supertabular}[2004/02/20]


 **Misplaced alignment tab character &** For `\tablefirsthead`, etc., enclose them as follows:

```

\StartDefiningTabulars
\tablefirsthead
...
\StopDefiningTabulars

```

See section 9.10.1.

 **lateximage** supertabular and xtab are not supported inside a lateximage.

```

2 \newcommand{\LWRST@firsthead}{}
3
4 \newcommand{\tablefirsthead}[1]{%
5 \long\gdef\LWRST@firsthead{#1}%
6 }
7
8 \newcommand{\tablehead}[1]{}
9 \newcommand{\tabletail}[1]{}
10
11 \newcommand{\LWRST@lasttail}{}
12
13 \newcommand{\tablelasttail}[1]{%
14 \long\gdef\LWRST@lasttail{#1}%
15 }

16 \newcommand{\tablecaption}[2][]{%
17 \long\gdef\LWRST@caption{%
18 \ifblank{#1}%

```

```

19 {\caption{#2}}%
20 {\caption[#1]{#2}}%
21 }%
22 }
23
24 \let\topcaption\tablecaption
25 \let\bottomcaption\tablecaption

26 \newcommand*\LWRST@caption{}
27
28 \newcommand*\shrinkheight}[1]{}
29
30 \NewDocumentEnvironment{supertabular}{s o m}
31 {%
32 \LWR@traceinfo{supertabular}%
33 \begin{table}%
34 \LWRST@caption%
35 \begin{tabular}{#3}%
36 \TabularMacro\ifdefvoid{\LWRST@firsthead}%
37 {\LWR@getmynexttoken}%
38 {\expandafter\LWR@getmynexttoken\LWRST@firsthead}%
39 }%
40 {%
41 \ifdefvoid{\LWRST@lasttail}%
42 {}%
43 {%
44 \TabularMacro\ResumeTabular%
45 \LWRST@lasttail%
46 }%
47 \end{tabular}%
48 \end{table}%

49 \gdef\LWRST@caption{}%

50 \LWR@traceinfo{supertabular done}%
51 }
52
53 \NewDocumentEnvironment{mpsupertabular}{s o m}
54 {\minipage{\linewidth}\supertabular{#3}}
55 {\endsupertabular\endminipage}

```

---

File 341 **lwarp-syntonly.sty**

§ 440 Package **syntonly**

(Emulates or patches code by FRANK MITTELBACH, RAINER SCHÖPF.)

Pkg syntonly Emulated.

**for HTML output:** Discard all options for lwarp-syntonly:

```
1 \LWR@ProvidesPackageDrop{syntonly}[2017/06/30]
```

---

```

2 \newif\ifsyntax@
3 \syntax@false
4
5 \newcommand*{\syntaxonly}{}
6
7 \@onlypreamble\syntaxonly

```

---

File 342 **lwarp-tablefootnote.sty**

§ 441 Package **tablefootnote**

Pkg tablefootnote tablefootnote is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop[tablefootnote][2014/01/26]

This works because in HTML tables are no longer floats.

```
2 \LetLtxMacro\tablefootnote\footnote
```

---

File 343 **lwarp-tables.sty**

§ 442 Package **tables**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg tables tables is emulated. \LWR@hline is used to handle the optional argument when tables is loaded.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{tables}

```

2 \newdimen\tablinesep
3 \newdimen\arraylinesep
4 \newdimen\extrarulesep

```

---

File 344 **lwarp-tabularx.sty**

§ 443 Package **tabularx**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg tabularx tabularx is emulated by lwarp.

**for HTML output:** Discard all options for lwarp-tabularx:

```

1 \LWR@ProvidesPackageDrop{tabularx}[2016/02/03]
2 \RequirePackage{array}

```

```

3 \DeclareDocumentEnvironment{tabularx}{m o m}
4 {\tabular{#3}}
5 {\endtabular}
6
7 \DeclareDocumentEnvironment{tabularx*}{m o m}
8 {\tabular{#3}}
9 {\endtabular}

```

---

File 345 **lwarp-tabulary.sty**

§ 444 Package **tabulary**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg tabulary tabulary is emulated by lwarp.

**for HTML output:** Discard all options for lwarp-tabulary.

Column types L, C, R, and J are emulated by lwarp core code.

```

1 \LWR@ProvidesPackageDrop{tabulary}[2014/06/11]
2 \RequirePackage{array}

3 \NewDocumentEnvironment{tabulary}{m o m}
4 {\tabular{#3}}
5 {\endtabular}
6
7 \NewDocumentEnvironment{tabulary*}{m o m}
8 {\tabular{#3}}
9 {\endtabular}
10
11 \newdimen\tymin
12 \newdimen\tymax
13 \def\tyformat{}

```

---

File 346 **lwarp-tascmac.sty**

§ 445 Package **tascmac**

Pkg tascmac tascmac is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{tascmac}[2018/03/09]

2 \newenvironment*{boxnote}
3 {
4 \BlockClass[
5 padding: .5ex ;
6 border: 1px solid black ;
7 border-top: 1px dashed black ;
8]{boxnote}

```

```
9 }
10 {\endBlockClass}
11
12 \newenvironment*{screen}[1][[]
13 {
14 \BlockClass[
15 padding: .5ex ;
16 border: 1px solid gray ;
17 border-radius: 8pt
18]{boxnote}
19 }
20 {\endBlockClass}
21
22 \newenvironment*{itembox}[2][[]
23 {
24 \BlockClass[
25 padding: .5ex ;
26 border: 1px solid gray ;
27 border-radius: 8pt
28]{boxnote}
29 \InlineClass{itemboxtitle}{#2}\par
30 }
31 {\endBlockClass}
32
33 \newenvironment*{shadebox}
34 {
35 \BlockClass[
36 padding: .5ex ;
37 border: 1px solid black ;
38 box-shadow: 3px 3px 3px \#808080 ;
39]{boxnote}
40 }
41 {\endBlockClass}
42
43 \newcommand*{\mask}[2]{%
44 \InlineClass[background: lightgray]{mask}{#1}%
45 }
46
47 \newcommand*{\maskbox}[5]{%
48 \InlineClass[background: lightgray]{mask}{#5}%
49 }
50
51 \newcommand*{\Maskbox}[6]{%
52 \InlineClass[
53 background: lightgray ;
54 border: #5 solid black
55]{mask}{#6}%
56 }
57
58 \newcommand*{\keytop}[2][[]{%
59 \InlineClass[%
60 padding: .2ex ;
61 border: 1px solid black ;
62 border-radius: .7ex ;
63]{keytop}{#2}%
```



```

64 }
65
66 \def\yen{\HTMLUnicode{00A5}}
67
68 \def\return{\HTMLUnicode{23CE}}
69
70 \def\Return{\HTMLUnicode{23CE}}
71
72 \def\ascii{ASCII Corporation}
73
74 \def\Ascii{ASCII Corporation}
75
76 \def\ASCII{ASCII Corporation}

```

---

File 347 **lwarp-textarea.sty**

§ 446 Package **textarea**

*(Emulates or patches code by ALEXANDER I. ROZHENKO.)*

Pkg textarea **textarea** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{textarea}[2005/12/26]

```

2 \newcommand\StartFromTextArea{}
3 \newcommand\StartFromHeaderArea{}
4 \newcommand*\RestoreTextArea{}
5 \newcommand*\ExpandTextArea[1][*]{}
6 \let\NCC@restorettextarea\empty

```

---

File 348 **lwarp-textcomp.sty**


§ 447 Package **textcomp**

*(Emulates or patches code by FRANK MITTELBACH, ROBIN FAIRBAIRNS, WERNER LEMBERG.)*

Pkg textcomp **textcomp** is patched for use by lwarp.

§ 447.1 **Limitations**

Some textcomp symbols do not have Unicode equivalents, and thus are not supported.

 **missing symbols** Many textcomp symbols are not supported by many system / browser fonts. In the css try referencing fonts which are more complete, but expect to see gaps in coverage.

## § 447.2 Package loading

**for HTML output:** `1 \LWR@ProvidesPackagePass{textcomp}[2017/04/05]`

## § 447.3 HTML symbols

For HTML, use HTML entities or direct Unicode, depending on the engine.

`\AtBeginDocument` improves support for Lua $\TeX$  and X $\TeX$ .

### § 447.3.1 pdf $\TeX$ symbols

```

2 \AtBeginDocument{
3 \ifPDFTeX% pdflatex or dvi latex
4 \newcommand*\LWR@HTML@textdegree{\HTMLentity{deg}}
5 \newcommand*\LWR@HTML@textcelsius{\HTMLUnicode{2103}}
6 \newcommand*\LWR@HTML@textohm{\HTMLUnicode{2126}}
7 \newcommand*\LWR@HTML@textmu{\HTMLUnicode{00B5}}
8 \newcommand*\LWR@HTML@textlquill{\HTMLUnicode{2045}}
9 \newcommand*\LWR@HTML@textrquill{\HTMLUnicode{2046}}
10 \newcommand*\LWR@HTML@textcircledP{\HTMLUnicode{2117}}
11 \newcommand*\LWR@HTML@texttwelveudash{\HTMLUnicode{2014}}% emdash
12 \newcommand*\LWR@HTML@textthreequartersemdash{\HTMLUnicode{2014}}% emdash
13 \newcommand*\LWR@HTML@textmho{\HTMLUnicode{2127}}
14 \newcommand*\LWR@HTML@textnaira{\HTMLUnicode{20A6}}
15 \newcommand*\LWR@HTML@textpeso{\HTMLUnicode{20B1}}
16 \newcommand*\LWR@HTML@textrecipe{\HTMLUnicode{211E}}
17 \newcommand*\LWR@HTML@textinterrobang{\HTMLUnicode{203D}}
18 \newcommand*\LWR@HTML@textinterrobangdown{\HTMLUnicode{2E18}}
19 \newcommand*\LWR@HTML@textperthousand{\HTMLUnicode{2030}}
20 \newcommand*\LWR@HTML@textpertenthousand{\HTMLUnicode{2031}}
21 \newcommand*\LWR@HTML@textbaht{\HTMLUnicode{0E3F}}
22 \newcommand*\LWR@HTML@textdiscount{\}%
23 \newcommand*\LWR@HTML@textservicemark{\HTMLUnicode{2120}}
24 \else

```

### § 447.3.2 X $\TeX$ and Lua $\TeX$ symbols

NOTE: Some of the following do not print well in the listing. Consult the .dtx or .sty file for the actual characters.

```

25 \newcommand*\LWR@HTML@textdegree{\°}
26 \newcommand*\LWR@HTML@textcelsius{\}
27 \newcommand*\LWR@HTML@textohm{\}
28 \newcommand*\LWR@HTML@textmu{\μ}
29 \newcommand*\LWR@HTML@textlquill{\}
30 \newcommand*\LWR@HTML@textrquill{\}
31 \newcommand*\LWR@HTML@textcircledP{\}
32 \newcommand*\LWR@HTML@texttwelveudash{\---}% emdash
33 \newcommand*\LWR@HTML@textthreequartersemdash{\---}% emdash
34 \newcommand*\LWR@HTML@textmho{\}
35 \newcommand*\LWR@HTML@textnaira{\}
36 \newcommand*\LWR@HTML@textpeso{\}

```

```

37 \newcommand*\LWR@HTML@textrecipe}{ }
38 \newcommand*\LWR@HTML@textinterrobang}{ }
39 \newcommand*\LWR@HTML@textinterrobangdown}{ }
40 \newcommand*\LWR@HTML@textperthousand}{%}
41 \newcommand*\LWR@HTML@textpertenthousand}{%}
42 \newcommand*\LWR@HTML@textbaht}{ }
43 \newcommand*\LWR@HTML@textdiscount}{\%}
44 \newcommand*\LWR@HTML@textservicemark}{ }
45 \fi
46
47 \LWR@formatted{textdegree}
48 \LWR@formatted{textcelsius}
49 \LWR@formatted{textohm}
50 \LWR@formatted{textmu}
51 \LWR@formatted{textlquill}
52 \LWR@formatted{textrquill}
53 \LWR@formatted{textcircledP}
54 \LWR@formatted{texttwelveudash}
55 \LWR@formatted{textthreequartersemdash}
56 \LWR@formatted{textmho}
57 \LWR@formatted{textnaira}
58 \LWR@formatted{textpeso}
59 \LWR@formatted{textrecipe}
60 \LWR@formatted{textinterrobang}
61 \LWR@formatted{textinterrobangdown}
62 \LWR@formatted{textperthousand}
63 \LWR@formatted{textpertenthousand}
64 \LWR@formatted{textbaht}
65 \LWR@formatted{textdiscount}
66 \LWR@formatted{textservicemark}

```

#### § 447.4 HTML diacritics

For HTML, Unicode diacritical marks are used:

```

67 \newcommand*\LWR@HTML@capitalcedilla}[1]{#1\HTMLUnicode{0327}}
68 \newcommand*\LWR@HTML@capitalogonek}[1]{#1\HTMLUnicode{0328}}
69 \newcommand*\LWR@HTML@capitalgrave}[1]{#1\HTMLUnicode{0300}}
70 \newcommand*\LWR@HTML@capitalacute}[1]{#1\HTMLUnicode{0301}}
71 \newcommand*\LWR@HTML@capitalcircumflex}[1]{#1\HTMLUnicode{0302}}
72 \newcommand*\LWR@HTML@capitaltilde}[1]{#1\HTMLUnicode{0303}}
73 \newcommand*\LWR@HTML@capitaldieresis}[1]{#1\HTMLUnicode{0308}}
74 \newcommand*\LWR@HTML@capitalhungarumlaut}[1]{#1\HTMLUnicode{30B}}
75 \newcommand*\LWR@HTML@capitalring}[1]{#1\HTMLUnicode{30A}}
76 \newcommand*\LWR@HTML@capitalcaron}[1]{#1\HTMLUnicode{30C}}
77 \newcommand*\LWR@HTML@capitalbreve}[1]{#1\HTMLUnicode{306}}
78 \newcommand*\LWR@HTML@capitalmacron}[1]{#1\HTMLUnicode{304}}
79 \newcommand*\LWR@HTML@capitaldotaccent}[1]{#1\HTMLUnicode{307}}

```

`\textcircled` becomes a span with a rounded border. `\providecommand` is used to avoid conflict with `xunicode`.

```

80 \providecommand*\LWR@HTML@textcircled}[1]{%
81 \InlineClass[border: 1px solid \LWR@currenttextcolor]{textcircled}{#1}%
82 }

```

```

83
84 \LWR@formatted{capitalcedilla}
85 \LWR@formatted{capitalogonek}
86 \LWR@formatted{capitalgrave}
87 \LWR@formatted{capitalacute}
88 \LWR@formatted{capitalcircumflex}
89 \LWR@formatted{capitaltilde}
90 \LWR@formatted{capitaldieresis}
91 \LWR@formatted{capitalhungarumlaut}
92 \LWR@formatted{capitalring}
93 \LWR@formatted{capitalcaron}
94 \LWR@formatted{capitalbreve}
95 \LWR@formatted{capitalmacron}
96 \LWR@formatted{capitaldotaccent}
97 \LWR@formatted{textcircled}

```

Nullify `textcomp` macros when generating filenames:

```

98 \FilenameNullify{%
99 \renewcommand*{\textdegree}{}%
100 \renewcommand*{\textcelsius}{}%
101 \renewcommand*{\textohm}{}%
102 \renewcommand*{\textmu}{}%
103 \renewcommand*{\textlquill}{}%
104 \renewcommand*{\textrquill}{}%
105 \renewcommand*{\textcircledP}{}%
106 \renewcommand*{\texttwelveudash}{}%
107 \renewcommand*{\textthreequartersemdash}{}%
108 \renewcommand*{\textmho}{}%
109 \renewcommand*{\textnaira}{}%
110 \renewcommand*{\textpeso}{}%
111 \renewcommand*{\textrecipe}{}%
112 \renewcommand*{\textinterrobang}{}%
113 \renewcommand*{\textinterrobangdown}{}%
114 \renewcommand*{\textperthousand}{}%
115 \renewcommand*{\textpertenthousand}{}%
116 \renewcommand*{\textbaht}{}%
117 \renewcommand*{\textdiscount}{}%
118 \renewcommand*{\textservicemark}{}%
119 \renewcommand*{\textcircled}[1]{#1}%
120 \renewcommand*{\capitalcedilla}[1]{#1}%
121 \renewcommand*{\capitalogonek}[1]{#1}%
122 \renewcommand*{\capitalgrave}[1]{#1}%
123 \renewcommand*{\capitalacute}[1]{#1}%
124 \renewcommand*{\capitalcircumflex}[1]{#1}%
125 \renewcommand*{\capitaltilde}[1]{#1}%
126 \renewcommand*{\capitaldieresis}[1]{#1}%
127 \renewcommand*{\capitalhungarumlaut}[1]{#1}%
128 \renewcommand*{\capitalring}[1]{#1}%
129 \renewcommand*{\capitalcaron}[1]{#1}%
130 \renewcommand*{\capitalbreve}[1]{#1}%
131 \renewcommand*{\capitalmacron}[1]{#1}%
132 \renewcommand*{\capitaldotaccent}[1]{#1}%
133 }% \FilenameNullify
134

```

---

```
135 }% AtBeginDocument
```

---

File 349 **lwarp-textfit.sty**

§ 448 Package **textfit**

Pkg textfit textfit is emulated.

Text is placed into a `<span>` of class `textfit`. Sizes are approximated, and also limited by browser min/max font-size settings.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{textfit}[1994/04/15]
2 \newsavebox{\LWR@textfitbox}
3
4 \newcommand*\LWR@textfitscale}[2]{%
5 \setlength{\LWR@templengthone}{#1}%
6 \setlength{\LWR@templengthone}{%
7 1em*\ratio{\LWR@templengthone}{\LWR@templengthtwo}%
8 }%
9 \InlineClass[font-size:\LWR@printlength{\LWR@templengthone}]{textfit}{#2}%
10 }
11
12 \newcommand*\scaletowidth}[2]{%
13 \sbox{\LWR@textfitbox}{#2}%
14 \settowidth{\LWR@templengthtwo}{\usebox{\LWR@textfitbox}}%
15 \LWR@textfitscale{#1}{#2}%
16 }
17
18 \newcommand*\scaletoheight}[2]{%
19 \sbox{\LWR@textfitbox}{#2}%
20 \settoheight{\LWR@templengthtwo}{\usebox{\LWR@textfitbox}}%
21 \LWR@textfitscale{#1}{#2}%
22 }
```

---

File 350 **lwarp-textpos.sty**

§ 449 Package **textpos**

*(Emulates or patches code by NORMAN GRAY.)*

Pkg textpos textpos is emulated.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{textpos}[2016/06/07]
2 \NewDocumentEnvironment{textblock}{m o r()}{}{}
3 \NewDocumentEnvironment{textblock*}{m o r()}{}{}
4 \newcommand*\TPGrid[3][{}{}
5 \NewDocumentCommand{\TPMargin}{s o}{}
6 \newcommand*\textblockcolour[1]{}

```

---

```

7 \newcommand*\textblockrulecolour}[1]{}
8 \newcommand*\textblockcolor}[1]{}
9 \newcommand*\textblockrulecolor}[1]{}
10 \newcommand*\tekstblokkulur}[1]{}
11 \newcommand*\tekstblokrulekulur}[1]{}
12 \newlength\TPHorizModule
13 \newlength\TPVertModule
14 \newlength\TPboxrulesize
15 \newcommand\textblocklabel}[1]{}
16 \newcommand*\showtextsize{}
17 \newcommand\textblockorigin}[2]{}

```

---

File 351 **lwarp-theorem.sty**

§ 450 Package **theorem**

*(Emulates or patches code by FRANK MITTELBACH.)*

Pkg theorem theorem is patched for use by lwarp.

---

Table 16: Theorem package — css styling of theorems and proofs

**Theorem:** <div> of class theorembody<theoremstyle>

**Theorem Header:** <span> of class theoremheader

where <theoremstyle> is plain, break, etc.

---

**for HTML output:** 1 \LWR@ProvidesPackagePass{theorem}[2014/10/28]

### § 450.1 Remembering the theorem style

Storage for the style being used for new theorems:

```
2 \newcommand{\LWR@newtheoremstyle}{plain}
```

Patched to remember the style being used for new theorems:

```

3 \gdef\theoremstyle#1{%
4 \ifundefined{th@#1}{\@warning
5 {Unknown theoremstyle ‘#1’. Using ‘plain’}%
6 \theorem@style{plain}%
7 \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
8 }%
9 {%
10 \theorem@style{#1}%
11 \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
12 }%
13 \begingroup
14 \csname th@the\theorem@style \endcsname
15 \endgroup}

```

Patched to remember the style for this theorem type, and set it later when the environment is started.

```

16 \gdef\xnthm#1#2[#3]{%
17 \expandafter\ifdefinable\csname #1\endcsname
18 {%
19 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
20 \@definecounter{#1}\@newctr{#1}[#3]%
21 \expandafter\xdef\csname the#1\endcsname
22 {\expandafter \noexpand \csname the#3\endcsname
23 \@thmcountersep \@thmcounter{#1}}%
24 \def\@tempa{\global\@namedef{#1}}%
25 \expandafter \@tempa \expandafter{%
26 \csname th@the \theorem@style
27 \expandafter \endcsname \the \theorem@bodyfont
28 \@thm{#1}{#2}}%
29 \global \expandafter \let \csname end#1\endcsname \@endtheorem
30 \AtBeginEnvironment{#1}{\edef\LWR@thmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
31 }}
32
33 \gdef\ynthm#1#2{%
34 \expandafter\ifdefinable\csname #1\endcsname
35 {
36 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
37 \@definecounter{#1}%
38 \expandafter\xdef\csname the#1\endcsname{\@thmcounter{#1}}%
39 \def\@tempa{\global\@namedef{#1}}\expandafter \@tempa
40 \expandafter{\csname th@the \theorem@style \expandafter
41 \endcsname \the\theorem@bodyfont \@thm{#1}{#2}}%
42 \global \expandafter \let \csname end#1\endcsname \@endtheorem
43 \AtBeginEnvironment{#1}{\edef\LWR@thmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
44 }}
45
46 \gdef\othm#1[#2]#3{%
47 \expandafter\ifx\csname c@#2\endcsname\relax
48 \@nocounterr{#2}%
49 \else
50 \expandafter\ifdefinable\csname #1\endcsname
51 {
52 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
53 \expandafter \xdef \csname the#1\endcsname
54 {\expandafter \noexpand \csname the#2\endcsname}%
55 \def\@tempa{\global\@namedef{#1}}\expandafter \@tempa
56 \expandafter{\csname th@the \theorem@style \expandafter
57 \endcsname \the\theorem@bodyfont \@thm{#2}{#3}}%
58 \global \expandafter \let \csname end#1\endcsname \@endtheorem
59 \AtBeginEnvironment{#1}{\edef\LWR@thmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
60 }%
61 \fi}

```

## § 450.2 **css patches**

The following are patched for css.

These were in individual files thp.sty for plain, thmb.sty for margin break, etc. They are gathered together here.

Each theorem is encased in a BlockClass environment of class theorembody<style>.

Each header is encased in an \InlineClass of class theoremheader.

```

62 \gdef\th@plain{%
63 \def\@begintheorem##1##2{%
64 \item[
65 \InlineClass{theoremheader}{##1\ ##2}
66]
67 }%
68 \def\@opargbegintheorem##1##2##3{%
69 \item[
70 \InlineClass{theoremheader}{##1\ ##2\ (##3)}
71]
72 }
73 }
74
75 \gdef\th@break{%
76 \def\@begintheorem##1##2{%
77 \item[
78 \InlineClass{theoremheader}{##1\ ##2}\newline%
79]
80 }%
81 \def\@opargbegintheorem##1##2##3{%
82 \item[
83 \InlineClass{theoremheader}{##1\ ##2\ (##3)}\newline
84]
85 }
86 }
87
88 \gdef\th@marginbreak{%
89 \def\@begintheorem##1##2{
90 \item[
91 \InlineClass{theoremheader}{##2 \quad ##1}\newline
92]
93 }%
94 \def\@opargbegintheorem##1##2##3{%
95 \item[
96 \InlineClass{theoremheader}{##2 \quad ##1\ %
97 (##3)}\newline
98]
99 }
100 }
101
102 \gdef\th@changebreak{%
103 \def\@begintheorem##1##2{
104 \item[
105 \InlineClass{theoremheader}{##2\ ##1}\newline
106]

```



```

107 }%
108 \def\@opargbegintheorem##1##2##3{%
109 \item[
110 \InlineClass{theoremheader}{##2\ ##1\ %
111 (##3)}\newline
112]
113 }
114 }
115
116 \gdef\th@change{%
117 \def\@begintheorem##1##2{
118 \item[
119 \InlineClass{theoremheader}{##2\ ##1}
120]
121 }%
122 \def\@opargbegintheorem##1##2##3{%
123 \item[
124 \InlineClass{theoremheader}{##2\ ##1\ (##3)}
125]
126 }
127 }
128
129 \gdef\th@margin{%
130 \def\@begintheorem##1##2{
131 \item[
132 \InlineClass{theoremheader}{##2 \quad ##1}
133]
134 }%
135 \def\@opargbegintheorem##1##2##3{%
136 \item[
137 \InlineClass{theoremheader}{##2 \quad ##1\ (##3)}
138]
139 }
140 }

```

Patched for css:

```

141 \gdef\@thm#1#2{\refstepcounter{#1}%
142 \LWR@forcenewpage% lwarp
143 \BlockClass{theorembody\LWR@thisthmstyle}% lwarp
144 \trivlist
145 \@topsep \theorempreskipamount % used by first \item
146 \@topsepadd \theorempostskipamount % used by \@endparenv
147 \@ifnextchar [%
148 {\@ythm{#1}{#2}}%
149 {\@begintheorem{#2}{\csname the#1\endcsname}\ignorespaces}}
150
151 \gdef\@endtheorem{%
152 \endtrivlist
153 \endBlockClass
154 }

```

---

File 352 **lwarp-thinsp.sty**

§ 451 Package **thinsp**

Pkg thinsp thinsp is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{thinsp}[2016/10/02]

```

2 \AtBeginDocument{
3 \let\thinthispace\relax% defined by some packages
4 \newcommand*\thinthispace{\thinspace}
5 }
6
7 \newcommand*\stretchthispace{\thinspace}
8 \newcommand*\stretchthinthispace{\thinthispace}
9 \newcommand*\stretchnegthispace{\negthinspace}
```

---

File 353 **lwarp-threadcol.sty**

§ 452 Package **threadcol**

Pkg threadcol threadcol is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{threadcol}[2013/01/06]

```

2 \newcommand{\setthreadname}[1]{}

```

---

File 354 **lwarp-threeparttable.sty**

§ 453 Package **threeparttable**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg threeparttable threeparttable is emulated.

Table note are contained inside a CSS <div> of class tnotes. If `enumitem` is used, the note item labels are also individually highlighted with an additional CSS <span> of class `tnoteitemheader`, otherwise they are plain text.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{threeparttable}[2003/06/13]

Env threeparttable [*alignment*] To emulate threeparttable:

```

2 \newenvironment*{threeparttable}[1][b]
```

```

3 {\def\@capttype{table}}
4 {}

```

```

Env tablenotes [(<options>)]

5 \newenvironment*{tablenotes}[1][[]
6 {%
7 \LWR@forcenewpage
8 \BlockClass{tnotes}%

9 \description%
10 }
11 {%
12 \enddescription%
13 \endBlockClass%
14 }

```

```

\tnote {(<text>)}

15 \newcommand{\tnote}[1]{\LWR@htmlspan{sup}{#1}}

```

---

File 355 **lwarp-threeparttablex.sty**

§ 454 Package **threeparttablex**

Pkg threeparttablex threeparttablex is patched for use by lwarp.

threeparttablex is used with longtable and booktabs as follows:

```

\begin{longtable}{ [column specifiers] }
[. . .] \endfirsthead % or \endhead, for print and HTML
\warpprintonly{ % not used in HTML
[. . .] \endhead % or \endfirsthead
[. . .] \endfoot
\bottomrule \insertTableNotes \endlastfoot
}
. . . table contents . . .
\warpHTMLonly{ % HTML last footer
\bottomrule
\UseMinipageWidths % optional
\insertTableNotes
\endlastfoot
}
\end{longtable}

```

**table width** The table notes are created using a `\multicolumn`. By default the width is not specified to the browser, so long table notes can cause the table to be spread out horizontally. For HTML output, lwarp guesses the width of the table depending on the number of columns, then restricts its guess to a min/max range. To use this guess for the width of the table notes, use `\UseMinipageWidths` before `\insertTableNotes`. The width is then specified, and in many cases the result is an improvement in overall table layout.

**for HTML output:** 1 \LWR@ProvidesPackagePass{threeparttablex}[2013/07/23]

The width is guessed depending on the number of columns, then limited to a min/max.

```

2 \renewcommand\insertTableNotes{%
3 \setlength{\LWR@templengthone}{.375in*\value{LWR@tabletotalLaTeXcols}}%
4 \setlength{\LWR@templengthone}{\minof{\textwidth}{\LWR@templengthone}}%
5 \setlength{\LWR@templengthone}{\maxof{2.5in}{\LWR@templengthone}}%
6 \multicolumn{\value{LWR@tabletotalLaTeXcols}}{c}{%
7 \parbox{\LWR@templengthone}{%
8 \begin{tablenotes}[\TPTL@optarg]%
9 \TPTL@font%
10 \TPTL@body%
11 \end{tablenotes}%
12 }%
13 }%
14 }
15
16 \renewcommand\TPTL@tnotex[2]{\tnote{\nameref{#2}}}
```

---

File 356 **lwarp-thumb.sty**

§ 455 Package **thumb**

Pkg thumb thumb is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{thumb}[1997/12/24]

```

2 \newcommand*\Overviewpage{}
3 \newlength{\thumbheight}
4 \newlength{\thumbwidth}
```

---

File 357 **lwarp-thumbs.sty**

§ 456 Package **thumbs**

Pkg thumbs thumbs is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{thumbs}[2014/03/09]

```

2 \newcommand{\addthumb}[4]{}
3 \newcommand{\addtitlethumb}[5]{}
4 \newcommand{\stopthumb}{}
5 \newcommand{\continuethumb}{}
6 \newcommand{\thumbsoverview}[1]{}
7 \newcommand{\thumbsoverviewback}[1]{}
8 \newcommand{\thumbsoverviewverso}[1]{}
9 \newcommand{\thumbsoverviewdouble}[1]{}
10 \newcommand{\thumbnewcolumn}{}

```

```
11 \newcommand{\addthumbsoverviewtocontents}[2]{}
12 \newcommand{\thumbsnophantom}{}


```

File 358 **lwarp-tikz.sty**

§ 457 Package **tikz**

*(Emulates or patches code by TILL TANTAU.)*

Pkg tikz tikz is supported.

 **displaymath and matrices** If using display math with `tikzpicture` or `\tikz`, along with matrices with the `&` character, the document must be modified as follows:

```
\usepackage{tikz}
\tikzset{every picture/.style={ampersand replacement=\&}}

```

and each instance of `&` in the `tikz` expression must be replaced with `\&`.

Accept all options for `lwarp-tikz`:

```
1 \LWR@ProvidesPackagePass{tikz}[2015/08/07]

```

**catcodes** `lwarp` changes the catcode of `$` for its own use. The `Tikz` `babel` library temporarily changes catcodes back to normal for `Tikz`'s use. `tikz` v3.0.0 introduced the `babel` library which handles catcode changes. For older versions, `lwarp` must change `$`'s catcode itself.

Also see:

<https://tex.stackexchange.com/questions/16199/test-if-a-package-or-package-option-is-loaded>

```
2 \newbool{LWR@tikzbabel}
3
4 \@ifpackagelater{tikz}{2013/12/20}% Test for Tikz version v3.0.0
5 {\usetikzlibrary{babel}\booltrue{LWR@tikzbabel}}
6 {\boolfalse{LWR@tikzbabel}}

```

Env `pgfpicture` The `\pgfpicture` environment is enclosed inside a `\lateximage`. Enclose the low-level `\pgfpicture` in a `lateximage`. This is also used by the higher-level `\tikz` and `tikzpicture`.

```
7 \preto\pgfpicture{%
8 \begin{lateximage}%
9 \ifbool{LWR@tikzbabel}% Test for Tikz version v3.0.0
10 {%
11 {\catcode'\$=3}% dollar sign is math shift
12 }
13 }
14 \appto\endpgfpicture{\end{lateximage}}

```

Tikz is placed inside an SVG image, so use the original meanings of the following:

```

15 \LetLtxMacro\pgfutil@minipage\LWR@print@minipage
16 \let\pgfutil@endminipage\endLWR@print@minipage
17
18 \let\pgfutil@raggedleft\LWR@print@raggedleft
19 \let\pgfutil@raggedright\LWR@print@raggedright
20
21 \def\pgfutil@font@tiny{\LWR@printtiny}
22 \def\pgfutil@font@scriptsize{\LWR@printscriptsize}
23 \def\pgfutil@font@footnotesize{\LWR@printfootnotesize}
24 \def\pgfutil@font@small{\LWR@printsmall}
25 \def\pgfutil@font@normalsize{\LWR@printnormalsize}
26 \def\pgfutil@font@large{\LWR@printlarge}
27 \def\pgfutil@font@Large{\LWR@printLarge}
28 \def\pgfutil@font@huge{\LWR@printhuge}
29 \def\pgfutil@font@Huge{\LWR@printHuge}
30
31 \def\pgfutil@font@itshape{\LWR@origitshape}
32 \def\pgfutil@font@bfseries{\LWR@origbfseries}
33
34 \def\pgfutil@font@normalfont{\LWR@orignormalfont}

```

---

File 359 **lwarp-titles.sty**

§ 458 Package **titles**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg titles titles is loaded and used by lwarp during HTML output. All user options and macros are ignored and disabled.

Discard all options for lwarp-titles:

**for HTML output:** 1 \LWR@ProvidesPackageDrop{titles}[2016/03/15]

\pagestyle and \thispagestyle are already disabled in the lwarp code.

```

\newpagestyle {<name>} [<style>] {<commands>}
2 \NewDocumentCommand{\newpagestyle}{m o m}{}

```

```

\renewpagestyle {<name>} [<style>] {<commands>}
3 \NewDocumentCommand{\renewpagestyle}{m o m}{}

```

```

\sethead [<el>] [<ec>] [<er>] {} {<oc>} {<or>}
4 \NewDocumentCommand{\sethead}{o o o m m}{}

```

```

\setfoot [<el>] [<ec>] [<er>] {} {<oc>} {<or>}

```

---

|                  |                                                 |
|------------------|-------------------------------------------------|
|                  | 5 \NewDocumentCommand{\setfoot}{o o o m m m}{}  |
| \settlemarks     | * {<names>}                                     |
|                  | 6 \NewDocumentCommand{\settlemarks}{s m}{}      |
| \headrule        |                                                 |
|                  | 7 \newcommand*{\headrule}{}                     |
| \footrule        |                                                 |
|                  | 8 \newcommand*{\footrule}{}                     |
| \setheadrule     | {<length>}                                      |
|                  | 9 \newcommand*{\setheadrule}[1]{}               |
| \setfootrule     | {<length>}                                      |
|                  | 10 \newcommand*{\setfootrule}[1]{}              |
| \makeheadrule    |                                                 |
|                  | 11 \newcommand*{\makeheadrule}{}                |
| \makefootrule    |                                                 |
|                  | 12 \newcommand*{\makefootrule}{}                |
| \setmarkboth     | {<code>}                                        |
|                  | 13 \newcommand{\setmarkboth}[1]{}               |
| \widenhead       |                                                 |
|                  | 14 \NewDocumentCommand{\widenhead}{s o o m m}{} |
| \bottlemarks     |                                                 |
|                  | 15 \newcommand*{\bottlemarks}{}                 |
| \toptitlemarks   |                                                 |
|                  | 16 \newcommand*{\toptitlemarks}{}               |
| \firsttitlemarks |                                                 |
|                  | 17 \newcommand*{\firsttitlemarks}{}             |
| \nexttitlemarks  |                                                 |

18 \newcommand\*{\nexttoptitlemarks}{}

\outertitlemarks

19 \newcommand\*{\outertitlemarks}{}

\innertitlemarks

20 \newcommand\*{\innertitlemarks}{}

\newtitlemark \* {\langle name \rangle}

21 \NewDocumentCommand{\newtitlemark}{s m}{}

\pretitlemark \* {\langle section \rangle} {\langle text \rangle}

22 \NewDocumentCommand{\pretitlemark}{s m m}{}

\ifsamemark {\langle group \rangle} {\langle command \rangle} {\langle true \rangle} {\langle false \rangle}

23 \newcommand{\ifsamemark}[4]{}

\setfloathead \* [\langle. \rangle] [\langle. \rangle] [\langle. \rangle] {\langle. \rangle} {\langle. \rangle} {\langle. \rangle} {\langle extra \rangle} [\langle which \rangle]

24 \NewDocumentCommand{\setfloathead}{s o o o m m m m}{}

\setfloatfoot \* [\langle. \rangle] [\langle. \rangle] [\langle. \rangle] {\langle. \rangle} {\langle. \rangle} {\langle. \rangle} {\langle extra \rangle} [\langle which \rangle]

25 \NewDocumentCommand{\setfloatfoot}{s o o o m m m m}{}

\nextfloathead \* [\langle. \rangle] [\langle. \rangle] [\langle. \rangle] {\langle. \rangle} {\langle. \rangle} {\langle. \rangle} {\langle extra \rangle} [\langle which \rangle]

26 \NewDocumentCommand{\nextfloathead}{s o o o m m m m}{}

\nextfloatfoot \* [\langle. \rangle] [\langle. \rangle] [\langle. \rangle] {\langle. \rangle} {\langle. \rangle} {\langle. \rangle} {\langle extra \rangle} [\langle which \rangle]

27 \NewDocumentCommand{\nextfloatfoot}{s o o o m m m m}{}

\newmarkset {\langle markset \rangle}

28 \newcommand{\newmarkset}[1]{}

\newextramark \* {\langle markset \rangle} {\langle macro-name \rangle}

29 \NewDocumentCommand{\newextramarkset}{s m m}{}

\botextramarks {\langle markset \rangle}

30 \newcommand{\botextramarks}[1]{}

\topextramarks {\langle markset \rangle}



```

31 \newcommand{\topextramarks}[1]{}

\firstextramarks {\langle markset \rangle}
32 \newcommand{\firstextramarks}[1]{}

\nextextramarks {\langle markset \rangle}
33 \newcommand{\nexttopextramarks}[1]{}

\outerextramarks {\langle markset \rangle}
34 \newcommand{\outerextramarks}[1]{}

\innerextramarks {\langle markset \rangle}
35 \newcommand{\innerextramarks}[1]{}

```

---

File 360 **lwarp-titleref.sty**

§ 459 Package **titleref**

Pkg titleref titleref is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{titleref}[2001/04/05]
2
3 \LetLtxMacro\titleref\nameref
4
5 \providecounter{LWR@currenttitle}
6
7 \newcommand*{\currenttitle}{%
8 \addtocounter{LWR@currenttitle}{1}%
9 \label{currenttitle\arabic{LWR@currenttitle}}%
10 \nameref{currenttitle\arabic{LWR@currenttitle}}%
11 }
12
13 \newcommand*{\theTitleReference}[2]{}

```

---

File 361 **lwarp-titlesec.sty**

§ 460 Package **titlesec**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg titlesec titlesec is emulated. All user options and macros are ignored and disabled.

Discard all options for lwarp-titlesec:

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{titlesec}[2016/03/21]

```

```

\titlelabel {\langle label-format \rangle}
 2 \newcommand*\titlelabel[1]{}

\titleformat* {\langle command \rangle} {\langle format \rangle}

\titleformat {\langle command \rangle} [\langle shape \rangle] {\langle format \rangle} {\langle label \rangle} {\langle sep \rangle} {\langle before \rangle} [\langle after \rangle]
 3 \newcommand\titleformat{%
 4 \ifstar{\ttl@format@s}%
 5 {\ttl@format@i}}
 6 \newcommand{\ttl@format@s}[1]{}
 7 \NewDocumentCommand{\ttl@format@i}{m o m m m o}{}

\chaptertitlename
 8 \@ifundefined{@chapapp}{\let\@chapapp\chaptername}{}
 9 \newcommand\chaptertitlename{\@chapapp}

\titlespacing * {\langle command \rangle} {\langle left \rangle} {\langle before \rangle} {\langle after \rangle} [\langle right \rangle]
 10 \NewDocumentCommand{\titlespacing}{s m m m m o}{}

\filright
 11 \newcommand*\filright{}

\filcenter
 12 \newcommand*\filcenter{}

\filleft
 13 \newcommand*\filleft{}

\fillast
 14 \newcommand*\fillast{}

\filinner
 15 \newcommand*\filinner{}

\filouter
 16 \newcommand*\filouter{}

\wordsep
 17 \newcommand\wordsep{\fontdimen\tw@font \@plus
 18 \fontdimen\thr@@font \@minus \fontdimen4\font}

```

|                                |                                                                                                                                                                                                          |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>\titleline</code>        | <code>* [<i>align</i>] {<i>material</i>}</code><br>19 <code>\NewDocumentCommand{\titleline}{s o m}{}</code>                                                                                              |
| <code>\titlerule</code>        | <code>[<i>height</i>]</code><br>20 <code>\providecommand*\titlerule{\@ifstar{\ttl@row}{\ttl@rule}}</code><br>21 <code>\newcommand*\ttl@rule[1]{}{}</code><br>22 <code>\newcommand*\ttl@row[2]{}{}</code> |
| <code>\iftitlemeasuring</code> | <code>{<i>true</i>} {<i>false</i>}</code><br>23 <code>\newcommand{\iftitlemeasuring}[2]{#2}</code>                                                                                                       |
| <code>\assignpagestyle</code>  | <code>{<i>command</i>} {<i>pagestyle</i>}</code><br>24 <code>\newcommand{\assignpagestyle}[2]{#2}</code>                                                                                                 |
| <code>\titleclass</code>       | <code>{<i>name</i>} [<i>startlevel</i>] {<i>class</i>} [<i>cmd</i>]</code><br>25 <code>\NewDocumentCommand{\titleclass}{m o m o}</code>                                                                  |

---

File 362 **lwarp-titletoc.sty**

§ 461 Package **titletoc**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg titletoc **titletoc** is emulated. All user options and macros are ignored and disabled.

Discard all options for lwarp-titletoc:

**for HTML output:** 1 `\LWR@ProvidesPackageDrop{titletoc}[2011/12/15]`

|                              |                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>\dottedcontents</code> | <code>{<i>section</i>} [<i>left</i>] {<i>above</i>} {<i>label</i>} {<i>leader</i>}</code><br>2 <code>\NewDocumentCommand{\dottedcontents}{m o m m m}{}</code>                                                                                                                                                                                                                                                |
| <code>\titlecontents</code>  | <code>* {<i>section</i>} [<i>left</i>] {<i>above</i>} {<i>numbered</i>} {<i>numberless</i>} {<i>filler</i>} [<i>below or begin</i>] [<i>separator</i>] [<i>end</i>]</code><br>3 <code>\newcommand{\titlecontents}{\@ifstar{\ttl@tcstar}{\ttl@tcnostar}}</code><br>4 <code>\NewDocumentCommand{\ttl@tcstar}{m o m m m m o o o}{}</code><br>5 <code>\NewDocumentCommand{\ttl@tcnostar}{m o m m m m o}{}</code> |
| <code>\contentsmargin</code> | <code>[<i>correction</i>] {<i>right</i>}</code><br>6 <code>\newcommand{\contentsmargin}[2]{}{}</code>                                                                                                                                                                                                                                                                                                        |

`\thecontentslabel`

```

7 \newcommand*{\thecontentslabel}{thecontentslabel}

\thecontentspage
8 \newcommand*{\thecontentspage}{thecontentspage}

\contentslabel [format] {space}
9 \newcommand{\contentslabel}[2][\thecontentslabel]

\contentspage [format]
10 \newcommand{\contentspage}[1][\thecontentspage]

\contentspush {text}
11 \newcommand{\contentspush}[1]{}

\contentsuse {name} {text}
12 \newcommand{\contentsuse}[2]{}

\startcontents [name]
13 \newcommand*{\startcontents}[1][{}]

\stopcontents [name]
14 \newcommand*{\stopcontents}[1][{}]

\resumecontents [name]
15 \newcommand*{\resumecontents}[1][{}]

\printcontents [name] {prefix} {start} {code}
16 \newcommand{\printcontents}[4][{}]

\startlist [name] {list}
17 \newcommand{\startlist}[2][{}]

\stoplist [name] {list}
18 \newcommand{\stoplist}[2][{}]

\resumelist [name] {list}
19 \newcommand{\resumelist}[2][{}]

\printlist [name] {list} {prefix} {code}

```

---

```
20 \newcommand{\printlist}[4][[]]{}
```

---

File 363 **lwarp-titling.sty**

§ 462 Package **titling**

*(Emulates or patches code by PETER WILSON.)*

Pkg titling

**package support** lwarp supports the native L<sup>A</sup>T<sub>E</sub>X titling commands, and also supports the packages  
**△ load order** authblk and titling. If both are used, authblk should be loaded before titling.

**\published and \subtitle** If using the titling package, additional titlepage fields for \published and \subtitle may be added by using \AddSubtitlePublished in the preamble. See section 67.8.

The various titling footnote restyling commands have no effect.

Pass all options to lwarp-titling:

**for HTML output:** 1 \LWR@ProvidesPackagePass{titling}[2009/09/04]

**\@bsmtitleempty** Patch \@bsmtitleempty:

```
2 \let\LWR@orig@bsmtitleempty\@bsmtitleempty
3 \renewcommand*{\@bsmtitleempty}{%
4 \LWR@orig@bsmtitleempty%
5 }
```

**\keepthetitle** Patch \keepthetitle:

```
6 \let\LWR@origkeepthetitle\keepthetitle
7 \renewcommand*{\keepthetitle}{%
8 \LWR@orig@keepthetitle%
9 }
```

**\killtitle** Patch \killtitle:

```
10 \let\LWR@origkilltitle\killtitle
11 \renewcommand*{\killtitle}{%
12 \LWR@orig@killtitle%
13 }
```

Env titlingpage

```
14 \renewenvironment*{titlingpage}
15 {%
```

Start an HTML titlepage div:

```
16 \LWR@printpendingfootnotes
17 \begin{titlepage}
```

Prepare for a custom version of `\maketitle` inside the `titlingpage`:

```
18 \LWR@maketitlesetup
19 \let\maketitle\LWR@titlingmaketitle
20 }
21 {
```

At the end of the environment, end the `HTML` titlepage div:

```
22 \end{titlepage}
23 }
```

Patch the `pre/post` title/author/date to add `HTML` tags, then initialize:

```
24
25 \pretitle{}
26 \posttitle{}
27
28 \preauthor{}
29 \postauthor{}
30
31 \predate{}
32 \postdate{}
```

`\LWR@maketitlesetup` Patches `\thanks` macros.

```
33 \renewcommand*{\LWR@maketitlesetup}{%
```

Redefine the footnote mark:

```
34 \def\@makefnmark{\@thefnmark}

\thefootnote ⇒ \nameuse{arabic}{footnote}, or
\thefootnote ⇒ \nameuse{fnsymbol}{footnote}
```

Redefine the footnote text:

```
35 \long\def\@makefntext##1{%
```

Make the footnote mark and some extra horizontal space for the tags:

```
36 \makethanksmark~%

\makethanksmark ⇒ \thanksfootmark ⇒ \tamark ⇒
\@thefnmark ⇒ \itshape a (or similar)
```

Print the text:

```
37 ##1%
38 }% \@makefntext
39 }
```

`\thanksfootmark`

```
40 \renewcommand{\thanksfootmark}{%
41 % \hb@xt@\thanksmarkwidth{\hfil\normalfont%
42 \thanksscript{%
43 \thanksfootpre \tamark \thanksfootpost%
44 }%
45 % }%
46 }
```

`\maketitle` HTML mode. Creates an HTML titlepage div and typesets the title, etc.

Code from the titling package is adapted, simplified, and modified for HTML output.

```
47 \renewcommand*\maketitle{%
```

An HTML titlepage `<div>` is used for all classes.

```
48 \begin{titlepage}
```

Select which kind of footnote marks to use:

```
49 \@bsmarkseries
```

Set up special patches:

```
50 \LWR@maketitlesetup
```

Typeset the title, etc:

```
51 \@maketitle
```

Immediately generate any `\thanks` footnotes:

```
52 \@thanks
```

Close the HTML titlepage div:

```
53 \end{titlepage}
```

Reset the footnote counter:

```
54 \@bscontmark
```

```
55 }
```

`\@maketitle` Typesets the title, etc. Patched for HTML.

```
56 \DeclareDocumentCommand{\@maketitle}{}{%
57 \maketitlehooka
58 {
59 \LWR@stoppars\LWR@htmltag{\LWR@tagtitle}%
```

```

60 \@bsprettitle \@title \@bsposttitle%
61 \LWR@htmltag{\LWR@tagtitleend}\LWR@startpars%
62 }
63 \maketitlehookb
64 {
65 \begin{BlockClass}{author}
66 \renewcommand{\and}{%
67 \end{BlockClass}%
68 \begin{BlockClass}{oneauthor}%
69 }
70 \begin{BlockClass}{oneauthor}%
71 \@bspreadauthor \@author \@bspsteadauthor%
72 \end{BlockClass}%
73 \end{BlockClass}%
74 }
75 \maketitlehookc
76 {
77 \begin{BlockClass}{titledate}%
78 \@bspredate \@date \@bspsteadate%
79 \end{BlockClass}%
80 }
81 \maketitlehookd
82 }

```

`\LWR@titlingmaketitle` \maketitle for use inside an HTML titlingpage environment.

```
83 \renewcommand*{\LWR@titlingmaketitle}{%
```

Keep pending footnotes out of the title block:

```
84 \@thanks
```

Select which kind of footnote marks to use:

```
85 \@bsmarkseries
```

Set up special patches:

```
86 \LWR@maketitlesetup
```

Typeset the title, etc:

```
87 \@maketitle
```

Immediately generate any \thanks footnotes:

```
88 \@thanks
```

Reset the footnote counter:

```
89 \@bscontmark
90 }
```



`\thanksmarkseries`  $\{\langle series \rangle\}$

Sets the type of footnote marks used by `\thanks`, where type is ‘arabic’, ‘roman’, ‘fn-symbol’, etc.

```
91 \renewcommand{\thanksmarkseries}[1]{%
92 \def\@bsmarkseries{\renewcommand{\thefootnote}{\@nameuse{#1}{footnote}}}%
93 }
```

Set default titlepage thanks footnote marks. See section 67.7.

```
94 \@ifclassloaded{memoir}{
95 \thanksmarkseries{arabic}
96 }{% not memoir
97 \if@titlepage
98 \thanksmarkseries{arabic}
99 \else
100 \thanksmarkseries{fnsymbol}
101 \fi
102}% not memoir
```

---

File 364 **lwarp-tocbasic.sty**

§ 463 Package **tocbasic**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg tocbasic tocbasic is nullified for lwarp.

This package may be loaded standalone, but is also loaded automatically if koma-script classes are in use. `\DeclareDocumentCommand` is used to overwrite the koma-script definitions.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{tocbasic}[2018/12/30]

2 \DeclareDocumentCommand{\usetocbasicnumberline}{o}{}
3 \DeclareDocumentCommand{\DeclareTOCStyleEntry}{o m}{}
4 \DeclareDocumentCommand{\DeclareTOCStyleEntries}{o m m}{}
5 \DeclareDocumentCommand{\DeclareTOCEntryStyle}{m o m}{}
6 \DeclareDocumentCommand{\DefineTOCEntryOption}{m o m}{}
7 \DeclareDocumentCommand{\DefineTOCEntryBooleanOption}{m o m m m}{}
8 \DeclareDocumentCommand{\DefineTOCEntryCommandOption}{m o m m m}{}
9 \DeclareDocumentCommand{\DefineTOCEntryIfOption}{m o m m m}{}
10 \DeclareDocumentCommand{\DefineTOCEntryLengthOption}{m o m m m}{}
11 \DeclareDocumentCommand{\DefineTOCEntryNumberOption}{m o m m m}{}
12 \DeclareDocumentCommand{\CloneTOCEntryStyle}{m m}{}
13 \DeclareDocumentCommand{\TOCEntryStyleInitCode}{m m}{}
14 \DeclareDocumentCommand{\TOCEntryStyleStartInitCode}{m m}{}

```

File 365 **lwarp-tocbibind.sty**

§ 464 Package **tocbibind**

*(Emulates or patches code by PETER WILSON.)*

Pkg tocbibind tocbibind is patched for use by lwarp.

[placement and toc options](#) An index may be placed inline with other HTML text, or on its own HTML page:

Pkg makeidx **Inline, with a manual toc entry:**

A commonly-used method to introduce an index in a L<sup>A</sup>T<sub>E</sub>X document:

```
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname}% or chapter
\printindex
```

Pkg makeidx **On its own HTML page, with a manual toc entry:**

```
\begin{warpprint}
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname}% or chapter
\end{warpprint}
\ForceHTMLPage
\ForceHTMLTOC
\printindex
```

Pkg tocbibind **Inline, with an automatic toc entry:**

The tocbibind package may be used to automatically place an entry in the toc.

```
\usepackage[nottoc]{tocbibind}
...
\cleardoublepage
\phantomsection % to fix print-version index link
\printindex
```

Pkg tocbibind **On its own HTML page, with an automatic toc entry:**

```
\usepackage[nottoc]{tocbibind}
...
\cleardoublepage
\phantomsection % to fix print-version index link
\ForceHTMLPage
\printindex
```

Opt [tocbibind] numindex Use the tocbibind numindex option to generate a numbered index. Without this option, the index heading has no number.

[numbered index section](#)

Other packages, such as imakeidx, may also have options for including the index in the Table of Contents.

```

for HTML output: 1 \let\simplechapterdelim\relax
2
3 \LWR@ProvidesPackagePass{tocbibind}[2010/10/13]

4 \renewenvironment{theindex}%
5 {%
6 \if@bibchapter
7 \if@donumindex
8 \chapter{\indexname}
9 \else
10 \if@dotocind
11 \chapter*{\indexname}
12 \addcontentsline{toc}{chapter}{\LWR@isolate{\indexname}}
13 \else
14 \chapter*{\indexname}
15 \fi
16 \fi
17 \else
18 \if@donumindex
19 \section{\indexname}
20 \else
21 \if@dotocind
22 \section*{\indexname}
23 \addcontentsline{toc}{\@tocextra}{\LWR@isolate{\indexname}}
24 \else
25 \section*{\indexname}
26 \fi
27 \fi
28 \fi
29 \let\item\LWR@indexitem%
30 \let\subitem\LWR@indexsubitem%
31 \let\subsubitem\LWR@indexsubsubitem%
32 }{}

```

The following code is shared by anonchap.

```

33 \DeclareDocumentCommand{\simplechapter}{0}{\@empty}}{%
34 \def\@chappntformat##1{%
35 #1~\csname the##1\endcsname\simplechapterdelim\quad%
36 }%
37 }
38
39 \DeclareDocumentCommand{\restorechapter}{}{%
40 \let\@chappntformat\@secntformat%
41 }

```

---

File 366 **lwarp-tocdata.sty**

§ 465 Package **tocdata**

*(Emulates or patches code by BRIAN DUNN.)*

Pkg tocdata tocdata is patched for use by lwarp.

```

for HTML output: 1 \LWR@ProvidesPackagePass{tocdata}[2019/03/21]

2 \renewcommand*{\LWR@maybetocdata}{%
3 \ifdefempty{\TD@thistocdata}{}{%
4 \quad --- \InlineClass{authorartist}{\TD@thistocdata}%
5 \def\TD@thistocdata{}
6 }
7 }
8
9 \renewrobustcmd{\tocdatapartprint}[4]
10 {%
11 \LWR@htmltagc{br /}%
12 \InlineClass{authorartist}{%
13 \quad --- %
14 \TD@optionalname{#1}\TD@optionalname{#2}#3#4%
15 }%
16 }
17
18 \ifundefined{chapter}{}{
19 \let\tocdatachapterprint\tocdatapartprint
20 }
21 \let\tocdatasectionprint\tocdatapartprint
22 \let\tocdatasubsectionprint\tocdatapartprint
23
24 \newcommand*{\LWR@TD@settetalign}[1]{%
25 \def\LWR@TD@textalign{justify}%
26 \ifcsstring{TD#1align}{\centering}%
27 {\def\LWR@TD@textalign{center}}%
28 {}%
29 \ifcsstring{TD#1align}{\raggedleft}%
30 {\def\LWR@TD@textalign{right}}%
31 {}%
32 \ifcsstring{TD#1align}{\raggedright}%
33 {\def\LWR@TD@textalign{left}}%
34 {}%
35 }
36
37 \renewcommand{\TD@artistauthorprint}[5]{%
38 \LWR@TD@settetalign{#1}%
39 \begin{BlockClass}[text-align:\LWR@TD@textalign]{floatnotes}%
40 \InlineClass{authorartist}{\TD@optionalname{#2}\TD@optionalname{#3}#4#5}%
41 \end{BlockClass}%
42 }
43
44 \newcommand*{\LWR@TD@setnamealign}[1]{%
45 \def\LWR@TD@textalign{justify}%
46 \ifcsstring{TD#1textalign}{\centering}%
47 {\def\LWR@TD@textalign{center}}%
48 {}%
49 \ifcsstring{TD#1textalign}{\raggedleft}%
50 {\def\LWR@TD@textalign{right}}%
51 {}%
52 \ifcsstring{TD#1textalign}{\raggedright}%

```

```

53 {\def\LWR@TD@textalign{left}}%
54 {}%
55 }
56
57 \renewcommand{\TD@artistauthortextprint}[2]{%
58 \LWR@TD@setnamealign{#1}%
59 \begin{BlockClass}[text-align:\LWR@TD@textalign]{floatnotes}%
60 #2%
61 \end{BlockClass}%
62 }

```

---

File 367 **lwarp-tocenter.sty**

§ 466 Package **tocenter**

Pkg tocenter tocenter is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{tocenter}[2004/12/09]

```

2 \NewDocumentCommand{\ToCenter}{s o m m}{ }
3 \NewDocumentCommand{\FromMargins}{s o m m m m}{ }

```

---

File 368 **lwarp-tocloft.sty**

§ 467 Package **tocloft**

*(Emulates or patches code by PETER WILSON.)*

Pkg tocloft tocloft is emulated. Most user options and macros are ignored and disabled. \newlistof and \cftchapterprecis are supported.

Pkg tocloft If using tocloft with tocbibind, anonchop, fncychap, or other packages which change chapter title formatting, load tocloft with its titles option, which tells tocloft to use standard L<sup>A</sup>T<sub>E</sub>X commands to create the titles, allowing other packages to work with it.

Discard all options for lwarp-tocloft:

**for HTML output:** 1 \LWR@ProvidesPackageDrop{tocloft}[2017/08/31]

```

\tocloftpagestyle {<style>}
2 \newcommand{\tocloftpagestyle}[1]{ }

```

```

\cftmarktoc
3 \newcommand*{\cftmarktoc}{ }

```

```

\cfttoctitlefont

```

⚠ **tocloft & other packages**

4 \newcommand\*{\cfttoctitlefont}{}

\cftaftertoctitle

5 \newcommand\*{\cftaftertoctitle}{}

6 \newlength{\cftbeforetoctitleskip}

7 \newlength{\cftaftertoctitleskip}

\cftmarklof

8 \newcommand\*{\cftmarklof}{}

\cftloftitlefont

9 \newcommand\*{\cftloftitlefont}{}

\cftafterloftitle

10 \newcommand\*{\cftafterloftitle}{}

11 \newlength{\cftbeforeloftitleskip}

12 \newlength{\cftafterloftitleskip}

\cftmarklot

13 \newcommand\*{\cftmarklot}{}

\cftlottitlefont

14 \newcommand\*{\cftlottitlefont}{}

\cftafterlottitle

15 \newcommand\*{\cftafterlottitle}{}

16 \newlength{\cftbeforelottitleskip}

17 \newlength{\cftafterlottitleskip}

\cftdot

18 \providecommand\*{\cftdot}{.}

\cftdotsep

19 \providecommand\*{\cftdotsep}{1}

\cftnodots

20 \providecommand\*{\cftnodots}{5000}

`\cftdotfill`     $\{\langle sep \rangle\}$   
 21 `\providecommand{\cftdotfill}[1]{}`

`\cftsetpnumwidth`     $\{\langle length \rangle\}$   
 22 `\DeclareDocumentCommand{\cftsetpnumwidth}{m}{}`

`\cftsetrmarg`     $\{\langle length \rangle\}$   
 23 `\DeclareDocumentCommand{\cftsetrmarg}{m}{}`

`\cftpnumalign`     $\{\langle alignment \rangle\}$   
 24 `\DeclareDocumentCommand{\cftpnumalign}{m}{}`

25 `\LWR@providelength{\cftparskip}`

The part-related items are also provided by memoir:

26 `\LWR@providelength{\cftbeforepartskip}`  
 27 `\LWR@providelength{\cftpartindent}`  
 28 `\LWR@providelength{\cftpartnumwidth}`  
 29 `\providecommand*\cftpartfont{}{}`  
 30 `\providecommand*\cftpartpresnum{}{}`  
 31 `\providecommand*\cftpartaftersnum{}{}`  
 32 `\providecommand*\cftpartaftersnumb{}{}`  
 33 `\providecommand*\cftpartleader{}{}`  
 34 `\providecommand*\cftpartdotsep}{1}`  
 35 `\providecommand*\cftpartpagefont{}{}`  
 36 `\providecommand*\cftpartafterpnum{}{}`

memoir uses the full name “chapter” instead of “chap”:

37 `\LWR@providelength{\cftbeforechapskip}`  
 38 `\LWR@providelength{\cftchapindent}`  
 39 `\LWR@providelength{\cftchapnumwidth}`  
 40 `\newcommand*\cftchapfont{}{}`  
 41 `\newcommand*\cftchappresnum{}{}`  
 42 `\newcommand*\cftchapaftersnum{}{}`  
 43 `\newcommand*\cftchapaftersnumb{}{}`  
 44 `\newcommand*\cftchapleader{}{}`  
 45 `\newcommand*\cftchapidotsep}{1}`  
 46 `\newcommand*\cftchappagefont{}{}`  
 47 `\newcommand*\cftchapafterpnum{}{}`

The following do not appear in memoir:

48 `\LWR@providelength{\cftbeforesecskip}`  
 49 `\LWR@providelength{\cftsecindent}`  
 50 `\LWR@providelength{\cftsecnumwidth}`  
 51 `\newcommand*\cftsecfont{}{}`  
 52 `\newcommand*\cftsecpresnum{}{}`

```
53 \newcommand*{\cftsecaftersnum}{}
54 \newcommand*{\cftsecaftersnumb}{}
55 \newcommand*{\cftsecleader}{}
56 \newcommand*{\cftsecdotsep}{1}
57 \newcommand*{\cftsecpagefont}{}
58 \newcommand*{\cftsecafterpnum}{}

59 \LWR@providelength{\cftbeforesubsecskip}
60 \LWR@providelength{\cftsubsecindent}
61 \LWR@providelength{\cftsubsecnumwidth}
62 \newcommand*{\cftsubsecfont}{}
63 \newcommand*{\cftsubsecpresnum}{}
64 \newcommand*{\cftsubsecaftersnum}{}
65 \newcommand*{\cftsubsecaftersnumb}{}
66 \newcommand*{\cftsubsecleader}{}
67 \newcommand*{\cftsubsecdotsep}{1}
68 \newcommand*{\cftsubsecpagefont}{}
69 \newcommand*{\cftsubsecafterpnum}{}

70 \LWR@providelength{\cftbeforesubsubsecskip}
71 \LWR@providelength{\cftsubsubsecindent}
72 \LWR@providelength{\cftsubsubsecnumwidth}
73 \newcommand*{\cftsubsubsecfont}{}
74 \newcommand*{\cftsubsubsecpresnum}{}
75 \newcommand*{\cftsubsubsecaftersnum}{}
76 \newcommand*{\cftsubsubsecaftersnumb}{}
77 \newcommand*{\cftsubsubsecleader}{}
78 \newcommand*{\cftsubsubsecdotsep}{1}
79 \newcommand*{\cftsubsubsecpagefont}{}
80 \newcommand*{\cftsubsubsecafterpnum}{}

81 \LWR@providelength{\cftbeforeparaskip}
82 \LWR@providelength{\cftparaindent}
83 \LWR@providelength{\cftparanumwidth}
84 \newcommand*{\cftparafont}{}
85 \newcommand*{\cftparapresnum}{}
86 \newcommand*{\cftparaaftersnum}{}
87 \newcommand*{\cftparaaftersnumb}{}
88 \newcommand*{\cftparaleader}{}
89 \newcommand*{\cftparadotsep}{1}
90 \newcommand*{\cftparapagefont}{}
91 \newcommand*{\cftparaafterpnum}{}

92 \LWR@providelength{\cftbeforesubparaskip}
93 \LWR@providelength{\cftsubparaindent}
94 \LWR@providelength{\cftsubparanumwidth}
95 \newcommand*{\cftsubparafont}{}
96 \newcommand*{\cftsubparapresnum}{}
97 \newcommand*{\cftsubparaaftersnum}{}
98 \newcommand*{\cftsubparaaftersnumb}{}
99 \newcommand*{\cftsubparaleader}{}
100 \newcommand*{\cftsubparadotsep}{1}
101 \newcommand*{\cftsubparapagefont}{}
102 \newcommand*{\cftsubparaafterpnum}{}

```



```
103 \LWR@providelength{\cftbeforefigskip}
104 \LWR@providelength{\cftfigindent}
105 \LWR@providelength{\cftfignumwidth}
106 \newcommand*\cftfigfont{}
107 \newcommand*\cftfigpresnum{}
108 \newcommand*\cftfigaftersnum{}
109 \newcommand*\cftfigaftersnumb{}
110 \newcommand*\cftfigleader{}
111 \newcommand*\cftfigdotsep{1}
112 \newcommand*\cftfigpagefont{}
113 \newcommand*\cftfigafterpnum{}

114 \LWR@providelength{\cftbeforesubfigskip}
115 \LWR@providelength{\cftsubfigindent}
116 \LWR@providelength{\cftsubfignumwidth}
117 \newcommand*\cftsubfigfont{}
118 \newcommand*\cftsubfigpresnum{}
119 \newcommand*\cftsubfigaftersnum{}
120 \newcommand*\cftsubfigaftersnumb{}
121 \newcommand*\cftsubfigleader{}
122 \newcommand*\cftsubfigdotsep{1}
123 \newcommand*\cftsubfigpagefont{}
124 \newcommand*\cftsubfigafterpnum{}

125 \LWR@providelength{\cftbeforetabskip}
126 \LWR@providelength{\cfttabindent}
127 \LWR@providelength{\cfttabnumwidth}
128 \newcommand*\cfttabfont{}
129 \newcommand*\cfttabpresnum{}
130 \newcommand*\cfttabaftersnum{}
131 \newcommand*\cfttabaftersnumb{}
132 \newcommand*\cfttableader{}
133 \newcommand*\cfttabdotsep{1}
134 \newcommand*\cfttabpagefont{}
135 \newcommand*\cfttabafterpnum{}

136 \LWR@providelength{\cftbeforesubtabskip}
137 \LWR@providelength{\cftsubtabindent}
138 \LWR@providelength{\cftsubtabnumwidth}
139 \newcommand*\cftsubtabfont{}
140 \newcommand*\cftsubtabpresnum{}
141 \newcommand*\cftsubtabaftersnum{}
142 \newcommand*\cftsubtabaftersnumb{}
143 \newcommand*\cftsubtableader{}
144 \newcommand*\cftsubtabdotsep{1}
145 \newcommand*\cftsubtabpagefont{}
146 \newcommand*\cftsubtabafterpnum{}

147 \DeclareDocumentCommand{\cftsetindents}{m m m}{}

148 \newcommand{\pagenumbersoff}[1]{}
149 \newcommand{\pagenumberson}[1]{}

```

`\newlistentry` [*<within>*] {<counter>} {<ext>} {<level-1>}

```

150 \DeclareDocumentCommand{\newlistentry}{o m m}
151 {%
152 \LWR@traceinfo{newlistentry #2 #3 #4}%
153 \IfValueTF{#1}%
154 {%
155 \ifundefined{c@#2}{%
156 \newcounter{#2}[#1]%
157 \expandafter\edef\csname the#2\endcsname{%
158 \expandafter\noexpand\csname the#1\endcsname.\noexpand\arabic{#2}%
159 }%
160 }{%
161 }%
162 {%
163 \ifundefined{c@#2}{%
164 \newcounter{#2}%
165 }{%
166 }%
167 \@namedef{l@#2}##1##2{%
168 \hypertocfloat{1}{#2}{#3}{##1}{##2}%
169 \def\cftwhatismyname{#2}% from memoir
170 }%
171 \expandafter\newlength\csname cftbefore#2skip\endcsname%
172 \expandafter\newlength\csname cft#2indent\endcsname%
173 \expandafter\newlength\csname cft#2numwidth\endcsname%
174 \@namedef{cft#2font}{}%
175 \@namedef{cft#2presnum}{}%
176 \@namedef{cft#2aftersnum}{}%
177 \@namedef{cft#2aftersnumb}{}%
178 \@namedef{cft#2leader}{}%
179 \@namedef{cft#2dotsep}{1}%
180 \@namedef{cft#2pagefont}{}%
181 \@namedef{cft#2afterpnum}{}%
182 \@namedef{toclevel@#2}{#4}%
183 \@namedef{cft#2fillnum}##1{}%
184 \LWR@traceinfo{newlistentry done}%
185 }

```

`\newlistof` [*<within>*] {<type>} {<ext>} {<listofname>}

Emulated through the `\newfloat` mechanism.

```

186 \DeclareDocumentCommand{\newlistof}{o m m}
187 {%
188 \IfValueTF{#1}
189 {\newlistentry[#1]{#2}{#3}{0}}
190 {\newlistentry{#2}{#3}{0}}
191 \@namedef{ext@#2}{#3}
192 \@ifundefined{c@#3depth}{\newcounter{#3depth}}{}
193 \setcounter{#3depth}{1}
194 \@namedef{cftmark#3}{}
195 \@namedef{listof#2}{\listof{#2}{#4}}
196 \@namedef{@cftmake#3title}{}
197 \expandafter\newlength\csname cftbefore#3titleskip\endcsname
198 \expandafter\newlength\csname cftafter#3titleskip\endcsname

```

```

199 \@namedef{cft#3titlefont}{}
200 \@namedef{cftafter#3title}{}
201 \@namedef{cft#3prehook}{}
202 \@namedef{cft#3posthook}{}
203 }

```

`\cftchapterprecis`     $\langle text \rangle$

```

204 \newcommand{\cftchapterprecis}[1]{%
205 \cftchapterprecishere{#1}
206 \cftchapterprecistoc{#1}}
207 \newcommand{\cftchapterprecishere}[1]{%
208 \begin{quote}\textit{#1}\end{quote}}
209 \newcommand{\cftchapterprecistoc}[1]{
210 \addtocontents{toc}{%
211 {
212 \protect\begin{quote}#1\protect\end{quote}}
213 }
214 }

```

---

File 369    **lwarp-tocstyle.sty**

§ 468    Package    **tocstyle**

Pkg    tocstyle    tocstyle is ignored.

 **Not fully tested!**    [Please send bug reports!](#)

**for HTML output:**    1 \LWR@ProvidesPackageDrop{tocstyle}[2017/02/23]

```

2 \newcommand*\usetocstyle}[2][{}
3 \newcommand*\deactivatetocstyle}[1][{}
4 \newcommand*\reactivatetocstyle}[1][{}
5 \NewDocumentCommand{\settocfeature}{o o m m}{}
6 \NewDocumentCommand{\settocstylefeature}{o m m}{}
7 \NewDocumentCommand{\newtocstyle}{o o m m}{}
8 \newcommand*\aliastoc}[2]{}
9 \newcommand*\showtoc}[2][{}
10 \newcommand{\iftochasdepth}[4]{}

```

---

File 370    **lwarp-todo.sty**

§ 469    Package    **todo**

*(Emulates or patches code by FEDERICO GARCIA.)*

Pkg    todo    todo is patched for use by lwarp.

**for HTML output:**    1 \LWR@ProvidesPackagePass{todo}[2010/03/31]

```

2 \renewcommand\todoitem[2]{%
3 \refstepcounter{todo}%
4 \item[%
5 \HTMLUnicode{2610} \quad
6 \ref{todopage:\thetodo}
7] : {\todoformat\ifx#1\todomain\else\textbf{#1} \fi}#2%
8 \label{todolbl:\thetodo}%
9 }%
10
11 \renewcommand\doneitem[2]{%
12 \stepcounter{todo}%
13 \item[%
14 \HTMLUnicode{2611} \quad
15 \ref{todopage:\thetodo}
16] \@nameuse{@done\the\c@todo}:
17 {\todoformat\ifx#1\todomain\else\textbf{#1} \fi}#2%
18 }
19
20 \xpatchcmd{\@displaytodo}
21 {\todoformat #1}{\todoformat \textbf{#1}}{}
22 {\PackageWarning{lwarp-todo}{Unable to patch @displaytodo.}}
23
24 \xpatchcmd{\@displayfulltodo}
25 {\todoformat #1}{\todoformat \textbf{#1}}{}
26 {\PackageWarning{lwarp-todo}{Unable to patch @displayfulltodo.}}
27
28 \patchcmd{\todoenv}{\itshape see text.}{\textit{see text.}}{}
29 {\PackageWarning{lwarp-todo}{Unable to patch todoenv.}}
30
31 \patchcmd{\astodos}{\todoformat #1}{\todoformat \textbf{#1}}{}
32 {\PackageWarning{lwarp-todo}{Unable to patch astodos.}}
33
34 \AtBeginDocument{
35 \crefname{todo}{todo}{todos}
36 \Crefname{todo}{Todo}{Todos}
37 }

```

---

File 371 **lwarp-todonotes.sty**

§ 470 Package **todonotes**

(Emulates or patches code by HENRIK SKOV MIDTIBY.)

Pkg todonotes todonotes is emulated.

The documentation for todonotes and luatodonotes have an example with a todo inside a caption. If this example does not work it will be necessary to move the todo outside of the caption.

**for HTML output:** 1 \LWR@ProvidesPackagePass{todonotes}[2012/07/25]

```

2 \if@todonotes@disabled
3 \else

```

```

4
5 \newcommand{\ext@todo}{tdo}
6
7 \renewcommand{\l@todo}[2]{\hypertocfloat{1}{todo}{ldo}{#1}{#2}}

8 \let\LWRTODONOTES@orig@todotoc\todotoc
9
10 \renewcommand*\todotoc{%
11 \phantomsection%
12 \LWRTODONOTES@orig@todotoc%
13 }
14
15 \renewcommand{\@todonotes@drawMarginNoteWithLine}{
16 \fcolorbox
17 {\@todonotes@currentbordercolor}
18 {\@todonotes@currentbackgroundcolor}
19 {\arabic{\@todonotes@numberoftodonotes}}
20 \marginpar{\@todonotes@drawMarginNote}
21 }
22
23 \renewcommand{\@todonotes@drawInlineNote}{%
24 \fcolorboxBlock%
25 {\@todonotes@currentbordercolor}%
26 {\@todonotes@currentbackgroundcolor}%
27 {%
28 \if@todonotes@authorgiven%
29 {\@todonotes@author:\,}%
30 \fi%
31 \@todonotes@text%
32 }%
33 }
34
35 \renewcommand{\@todonotes@drawMarginNote}{%
36 \if@todonotes@authorgiven%
37 \@todonotes@author\par%
38 \fi%
39 \arabic{\@todonotes@numberoftodonotes}: %
40 \fcolorbox%
41 {\@todonotes@currentbordercolor}%
42 {\@todonotes@currentbackgroundcolor}%
43 {%
44 \@todonotes@sizecommand%
45 \@todonotes@text %
46 }%
47 }%
48
49 \renewcommand{\@todonotes@drawLineToRightMargin}{ }
50
51 \renewcommand{\@todonotes@drawLineToLeftMargin}{ }
52
53 \renewcommand{\missingfigure}[2][]{%
54 \setkeys{todonotes}{#1}%
55 \addcontentsline{tdo}{todo}{\@todonotes@MissingFigureText: #2}%
56 \fcolorboxBlock%
57 {\@todonotes@currentbordercolor}%

```

```

58 {\@todonotes@currentfigcolor}%
59 {%
60 \setlength{\fboxrule}{4pt}%
61 \fcolorbox{red}{white}{Missing figure} \quad #2%
62 }
63 }
64
65 \LetLtxMacro\LWRTODONOTES@orig@todo\@todo
66
67 \RenewDocumentCommand{\@todo}{o m}{%
68 \begingroup%
69 \renewcommand*\phantomsection{}%
70 \IfValueTF{#1}{%
71 \LWRTODONOTES@orig@todo[#1]{#2}%
72 }{%
73 \LWRTODONOTES@orig@todo{#2}%
74 }
75 \endgroup%
76 }
77
78 \fi% \if@todonotes@disabled

```

---

File 372 **lwarp-topcapt.sty**

§ 471 Package **topcapt**

Pkg topcapt topcapt is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{topcapt}[2004/12/11]


2 \LetLtxMacro\topcaption\caption

---

File 373 **lwarp-tram.sty**

§ 472 Package **tram**

Pkg tram tram is emulated.

 **block only** The HTML emulation uses a <div>, which must not appear inside an HTML <span> or an HTML paragraph. For this reason, the tram environment should only be used to contain paragraphs inside a \parbox or minipage. tram should not be used to mark up inline text.

To disable tram, allowing source compatibility with inline uses:

```

\begin{warpHTML}
\renewenvironment{tram}[]{}{}
\end{warpHTML}

```

**for HTML output:** 1 \LWR@ProvidesPackageDrop{tram}[2013/04/04]

```

2 \newenvironment{tram}[1][]%
3 {\BlockClass[background:lightgray]{tram}}
4 {\endBlockClass}

```

---

File 374 **lwarp-transparent.sty**

§ 473 Package **transparent**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg transparent Emulated. `\texttransparent` works for inline objects. `\transparent` only works for `\includegraphics`.

 **Not X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X!** Note that `transparent` does not work with X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X.

**for HTML output:** Discard all options for `lwarp-transparent`:

```

1 \LWR@ProvidesPackageDrop{transparent}[2016/05/16]

2 \newcommand*{\transparent}[1]{\edef\LWR@opacity{#1}}
3
4 \newcommand*{\texttransparent}[2]{%
5 \begingroup%
6 \transparent{#1}%
7 \InlineClass[opacity: #1]{transparent}{#2}%
8 \endgroup%
9 }

```

---

File 375 **lwarp-trimclip.sty**

§ 474 Package **trimclip**

Pkg trimclip trimclip is nullified.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{trimclip}[2018/04/08]

The third argument, the text, is not touched. This allows `\bgroup / \egroup`, and verbatim content.

```

2 \csdef{trimbox}{\@ifstar@gobble@gobble}
3 \csletcs{trimbox*}{trimbox}
4 \def\endtrimbox{}
5 \csletcs{endtrimbox*}{endtrimbox}
6
7 \csletcs{clipbox}{trimbox}
8 \csletcs{clipbox*}{trimbox}
9 \csletcs{endclipbox}{endtrimbox}
10 \csletcs{endclipbox*}{endtrimbox}
11

```

---

```

12 \csletcs{marginbox}{trimbox}
13 \csletcs{marginbox*}{trimbox}
14 \csletcs{endmarginbox}{endtrimbox}
15 \csletcs{endmarginbox*}{endtrimbox}

```

---

File 376 **lwarp-trivfloat.sty**

§ 475 Package **trivfloat**

*(Emulates or patches code by JOSEPH WRIGHT.)*

Pkg trivfloat trivfloat is forced to use the built-in lwarp emulation for floats.

To create a new float type and change its name:

---

```

\trivfloat{example}
\renewcommand{\exemplename}{Example Name}
\crefname{example}{example}{examples}
\Crefname{example}{Example}{Examples}

```

---

Discard all options for lwarp-trivfloat. This tells trivfloat not to use floatrow or memoir.

```

1 \LWR@ProvidesPackageDrop{trivfloat}[2009/04/23]
2 \LWR@origRequirePackage{trivfloat}

```

\tfl@chapter@fix Nullified at the beginning of the document. Is used by trivfloat to correct float chapter numbers, but is not needed for lwarp.

**for HTML output:** 3 \begin{warpHTML}

```
4 \AtBeginDocument{\DeclareDocumentCommand{\tfl@chapter@fix}{m m}{}}
```

```
5 \end{warpHTML}
```

§ 475.1 **Combining \newfloat, \trivfloat, and algorithmicx**

**for HTML & PRINT:** 6 \begin{warpall}

**For both print and HTML output:**



When using float, trivfloat, or algorithmicx at the same time, be aware of conflicting file usage. algorithmicx uses .loa. trivfloat by default starts with .loa and goes up for additional floats, skipping .lof and .lot.



When using \newfloat, be sure to manually assign higher letters to the \newfloat files to avoid .loa used by algorithmicx, and any files used by trivfloat. Also avoid using .lof and .lot.





When using `\trivfloat`, you may force it to avoid conflicting with `algorithmicx` by starting `trivfloat`'s file extensions with `.lob`:

---

```
\makeatletter
\setcounter{tfl@float@cnt}{1} % start trivfloats with .lob
\makeatletter

7 \end{warpall}
```

---

File 377 **lwarp-truncate.sty**

§ 476 Package **truncate**

Pkg truncate truncate is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{truncate}[2001/08/20]

2 \providecommand{\TruncateMarker}{}
3 \newcommand{\truncate}[3][\TruncateMarker]{#3}
```

---

File 378 **lwarp-turnthepage.sty**

§ 477 Package **turnthepage**

Pkg turnthepage turnthepage is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{turnthepage}[2011/03/24]

2 \newcommand{\turnthepage}{}
```

---

File 379 **lwarp-twoup.sty**

§ 478 Package **twoup**

Pkg twoup twoup is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{twoup}[2007/02/26]

2 \newcommand{\cleartolastpage}{}
```

File 380 **lwarp-typearea.sty**

§ 479 Package **typearea**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg typearea typearea is emulated.

This package may be loaded standalone, but is also loaded automatically if koma-script classes are in use. `\DeclareDocumentCommand` is used to overwrite the koma-script definitions.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{typearea}[2018/03/30]

2 \DeclareDocumentCommand{\typearea}{o m}{}
3 \DeclareDocumentCommand{\recalctypearea}{}{}
4 \@ifundefined{footheight}{\newlength\footheight}{}
5 \DeclareDocumentCommand{\areaset}{o m m}{}
6 \DeclareDocumentCommand{\activateareas}{}{}
7 \DeclareDocumentCommand{\storeareas}{m}{}
8 \DeclareDocumentCommand{\BeforeRestoreareas}{s m}{}
9 \DeclareDocumentCommand{\AfterRestoreareas}{s m}{}
10 \DeclareDocumentCommand{\AfterCalculatingTypearea}{s m}{}
11 \DeclareDocumentCommand{\AfterSettingArea}{s m}{}

```

File 381 **lwarp-typicons.sty**

§ 480 Package **typicons**

*(Emulates or patches code by ARTHUR VIGIL, XAVIER DANAUX.)*

Pkg typicons typicons is patched for use by lwarp.

If `\ticon` is used, the name of the icon is used in the `alt` tag. Otherwise, for each of the individual icon macros, a generic `alt` tag is used.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{typicons}[2015/05/20]

2 \LetLtxMacro\LWR@orig@symbol\symbol
3
4 \let\LWR@orig@typicon@TI\TI
5
6 \newcommand*{\LWR@typicon@symbol}[1]{%
7 \begin{lateximage}*(typicon)[typicon#1]%
8 \begingroup%
9 \LWR@orig@typicon@TI%
10 \LWR@orig@symbol{#1}%
11 \endgroup%

```

```

12 \end{lateximage}%
13 }
14
15 \renewcommand*{\TI}{%
16 \LetLtxMacro\symbol\LWR@typicon@symbol%
17 }
18
19 \renewcommand*{\ticon}[1]
20 {%
21 \begin{lateximage}*[(#1 icon)][typicon#1]%
22 \TI\csname ticon@#1\endcsname%
23 \end{lateximage}%
24 }

```

---

File 382 **lwarp-ulem.sty**

§ 481 Package **ulem**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg ulem Patched for use by lwarp.

**for HTML output:** Use the original package:

```
1 \LWR@ProvidesPackagePass{ulem}[2012/05/18]
```

Basic markup commands, using CSS:

```

2 \NewDocumentCommand{\LWR@HTML@uline}{+m}{%
3 \InlineClass%
4 (text-decoration:underline; text-decoration-skip: auto)%
5 {uline}{\LWR@isolate{#1}}%
6 }
7 \LWR@formatted{uline}
8
9 \NewDocumentCommand{\LWR@HTML@uuline}{+m}{%
10 \InlineClass%
11 (%
12 text-decoration:underline; text-decoration-skip: auto;%
13 text-decoration-style:double%
14)%
15 {uuline}{\LWR@isolate{#1}}%
16 }
17 \LWR@formatted{uuline}
18
19 \NewDocumentCommand{\LWR@HTML@uwave}{+m}{%
20 \InlineClass%
21 (%
22 text-decoration:underline; text-decoration-skip: auto;%
23 text-decoration-style:wavy%
24)%
25 {uwave}{\LWR@isolate{#1}}%
26 }

```

```

27 \LWR@formatted{uwave}
28
29 \NewDocumentCommand{\LWR@HTML@sout}{+m}{%
30 \InlineClass%
31 (text-decoration:line-through)%
32 {sout}{\LWR@isolate{#1}}%
33 }
34 \LWR@formatted{sout}
35
36 \NewDocumentCommand{\LWR@HTML@xout}{+m}{%
37 \InlineClass%
38 (text-decoration:line-through)%
39 {xout}{\LWR@isolate{#1}}%
40 }
41
42 \NewDocumentCommand{\LWR@HTML@dashuline}{+m}{%
43 \InlineClass%
44 (%
45 text-decoration:underline;%
46 text-decoration-skip: auto;%
47 text-decoration-style:dashed%
48)%
49 {dashuline}{\LWR@isolate{#1}}%
50 }
51 \LWR@formatted{xout}
52
53 \NewDocumentCommand{\LWR@HTML@dotuline}{+m}{%
54 \InlineClass%
55 (%
56 text-decoration:underline;%
57 text-decoration-skip: auto;%
58 text-decoration-style: dotted%
59)%
60 {dotuline}{\LWR@isolate{#1}}%
61 }
62 \LWR@formatted{dotuline}

```

Nullified/emulated macros:

```

63 \NewDocumentCommand{\LWR@HTML@markoverwith}{m}{}
64 \LWR@formatted{markoverwith}
65
66 \NewDocumentCommand{\LWR@HTML@ULon}{+m}{\uline{#1}\egroup}
67 \LWR@formatted{ULon}

```

---

File 383 **lwarp-umoline.sty**

§ 482 Package **umoline**

*(Emulates or patches code by HIROSHI NAKASHIMA.)*

Pkg umoline umoline is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{umoline}[2000/07/11]
2 \newcommand*\LWR@HTML@Underline}[1]{%
3 \InlineClass{uline}{#1}%
4 }
5 \LWR@formatted{Underline}
6
7 \newcommand*\LWR@HTML@Midline}[1]{%
8 \InlineClass{sout}{#1}%
9 }
10 \LWR@formatted{Midline}
11
12 \newcommand*\LWR@HTML@Overline}[1]{%
13 \InlineClass{oline}{#1}%
14 }
15 \LWR@formatted{Overline}
16
17 \newcommand*\LWR@HTML@UMoline}[2]{%
18 \InlineClass{uline}{#2}%
19 }
20 \LWR@formatted{UMoline}
21
22 \NewDocumentCommand{\LWR@HTML@UMospace}{s m o}{\hspace*{#2}}
23 \LWR@formatted{UMospace}
24
25 \NewDocumentCommand{\LWR@HTML@UMOnewline}{s}{\newline}
26 \LWR@formatted{UMOnewline}

```

---

File 384 **lwarp-underscore.sty**

§ 483 Package **underscore**

Pkg underscore underscore is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{underscore}[2006/09/13]

---

File 385 **lwarp-units.sty**

§ 484 Package **units**

*(Emulates or patches code by AXEL REICHERT.)*

Pkg units units is patched for use by lwarp.

Values are not styled by css, and take the style of the surrounding HTML text.

Units are styled according to the print version, so they will be forced to upright roman in HTML if the print version does so. It may be necessary to adjust the document's body css to match the print version.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{units}[1998/08/04]

2 \DeclareRobustCommand*\LWR@HTML@unit}[2][]{%
3 \ifblank{#1}%
4 {\LWR@textcurrentfont{#2}}%
5 {%
6 #1%
7 \ifthenelse{\boolean{B@UnitsLoose}}{~}{\,%
8 \LWR@textcurrentfont{#2}}%
9 }%
10 }
11 \LWR@formatted{unit}

12 \DeclareRobustCommand*\LWR@HTML@unitfrac}[3][]{%
13 \ifblank{#1}%
14 {%
15 \nicefrac{#2}{#3}%
16 }%
17 {%
18 #1%
19 \ifthenelse{\boolean{B@UnitsLoose}}{~}{\,%
20 \nicefrac{#2}{#3}}%
21 }%
22 }
23
24 \LWR@formatted{unitfrac}

```

For Mathjax:

```

25 \CustomizeMathJax{\newcommand{\unit}[2][]{#1 #2}}
26 \CustomizeMathJax{\newcommand{\unitfrac}[3][]{#1 #2/#3}}

```

---

File 386 **lwarp-unitsdef.sty**

§ 485 Package **unitsdef**

*(Emulates or patches code by PATRICK HAPPEL.)*

Pkg unitsdef **unitsdef** is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{unitsdef}[2005/01/04]

2 \renewcommand{\unitvaluesep}{\,%
3
4 \renewcommand{\unittimes}{\@@setunitsepfalse\HTMLUnicode{22c5}}% \cdot
5
6 \renewunit{\arccmin}{%
7 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
8 {\ensuremath{{}^{\prime}}}%
9 {\HTMLUnicode{2032}}% prime
10 }
11

```

---

```

12 \renewunit{\arcsec}{%
13 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
14 {\ensuremath{{}^{\prime}\prime}}}%
15 {\HTMLUnicode{2033}}% dbl prime
16 }
17
18 \renewrobustcmd{\SI}[2]{%
19 \begingroup%
20 \let\unit@xspace\relax%
21 \unitSIdef\selectfont%
22 \LWR@textcurrentfont{#1#2}% lwarp
23 \endgroup%
24 }

```

---

File 387 **lwarp-upref.sty**

§ 486 Package **upref**

Pkg upref Ignored.

**for HTML output:** Discard all options for lwarp-upref:

```
1 \LWR@ProvidesPackageDrop{upref}[2007/03/14]
```

---

File 388 **lwarp-url.sty**

§ 487 Package **url**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg url url is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{url}[2013/09/16]

url uses math mode to print its string inside a group, so the original meaning of math is restored first.

```

2 \let\ltxmacro\LWR@url@origUrl@FormatString\url@FormatString
3
4 \renewcommand*{\url@FormatString}{%
5 \InlineClass{verbatim}{%
6 \LWR@restoreorigformatting%
7 \LWR@url@origUrl@FormatString%
8 }%
9 }

```

---

File 389 **lwarp-ospace.sty**

§ 488 Package **ospace**

Pkg ospace **ospace** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{ospace}[2016/11/06]

---

File 390 **lwarp-verse.sty**

§ 489 Package **verse**

*(Emulates or patches code by PETER WILSON.)*

Pkg verse **verse** is supported and patched by lwarp.

**for HTML output:** Pass all options for lwarp-verse:


1 \LWR@ProvidesPackagePass{verse}[2009/09/04]

When using `verse` or `memoir`, always place a `\\` after each line.

`\attrib` The documentation for the `verse` and `memoir` packages suggest defining an `\attrib` command, which may already exist in current documents, but it will only work for print output. `lwarp` provides `\attribution`, which works for both print and HTML output. To combine the two so that `\attrib` is used for print and `\attribution` is used for HTML:

```
\begin{warpHTML}
\let\attrib\attribution
\end{warpHTML}
```

Len `\vleftskip` These lengths are used by `verse` and `memoir` to control the left margin, and they may already be set by the user for print output. New lengths `\HTMLvleftskip` and `\HTMLleftmargini` are provided to control the margins in HTML output. These new lengths may be set by the user before any `verse` environment, and persist until they are manually changed again. One reason to change `\HTMLleftmargini` is if there is a wide `\flagverse` in use, such as the word “Chorus”, in which case the value of `\HTMLleftmargini` should be set to a wide enough length to contain “Chorus”. The default is wide enough for a stanza number.

 **spacing** Horizontal spacing relies on *pdftotext*'s ability to discern the layout (`-layout` option) of the text in the HTML-tagged PDF output. For some settings of `\HTMLleftmargini` or `\HTMLleftskip` the horizontal alignment may not work out exactly, in which case a label may be shifted by one space.



Env verse The verse environment will be placed inside a HTML <pre>.

```
2 \AfterEndPreamble{
3 \LWR@traceinfo{Patching verse.}
```

At the beginning of the verse environment:

```
4 \AtBeginEnvironment{verse}
5 {%
```

Use the original list environment inside a <pre> to attempt to preserve formatting.

```
6 \LWR@restoreoriglists%
```

Pkg verse The `verse` or `memoir` packages can place stanza numbers to the left with their  
Cls memoir `\flagverse` command. Do not allow them to go into the left margin, which would  
\flagverse cause *pdfcrop* to crop the entire page further to the left:

```
Len \vleftskip
7 \ifdef{\vleftskip}{%
8 \setlength{\vleftskip}{\HTMLvleftskip}
9 \setlength{\leftmargini}{\HTMLleftmargini}
10 }{}
11 \LWR@forcenewpage
12 \LWR@atbeginverbatim{3}{verse}%
13 }
```

After the end of the verse environment, which places the <pre> tag at the regular left margin:

```
14 \AtEndEnvironment{verse}{%
15 \leavevmode%
16 \LWR@afterendverbatim{1}%
17 }
```

Patch to place poemtitle inside an HTML <span> of class poemtitle:

```
18 \ifdef{\poemtitle}{
19 \DeclareDocumentCommand{\@vstypeptitle}{m}{%
20 \vspace{\beforepoemtitleskip}%
21 {\InlineClass{poemtitle}{\poemtitlefont #1}\par}%
22 \vspace{\afterpoemtitleskip}%
23 }
24 }{}
25
26 \LWR@traceinfo{Finished patching verse.}
27 }% AfterEndPreamble
```

---

File 391 **lwarp-versednotes.sty**

§ 490 Package **versednotes**

(Emulates or patches code by NORMAN GRAY.)

Pkg versonotes **versonotes** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{versonotes}[2015/12/08]

2 \newcommand{\versonote}[1]{\marginpar{#1}}
3 \newdimen\versotextwidth
4 \newdimen\versoleftmargin
5 \newcommand*\versolayout{}
```

File 392 **lwarp-vertbars.sty**

§ 491 Package **vertbars**

*(Emulates or patches code by PETER WILSON.)*

Pkg vertbars **vertbars** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{vertbars}[2010/11/27]

2 \newlength{\barwidth}
3 \setlength{\barwidth}{0.4pt}
4 \newlength{\barspace}
5 \setlength{\barspace}{1em}
6
7 \newenvironment{vertbar}{
8 \LWR@forcenewpage
9 \LWR@forceminwidth{\barwidth}
10 \begin{BlockClass}%
11 border-left: \LWR@printlength{\LWR@atleastonept} solid black ; %
12 padding-left: \LWR@printlength{\barspace}%
13 }{vertbar}
14 }{
15 \end{BlockClass}
16 }
```

File 393 **lwarp-vmargin.sty**

§ 492 Package **vmargin**

Pkg vmargin **vmargin** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{vmargin}[2004/07/15]

2 \newcommand*\LWRVM@customsize[2]{}
3 \newcommand*\setpapersize[2][\ifstrequal{#2}{custom}{\LWRVM@customsize}{}
4 \newcommand*\setmargins[8]{}
5 \newcommand*\setmarginsrb[8]{}
6 \newcommand*\setmargnohf[4]{}
7 \newcommand*\setmargnohfrb[4]{}

```

---

```

8 \newcommand*{\setmarg}[4]{}
9 \newcommand*{\setmargrb}[4]{}
10 \newlength{\PaperWidth}
11 \setlength{\PaperWidth}{8.5in}
12 \newlength{\PaperHeight}
13 \setlength{\PaperHeight}{11in}
14 \newif\ifLandscape

```

---

File 394 **lwarp-vowel.sty**

§ 493 Package **vowel**

*(Emulates or patches code by FUKUI REI.)*

Pkg vowel vowel is patched for use by lwarp.

This package has been tested with *pdf<sub>l</sub>atex* and the Type 1 TIPA fonts using the following package load sequence:

```

\usepackage[T3,T1]{fontenc}
\usepackage[utf8]{inputenc}
\usepackage[noenc]{tipa}
\usepackage{vowel}

```

**for HTML output:** 1 \LWR@ProvidesPackagePass{vowel}[2002/08/08]

```

2 \renewenvironment{vowel}[1]{}
3 {%
4 \begin{lateximage}[(-vowel-~\packagediagramname)]%
5 \@vowel[#1]%
6 }
7 {%
8 \@@vowel%
9 \end{lateximage}%
10 }

```

---

File 395 **lwarp-vpe.sty**

§ 494 Package **vpe**

Pkg vpe vpe is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{vpe}[2012/04/18]

File 396 **lwarp-vwcol.sty**

§ 495 Package **vwcol**

(Emulates or patches code by WILL ROBERTSON.)

Pkg vwcol vwcol is patched for use with lwarp.

The width option is ignored. All vwcol environments adjust to 1–3 equal-width columns, depending on the width of the browser window.

The remaining options are supported, except for lines and maxrecursion.

**for HTML output:** 1 \LWR@ProvidesPackagePass{vwcol}[2015/02/10]

Factored from \vwcol. Each is given a style tag to append to the final style.

```
\LWR@vwcol@addrule {<style tag>}
2 \newcommand*{\LWR@vwcol@addrule}[1]{%
3 \appto{\LWR@vwcolstyle}{%
4 #1: %
5 \LWR@printlength{\vwcol@rule} solid \LWR@origpound\LWR@vwcol@rulecolor ; %
6 }%
7 }
```

```
\LWR@vwcol@addrule {<style tag>}
8 \newcommand*{\LWR@vwcol@addgap}[1]{%
9 \appto{\LWR@vwcolstyle}{%
10 #1: %
11 \LWR@printlength{\vwcol@sep} ; %
12 }%
13 }
```

Env vwcol {<key/values>}

Redefine the environment to add a HTML style. The style is built depending on the required options.

```
14 \renewenvironment*{vwcol}[1][1]{%
```

New paragraph, and process the options:

```
15 \par\noindent%
16 \vwcolsetup{#1}%
```

Begin with no style:

```
17 \newcommand*{\LWR@vwcolstyle}{}%
```

presep and postsep are created with HTML margins:

```
18 \if@vwcol@presep
```

```

19 \appto{\LWR@vwcolstyle}{margin-left: 1em ; padding-left: .5em ; }
20 \fi
21 \if@vwcol@postsep
22 \appto{\LWR@vwcolstyle}{margin-right: 1em ; padding-right: .5em ; }
23 \fi

```

sep becomes column-gap:

```

24 \ifdimgreater{\vwcol@sep}{1sp}{
25 \LWR@vwcol@addgap{column-gap}
26 \LWR@vwcol@addgap{-moz-column-gap}
27 \LWR@vwcol@addgap{-webkit-column-gap}
28 }{}

```

rule become column-rule, while prerule and postrule become HTML borders:

```

29 \convertcolorspec{named}{\vwcol@rulecol}{HTML}\LWR@vwcol@rulecolor%
30 \ifdimgreater{\vwcol@rule}{0pt}{
31 \ifdimless{\vwcol@rule}{1pt}{
32 \setlength{\vwcol@rule}{1pt}
33 }{}
34 \LWR@vwcol@addrule{column-rule}
35 \LWR@vwcol@addrule{-moz-column-rule}
36 \LWR@vwcol@addrule{-webkit-column-rule}
37 \if@vwcol@prerule\LWR@vwcol@addrule{border-left}\fi
38 \if@vwcol@postrule\LWR@vwcol@addrule{border-right}\fi
39 }{}

```

Each of the justify options becomes a text-align. Indentation is added where appropriate.

```

40 \ifdefequal{\vwcol@justify}{\RaggedRight}{
41 \appto{\LWR@vwcolstyle}{text-align: left ; }
42 \ifdimgreater{\vwcol@parindent}{0pt}{
43 \appto{\LWR@vwcolstyle}{%
44 text-indent: \LWR@printlength{\vwcol@parindent} ; %
45 }
46 }{}
47 }{}

48 \ifdefequal{\vwcol@justify}{\RaggedLeft}{
49 \appto{\LWR@vwcolstyle}{text-align: right ; }
50 }{}

51 \ifdefequal{\vwcol@justify}{\Centering}{
52 \appto{\LWR@vwcolstyle}{text-align: center ; }
53 }{}

54 \ifdefequal{\vwcol@justify}{\justifying}{
55 \appto{\LWR@vwcolstyle}{text-align: justify ; }
56 \ifdimgreater{\vwcol@parindent}{0pt}{
57 \appto{\LWR@vwcolstyle}{%
58 text-indent: \LWR@printlength{\vwcol@parindent} ; %
59 }
60 }{}
61 }{}

```

Create the <div> with the assembled style:

```

62 \BlockClass[\LWR@vwcolstyle]{multicols}

```

```
63 }
```

When the environment ends:

```
64 {
65 \endBlockClass
66 }
```

File 397 **lwarp-wallpaper.sty**

§ 496 Package **wallpaper**

*(Emulates or patches code by MICHAEL H.F. WILKINSON.)*

Pkg wallpaper wallpaper is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{wallpaper}[2005/01/18]

```
2 \newcommand*\CenterWallPaper}[2]{}
3 \newcommand*\ThisCenterWallPaper}[2]{}
4 \newcommand*\TileWallPaper}[3]{}
5 \newcommand*\ThisTileWallPaper}[3]{}
6 \newcommand*\TileSquareWallPaper}[2]{}
7 \newcommand*\ThisTileSquareWallPaper}[2]{}
8 \newcommand*\ULCornerWallPaper}[2]{}
9 \newcommand*\ThisULCornerWallPaper}[2]{}
10 \newcommand*\LLCornerWallPaper}[2]{}
11 \newcommand*\ThisLLCornerWallPaper}[2]{}
12 \newcommand*\URCornerWallPaper}[2]{}
13 \newcommand*\ThisURCornerWallPaper}[2]{}
14 \newcommand*\LRCornerWallPaper}[2]{}
15 \newcommand*\ThisLRCornerWallPaper}[2]{}
16 \newcommand*\ClearWallPaper[1]{}
17 \newlength\wpXoffset
18 \newlength\wpYoffset
```

File 398 **lwarp-watermark.sty**

§ 497 Package **watermark**

*(Emulates or patches code by ALEXANDER I. ROZHENKO.)*

Pkg watermark watermark is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{watermark}[2004/12/09]

```
2 \newcommand\watermark[1]{}
3 \newcommand\leftwatermark[1]{}
4 \newcommand\rightwatermark[1]{}
5 \newcommand\thiswatermark[1]{}
6 \newcommand\thispageheading[1]{}

```

---

File 399 **lwarp-widows-and-orphans.sty**

§ 498 Package **widows-and-orphans**

Pkg widows-and-orphans widows-and-orphans is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{widows-and-orphans}[2018/09/01]

```
2 \NewDocumentCommand\Wa0setup{m}{}
3 \NewDocumentCommand\Wa0parameters{}{}
4 \NewDocumentCommand\Wa0ignorenext{}{}
```

---

File 400 **lwarp-wrapfig.sty**

§ 499 Package **wrapfig**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg wrapfig wrapfig is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{wrapfig}[2003/01/31]

```
2 \newcommand*{\LWR@wrapposition}{}
3
4 \newcommand*{\LWR@subwrapfigure}[2]{%
5 \renewcommand*{\LWR@wrapposition}{}%
6 \ifthenelse{%
7 \equal{#1}{r}\OR\equal{#1}{R}\OR%
8 \equal{#1}{o}\OR\equal{#1}{O}%
9 }%
10 {\renewcommand*{\LWR@wrapposition}{float:right}}%
11 {\renewcommand*{\LWR@wrapposition}{float:left}}%
12 \setlength{\LWR@templengthone}{#2}%
13 \LWR@BlockClassWP{%
14 width:\LWR@printlength{\LWR@templengthone}; \LWR@wrapposition; %
15 margin:10pt%
16 }%
17 {%
18 width:\LWR@printlength{\LWR@templengthone}; \LWR@wrapposition%
19 }%
20 {marginblock}%
21 }
22
23
24 \NewDocumentEnvironment{wrapfigure}{o m o m}
25 {%
26 \LWR@subwrapfigure{#2}{#4}%
27 \captionsetup{type=figure}%
```

```

28 }
29 {%
30 \endLWR@BlockClassWP%
31 }
32
33
34 \NewDocumentEnvironment{wraptable}{o m o m}
35 {%
36 \LWR@subwrapfigure{#2}{#4}%
37 \captionsetup{type=table}%
38 }
39 {%
40 \endLWR@BlockClassWP%
41 }
42
43
44 \NewDocumentEnvironment{wrapfloat}{m o m o m}
45 {%
46 \LWR@subwrapfigure{#3}{#5}%
47 \captionsetup{type=#1}%
48 }
49 {%
50 \endLWR@BlockClassWP%
51 }
52
53 \newlength{\wrapoverhang}

```

---

File 401 **lwarp-xbmks.sty**

§ 500 Package **xbmks**

Pkg xbmks xbmks is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{xbmks}[2018/07/04]

2 \newcommand{\xbmksetup}[1]{}
3 \NewDocumentCommand{\pdfbookmarkx}{o m o m}{}
4 \NewDocumentCommand{\currentpdfbookmarkx}{m o m}{}
5 \NewDocumentCommand{\subpdfbookmarkx}{m o m}{}
6 \NewDocumentCommand{\belowpdfbookmarkx}{m o m}{}

```

---

File 402 **lwarp-xcolor.sty**

§ 501 Package **xcolor**

*(Emulates or patches code by DR. UWE KERN.)*

Pkg xcolor xcolor is supported by lwarp.



### § 501.1 **Limitations**

|                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>\colorboxBlock</code> and <code>\fcolorboxBlock</code> | <code>\colorboxBlock</code> and <code>\fcolorboxBlock</code> are provided for increased HTML compatibility, and they are identical to <code>\colorbox</code> and <code>\fcolorbox</code> in print mode. In HTML mode they place their contents into a <code>&lt;div&gt;</code> instead of a <code>&lt;span&gt;</code> . These <code>&lt;div&gt;</code> s are set to display: <code>inline-block</code> so adjacent <code>\colorboxBlock</code> s appear side-by-side in HTML, although text is placed before or after each. |
|                                                              | Print-mode definitions for <code>\colorboxBlock</code> and <code>\fcolorboxBlock</code> are created by lwarp's core if <code>xcolor</code> is loaded.                                                                                                                                                                                                                                                                                                                                                                       |
| <code>background: none</code>                                | <code>\colorbox</code> and <code>\fcolorboxBlock</code> allow a background color of <code>none</code> , in which case only the frame is drawn, which can be useful for HTML.                                                                                                                                                                                                                                                                                                                                                |
| <code>color support</code>                                   | Color definitions, models, and mixing are fully supported without any changes required.                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <code>colored tables</code>                                  | <code>\rowcolors</code> is supported, except that the optional argument is ignored so far.                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <code>colored text and boxes</code>                          | <code>\textcolor</code> , <code>\colorbox</code> , and <code>\fcolorbox</code> are supported.                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <code>\color</code> and <code>\pagecolor</code>              | <code>\color</code> and <code>\pagecolor</code> are ignored. Use <code>css</code> or <code>\textcolor</code> where possible.                                                                                                                                                                                                                                                                                                                                                                                                |

### § 501.2 **xcolor definitions: location and timing**

The lwarp core and its lwarp-xcolor package are tightly integrated to allow comparable results for print, HTML, and print inside an HTML `lateximage`. This requires a number of definitions and redefinitions depending on whether each of `xcolor` and `lateximage` is being used, and whether print or HTML is being generated. Some of these actions are one-time when `xcolor` is loaded, and others are temporary as `lateximage` is used.

**When `xcolor` is loaded in print mode:** No special actions are taken at the time that `xcolor` is loaded in print mode, but see `\AtBeginDocument` below.

**When lwarp-xcolor is loaded in HTML mode:** `xcolor`'s original definitions are saved for later restoration. `\LWR@restoreorigformatting` is appended to restore these definitions for use inside a `lateximage`. New HTML-mode definitions are created for `\textcolor`, `\pagecolor`, `\nopagecolor`, `\colorbox`, `\colorboxBlock`, `\fcolorbox`, `\fcolorboxBlock`, and `fcolorminipage`.

**\AtBeginDocument in print or HTML mode:** See Section 86. If `xcolor` has been loaded, the print-mode `\fcolorbox` is modified to accept a background color of `none`, and additional definitions are created for lwarp's new macros print-mode macros `\colorboxBlock`, `\fcolorboxBlock`, and `fcolorminipage`. The HTML versions of these macros will already have been created by lwarp-xcolor if it has been loaded.

For use inside an HTML `lateximage`, `\LWR@restoreorigformatting` is appended to temporarily set these functions to their print-mode versions.

**In a `lateximage` in HTML mode:** `\LWR@restoreorigformatting` temporarily restores the print-mode definitions of `xcolor`'s functions. See `\LWR@restoreorigformatting` on page 493.

**\color:**

**Print:** Used as-is.  
**HTML:** Ignored by *pdftotext*, and will not appear.  
**HTML lateximage:** Colors will appear in a lateximage.

**\textcolor:**

**Print:** Used as-is.  
**HTML:** Redefined by lwarp-xcolor, page 965.  
**HTML lateximage:** Remembers and reuses the print version.

**\pagecolor:**

**Print:** Used as-is.  
**HTML:** Ignored.  
**HTML lateximage:** Colors will be picked up in a lateximage.

**\nopagecolor:**

**Print:** Used as-is.  
**HTML:** Ignored.  
**HTML lateximage:** Colors will be picked up in a lateximage.

**\colorbox:**

**Print:** Used as-is.  
**HTML:** Redefined by lwarp-xcolor, page 965.  
**HTML lateximage:** Remembers and reuses the print version.

**\colorboxBlock:**

**Print:** Becomes `\colorbox`.  
**HTML:** Newly defined by lwarp-xcolor to use a `<div>`, page 966.  
**HTML lateximage:** Remembers and reuses the print version `\colorbox`.

**\fcolorbox:**

**Print:** Modified to allow a background of none.  
`\LWR@print@fcolorbox` at section 86  
**HTML:** Redefined by lwarp-xcolor, page 966.  
**HTML lateximage:** Remembers and reuses the print version.

**\fcolorboxBlock:**

**Print:** Becomes `\fcolorbox`. Section 86  
**HTML:** Newly defined by lwarp-xcolor to use a `<div>`, page 967.  
**HTML lateximage:** Remembers and reuses the print version `\fcolorbox`.

**fcloorminipage:**

**Print:** Newly defined in the lwarp core.  
`LWR@print@fcloorminipage` at section 86

**HTML:** Newly defined by lwarp-xcolor, page 968.

**HTML lateximage:** Uses the print version.

**\boxframe:**

**Print:** Used as-is.

**HTML:** Redefined by lwarp-xcolor, page 969.

**HTML lateximage:** Remembers and reuses the print version.

### § 501.3 Package loading

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{xcolor}[2016/05/11]
2 \begin{warpHTML}
```

### § 501.4 Remembering and restoring original definitions

Remember the following print-mode actions to be restored when inside a lateximage environment:

```
3 \LetLtxMacro\LWR@print@pagecolor\pagecolor
4 \LetLtxMacro\LWR@print@nopagecolor\nopagecolor
```

**\LWR@restoreorigformatting** Inside a lateximage the following gets restored to their print-mode actions:

```
5 \appto\LWR@restoreorigformatting{%
6 \LetLtxMacro\pagecolor\LWR@print@pagecolor%
7 \LetLtxMacro\nopagecolor\LWR@print@nopagecolor%
8 }
```

### § 501.5 HTML color style

**\LWR@findcurrenttextcolor** Sets \LWR@tempcolor to the current color.

```
9 \renewcommand*{\LWR@findcurrenttextcolor}{%
10 \protect\colorlet{\LWR@current@color}{.}%
11 \protect\convertcolorspec{named}{\LWR@current@color}{HTML}\LWR@tempcolor%
12 }
```

Prints a color style for the current color.

**\LWR@currenttextcolorstyle**

```
13 \newcommand*{\LWR@currenttextcolorstyle}{%
14 \LWR@findcurrenttextcolor%
15 \ifdefstring{\LWR@tempcolor}{000000}%
16 {}%
17 {color: \LWR@origpound\LWR@tempcolor ; }%
18 }
```

**\LWR@textcurrentcolor**  $\langle text \rangle$  Like \textcolor but uses the current \color instead.

```
19 \DeclareDocumentCommand{\LWR@textcurrentcolor}{m}{%
20 \begingroup%
```

```

21 \LWR@FBcancel%
22 \LWR@findcurrenttextcolor%
23 \InlineClass[color:\LWR@origpound\LWR@tempcolor]{textcolor}{%
24 \renewcommand*\LWR@currenttextcolor{\LWR@origpound\LWR@tempcolor}%
25 #1%
26 }%
27 \endgroup%
28 }

```

`\LWR@colorstyle`     $\langle 2: model \rangle \langle 3: color \rangle$

For a color style, prints the color converted to HTML colors.

```

29 \NewDocumentCommand{\LWR@colorstyle}{m m}{%
30 \begingroup%
31 \LWR@FBcancel%

```

Use the `xcolor` package to convert to an HTML color space:

```

32 \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%

```

Print the converted color:

```

33 \LWR@origpound\LWR@tempcolor%
34 \endgroup%
35 }

```

`\LWR@backgroundcolor`     $[\langle model \rangle] \langle color \rangle \langle text \rangle$

Similar to `\textcolor`, but prints black text against a color background.

Converted into an HTML hex color span.

```

36 \NewDocumentCommand{\LWR@backgroundcolor}{O{named} m m}{%
37 \begingroup%
38 \LWR@FBcancel%
39 \InlineClass[background:\LWR@colorstyle{#1}{#2}]{backgroundcolor}{%
40 #3%
41 }%
42 \endgroup%
43 }

```

## § 501.6 HTML border

`\LWR@borderpadding`     $\langle colorstyle \rangle \langle color \rangle$  Prints the HTML attributes for a black border and padding.  
`\LWR@forceminwidth` must be used first in order to set the border width.

```

44 \newcommand*\LWR@borderpadding}[2]{%
45 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@colorstyle{#1}{#2} ; %
46 padding:\LWR@printlength{\fboxsep}%
47 }

```

### § 501.7 High-level macros

`\textcolor` [*model*] {*color*} {*text*}

Converted into an HTML hex color span.

```
48 \NewDocumentCommand{\LWR@HTML@textcolor}{o m m}{%
49 \begingroup%
```

Set the PDF color, to be picked up by SVG math if possible.

The print-mode `\color` command cannot accept the named option with color mixing, but it works with no option at all.

```
50 \IfValueTF{#1}{%
51 \color[#1]{#2}%
52 }{%
53 \color{#2}%
54 }%

55 \LWR@FBcancel%
56 \IfValueTF{#1}{%
57 \InlineClass[color:\LWR@colorstyle{#1}{#2}]{textcolor}{%
58 \renewcommand*\LWR@currenttextcolor{\LWR@origpound\LWR@tempcolor}%
59 #3%
60 }%
61 }{%
62 \InlineClass[color:\LWR@colorstyle{named}{#2}]{textcolor}{%
63 \renewcommand*\LWR@currenttextcolor{\LWR@origpound\LWR@tempcolor}%
64 #3%
65 }%
66 }%
67 \endgroup%
68 }
69
70 \LWR@formatted{textcolor}
```

`\pagecolor` [*model*] {*color*}

Ignored. Use CSS instead.

```
71 \renewcommand*\LWR@pagecolor}[2][named]{}
```

`\nopagecolor` Ignored.

```
72 \renewcommand*\LWR@nopagecolor}{}
```

`\colorbox` [*model*] {*color*} {*text*}

Converted into an HTML hex background color `<span>`.

```

73 \NewDocumentCommand{\LWR@HTML@colorbox}{O{named} m +m}{%
74 \begingroup%
75 \LWR@FBcancel%
76 \InlineClass[%
77 background:\LWR@colorstyle{#1}{#2} ; %
78 padding:\LWR@printlength{\fboxsep}%
79]{colorbox}{#3}%
80 \endgroup%
81 }
82
83 \AtBeginDocument{
84 \LWR@formatted{colorbox}
85 }

```

`\colorboxBlock` [*model*] {<color>} {<text>}

Converted into an HTML hex background color <div>.

```

86 \NewDocumentCommand{\LWR@HTML@colorboxBlock}{O{named} m +m}{%
87 \begingroup%
88 \LWR@FBcancel%
89 \LWR@stoppars%
90 \begin{BlockClass}[%
91 background:\LWR@colorstyle{#1}{#2} ; %
92 padding:\LWR@printlength{\fboxsep}%
93]{colorboxBlock}
94 #3
95 \end{BlockClass}%
96 \endgroup%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

97 \global\booltrue{LWR@minipagethispar}%
98 }
99
100 \AtBeginDocument{
101 \LWR@formatted{colorboxBlock}
102 }

```

`\fcolorbox` [*framemodel*] {<framecolor>} [*boxmodel*] {<boxcolor>} {<text>}

Converted into a framed HTML hex background color span.

A background color of none creates a colored frame without a background color.

```

103 \NewDocumentCommand{\LWR@HTML@fcolorbox}{O{named} m O{named} m +m}{%
104 \LWR@traceinfo{HTML fcolorbox #2 #4}%
105 \begingroup%

```

```

106 \LWR@FBcancel%
107 \LWR@forceminwidth{\fboxrule}%
108 \ifthenelse{\equal{#4}{none}}%
109 {% no background color
110 \InlineClass[%
111 \LWR@borderpadding{#1}{#2}%
112]{fcolorbox}{#5}%
113 }%
114 {% yes background color
115 \InlineClass[%
116 \LWR@borderpadding{#1}{#2} ; %
117 background:\LWR@colorstyle{#3}{#4}%
118]{fcolorbox}{#5}%
119 }%
120 \endgroup%
121 }
122
123 \AtBeginDocument{
124 \LWR@formatted{fcolorbox}
125 }

```

`\fcolorboxBlock` [*framemodel*] [*framecolor*] [*boxmodel*] [*boxcolor*] [*text*]

Converted into a framed HTML hex background color span.

A background color of none creates a colored frame without a background color.

```

126 \NewDocumentCommand{\LWR@HTML@fcolorboxBlock}{O{named} m O{named} m +m}{%
127 \LWR@traceinfo{HTML fcolorboxBlock #2 #4}%
128 \begingroup%
129 \LWR@FBcancel%
130 \LWR@forceminwidth{\fboxrule}%

131 \LWR@stoppars%

132 \ifthenelse{\equal{#4}{none}}%
133 {% no background color
134 \begin{BlockClass}[%
135 \LWR@borderpadding{#1}{#2}%
136]{fcolorboxBlock}
137 #5
138 \end{BlockClass}%
139 }%
140 {% yes background color
141 \convertcolorspec{#3}{#4}{HTML}\LWR@tempcolortwo%
142 \begin{BlockClass}[%
143 background:\LWR@origpound\LWR@tempcolortwo\ ; %
144 \LWR@borderpadding{#1}{#2}%
145]{fcolorboxBlock}
146 #5
147 \end{BlockClass}%
148 }%
149 \endgroup%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```
150 \global\booltrue{LWR@minipagethispar}%
151 \LWR@traceinfo{HTML fcolorboxBlock done}%
152 }
153
154 \AtBeginDocument{
155 \LWR@formatted{fcolorboxBlock}
156 }
```

Creates a framed HTML <div> around its contents.

A print-output version is defined in the lwarp core: section 86

```
\LWR@subfcolorminipage {<framemodel>} {<framecolor>} {<background tag>} {<height>}
```

```
157 \NewDocumentCommand{\LWR@subfcolorminipage}{m m m m}{%
158 \LWR@stoppars%
159 \begin{BlockClass}[%
160 #3%
161 \LWR@borderpadding{#1}{#2} ; %
162 \IfValueT{#4}{height:\LWR@printlength{\LWR@tempheight} ; }%
163 width:\LWR@printlength{\LWR@tempwidth}%
164]{fcolorminipage}%
165 }
```

```
Env fcolorminipage [<1:framemodel>] { <2:framecolor> } [<3:boxmodel>] { <4:boxcolor> } [<5:align>] [<6:height>]
[<7:inner-align>] { <8:width> }
```

```
166 \NewDocumentEnvironment{LWR@HTML@fcolorminipage}{O{named} m O{named} m O{c} o o m}
167 {%
168 \LWR@FBcancel%
169 \setlength{\LWR@tempwidth}{#8}%
170 \IfValueT{#6}{\setlength{\LWR@tempheight}{#6}}%
171 \LWR@forceminwidth{\fboxrule}%
172 \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%
173 \ifthenelse{\equal{#4}{none}}%
174 {\LWR@subfcolorminipage{#1}{#2}{#6}}%
175 {%
176 \convertcolorspec{#3}{#4}{HTML}\LWR@tempcolortwo%
177 \LWR@subfcolorminipage{#1}{#2}%
178 {background:\LWR@origpound\LWR@tempcolortwo\ ; }%
179 {#6}%
180 }%
181 }%
182 {%
183 \end{BlockClass}%
```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:



```

184 \global\booltrue{LWR@minipagethispar}%
185 }
186
187 \AtBeginDocument{
188 \LWR@formattedenv{fcolorminipage}
189 }

```

`\boxframe`  $\langle width \rangle$   $\langle height \rangle$   $\langle depth \rangle$

The depth is added to the height, but the box is not decended below by the depth. `\textcolor` is honored.

```

190 \newcommand*{\LWR@HTML@boxframe}[3]{%
191 {%
192 \setlength{\LWR@tempwidth}{#1}%
193 \setlength{\LWR@tempheight}{#2}%
194 \addtolength{\LWR@tempheight}{#3}%
195 \LWR@forceminwidth{\fboxrule}%
196 \LWR@findcurrenttextcolor%
197 \InlineClass[%
198 display:inline-block ; %
199 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@currenttextcolor{} ; %
200 width:\LWR@printlength{\LWR@tempwidth} ; %
201 height:\LWR@printlength{\LWR@tempheight}%
202]{boxframe}{}%
203 }%
204 }
205
206 \LWR@formatted{boxframe}

```

## § 501.8 Row colors

`\rowcol@rs`  $[\langle cmds \rangle]$   $\langle startrow \rangle$   $\langle odd color \rangle$   $\langle even color \rangle$

```

207 \newcommand*{\LWR@xcolortempcolor}{}
208
209 \def\rowcol@rs[#1]#2#3#4%
210 {
211 \global\rownum=1
212 \global\@rowcolorstrue
213 \@ifxempty{#3}%
214 {\def\@oddrowcolor{\@norowcolor}}%
215 {%
216 \convertcolorspec{named}{#3}{HTML}\LWR@xcolortempcolor%
217 \edef\@oddrowcolor{%
218 \csdef{LWR@xcolorrowHTMLcolor}{\LWR@xcolortempcolor}%
219 }%
220 }%
221 \@ifxempty{#4}%
222 {\def\@evenrowcolor{\@norowcolor}}%
223 {%
224 \convertcolorspec{named}{#4}{HTML}\LWR@xcolortempcolor%
225 \edef\@evenrowcolor{%
226 \csdef{LWR@xcolorrowHTMLcolor}{\LWR@xcolortempcolor}%

```

```

227 }%
228 }%
229 \if@rowcmd
230 \def\@rowcolors
231 {%
232 #1%
233 \if@rowcolors
234 \noalign{%
235 \relax\ifnum\rownum<#2\@norowcolor\else
236 \ifodd\rownum\@oddrowcolor\else\@evenrowcolor\fi\fi%
237 }%
238 \fi%
239 }%
240 \else
241 \def\@rowcolors
242 {%
243 \if@rowcolors
244 \ifnum\rownum<#2%
245 \noalign{%
246 \@norowcolor
247 }
248 \else
249 #1%
250 \noalign{%
251 \ifodd\rownum\@oddrowcolor\else\@evenrowcolor\fi%
252 }%
253 \fi
254 \fi%
255 }%
256 \fi
257 \ignorespaces%
258 }

```

`\@norowcolor` Turns off color for this row.

```

259 \def\@norowcolor{%
260 \renewcommand{\LWR@xcolorrowHTMLcolor}{}}%
261 }

```

`\@rowc@lors` Executed at the end of each row.

```

262 \def\@rowc@lors{%
263 % \noalign{%
264 \global\advance\rownum\@ne%
265 % }%
266 \@rowcolors%
267 }

```

```

268 \end{warpHTML}

```

---

File 403 **lwarp-xexchangebar.sty**

§ 502 Package **xexchangebar**

Pkg xexchangebar xexchangebar is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{xexchangebar}[2017/08/03]  
2 \LWR@origRequirePackage{lwarp-changebar}

---

File 404 **lwarp-xellipsis.sty**

§ 503 Package **xellipsis**

*(Emulates or patches code by DONALD P. GOODMAN III.)*

Pkg xellipsis xellipsis is patched for use by lwarp.

When non-zero, each of the spaces is converted to an HTML thin unbreakable space.

**for HTML output:** 1 \LWR@ProvidesPackagePass{xellipsis}[2015/11/01]

```

2 \newcommand*{\LWR@xellipsespace}[1]{%
3 \ifdim#1=0pt\else%
4 \ifdim#1<\fontdimen2\font%
5 \,%
6 \else%
7 ~%
8 \fi%
9 \fi%
10 }
11
12 \def\xelip{%
13 \mbox{%
14 \LWR@xellipsespace{\xelipprebef}%
15 \xelipprechar%
16 \LWR@xellipsespace{\xelippreaft}%
17 \LWR@xellipsespace{\xelipbef}%
18 \xelipchar%
19 \xel@loopi = 1%
20 \loop\ifnum\xelipnum>\xel@loopi%
21 \advance\xel@loopi by1%
22 \LWR@xellipsespace{\xelipgap}%
23 \xelipchar%
24 \repeat%
25 \LWR@xellipsespace{\xelipaft}%
26 \LWR@xellipsespace{\xelippostbef}%
27 \xelippostchar%
28 \LWR@xellipsespace{\xelippostaft}%

```

29 }%  
30 }%

---

File 405 **lwarp-xetexko-vertical.sty**

§ 504 Package **xetexko-vertical**

*(Emulates or patches code by DOHYUN KIM.)*

Pkg xetexko-vertical xetexko-vertical is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@loadbefore{xetexko-vertical}
2
3 \LWR@ProvidesPackagePass{xetexko-vertical}[2018/04/06]

4 \renewcommand{\verticaltypesetting}{}
5 \renewenvironment{vertical}[1]{\BlockClass{verticalrl}}{\endBlockClass}
6 \renewenvironment{horizontal}[1]{\BlockClass{horizontaltb}}{\endBlockClass}
7 \renewcommand{\vertlatin}[1]{#1}

```


---

File 406 **lwarp-xfakebold.sty**

§ 505 Package **xfakebold**

*(Emulates or patches code by HERBERT VOSS.)*

Pkg xfakebold xfakebold is patched for use by lwarp, and additional underlying support is found in the lwarp core.

 **page breaks** Note that the print version resets to unbold at each page break, whereas the HTML version maintains the bold state until it is undone.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{xfakebold}[2018/07/25]

2 \let\LWR@orig@setBold\setBold
3 \let\LWR@orig@unsetBold\unsetBold
4 \renewcommand*\setBold{\booltrue\LWR@xfakebold}
5 \renewcommand*\unsetBold{\boolfalse\LWR@xfakebold}
6
7 \renewcommand*\LWR@applyxfakebold{%
8 \ifbool\LWR@xfakebold{\LWR@orig@setBold}\LWR@orig@unsetBold}%
9 }

```

---

File 407 **lwarp-xfrac.sty**

§ 506 Package **xfrac**

*(Emulates or patches code by THE L<sup>A</sup>T<sub>E</sub>X3 PROJECT.)*

Pkg xfrac Supported by adding xfrac instances.

for HTML output: 1 \LWR@ProvidesPackagePass{xfrac}[2018-08-23]

 font size

In the user's document preamble, lwarp should be loaded after font-related setup. During HTML conversion, this font is used by lwarp to generate its initial PDF output containing HTML tags, later to be converted by *pdftotext* to a plain text file. While the text may be in any font which *pdftotext* can read, the math is directly converted into SVG images using this same user-selected font. xfrac below is set for the Latin Modern (lmr) font. If another font is used, it may be desirable to redefine \xfracHTMLfontsize with a different em size.

\sfrac [*instance*] {<num>} [<sep>] {<denom>}

A text-mode instance for the default font is provided below. The numerator and denominator formats are adjusted to encase everything in HTML tags. \scalebox is made null inside the numerator and denominator, since the HTML tags should not be scaled, and we do not want to introduce additional HTML tags for scaling.

In math mode, which will appear inside a `lateximage`, no adjustments are necessary.

for HTML & PRINT: 2 \begin{warpall}

\xfracHTMLfontsize User-redefinable macro which controls the font size of the fraction.

3 \newcommand\*\xfracHTMLfontsize{.6em}

4 \end{warpall}

for HTML output: 5 \begin{warpHTML}

instances Instances of xfrac for various font choices:

Produce CSS for a small raised numerator and a small denominator.

Scaling is turned off so that *pdftotext* correctly reads the result.

```
6 \DeclareInstance{xfrac}{default}{text}{
7 numerator-format = {%
8 \begingroup%
9 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
10 \InlineClass{numerator}{#1}\,%
11 \endgroup%
12 },
13 denominator-format = {%
14 \begingroup%
15 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
16 \InlineClass{denominator}{#1}%
17 \endgroup%
18 },
```

For *pdftotext*, do not scale the text:

```

19 scaling = false
20 }
21
22 \DeclareInstance{xfrac}{lmr}{text}{
23 numerator-format = {%
24 \begingroup%
25 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
26 \InlineClass{numerator}{#1}\,%
27 \endgroup%
28 },
29 denominator-format = {%
30 \begingroup%
31 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
32 \InlineClass{denominator}{#1}%
33 \endgroup%
34 },

```

For *pdftotext*, do not scale the text:

```

35 scaling = false
36 }
37
38 \DeclareInstance{xfrac}{lmss}{text}{
39 numerator-format = {%
40 \begingroup%
41 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
42 \InlineClass{numerator}{#1}\,%
43 \endgroup%
44 },
45 denominator-format = {%
46 \begingroup%
47 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
48 \InlineClass{denominator}{#1}%
49 \endgroup%
50 },

```

For *pdftotext*, do not scale the text:

```

51 scaling = false
52 }
53
54 \DeclareInstance{xfrac}{lmtt}{text}{
55 numerator-format = {%
56 \begingroup%
57 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
58 \InlineClass{numerator}{#1}\,%
59 \endgroup%
60 },
61 denominator-format = {%
62 \begingroup%
63 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
64 \InlineClass{denominator}{#1}%
65 \endgroup%
66 },

```

For *pdftotext*, do not scale the text:

```
67 scaling = false
68 }
```

```
69 \end{warpHTML}
```


File 408 **lwarp-xltabular.sty**

§ 507 Package **xltabular**

*(Emulates or patches code by ROLF NIEPRASCHK, HERBERT VOSS.)*

Pkg xltabular xltabular is emulated by lwarp.

**for HTML output:** Relies on tabularx.

 **table numbering** At present, an xltabular without a caption or with only a \caption\* may be misnumbered in HTML, so it may be necessary to place at the end of the table:

```
\warpHTMLonly{\addtocounter{table}{-1}}
```

```
1 \RequirePackage{tabularx}
2
3 \LWR@ProvidesPackageDrop{xltabular}[2018/05/23]
4
5 \DeclareDocumentEnvironment{xltabular}{o m m}
6 {\longtable{#3}}
7 {\endlongtable}
```

File 409 **lwarp-xltxtra.sty**

§ 508 Package **xltxtra**

*(Emulates or patches code by WILL ROBERTSON, JONATHAN KEW.)*

Pkg xltxtra xltxtra is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{xltxtra}[2016/01/21]

```
2 \RequirePackage{realscripts}
3 \RequirePackage{metalogo}
4 \newcommand*\TeX@logo@spacing[6]{}
5
6 \newcommand*\vfrac[2]{%
7 #1/\textsubscript{#2}%
8 }
9
```

```

10 \newcommand\namedglyph[1]{%
11 \@tempcnta=\XeTeXglyphindex "#1"\relax
12 \ifnum\@tempcnta>0
13 \XeTeXglyph\@tempcnta
14 \else
15 \xxt@namedglyph@fallback{#1}%
16 \fi}
17
18 \newcommand\xxt@namedglyph@fallback[1]{[#1]}
19
20 \DeclareDocumentCommand{\showhyphens}{m}{}
```

---

File 410 **lwarp-xmpincl.sty**

§ 509 Package **xmpincl**

*(Emulates or patches code by MAARTEN SNEEP.)*

Pkg xmpincl Emulated.

**for HTML output:** Discard all options for lwarp-xmpincl:

```

1 \LWR@ProvidesPackageDrop{xmpincl}[2008/05/10]
2 \newcommand*\includexp}[1]{}
```

---

File 411 **lwarp-xpiano.sty**

§ 510 Package **xpiano**

*(Emulates or patches code by ENRICO GREGORIO.)*

Pkg xpiano xpiano is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{xpiano}
2 \ExplSyntaxOn
3 \NewDocumentCommand{\LWR@print@keyboard}{ O{}m }
4 {
5 \xpiano_keyboard:nn { #1 } { #2 }
6 }
7
8 \NewDocumentCommand{\LWR@HTML@keyboard}{ O{}m }
9 {
10 \begin{lateximage}*
11 [(-xpiano~\packagediagramname{}: \detokenize\expandafter{#2})]
12 [\detokenize\expandafter{#1}]
13 \xpiano_keyboard:nn { #1 } { #2 }
14 \end{lateximage}
15 }
```



```

16 \ExplSyntaxOff
17
18 \LWR@formatted{keyboard}

```

---

File 412 **lwarp-xpinyin.sty**§ 511 Package **xpinyin**

(Emulates or patches code by SOBEN LEE.)

Pkg xpinyin xpinyin is partly supported. \xpinyin and pinyinscope are nullified, but \pinyin works.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{xpinyin}[2018/01/28]

2 \RenewDocumentEnvironment{pinyinscope}{0{}}{}{}
3
4 \RenewDocumentCommand{\xpinyin}{s O{ } m}{%
5 \IfBooleanTF{#1}{#3}{\@firstoftwo#3}%
6 }
7
8 \RenewDocumentCommand{\enablepinyin}{}{}

```


---

File 413 **lwarp-xtab.sty**§ 512 Package **xtab**

(Emulates or patches code by PETER WILSON.)

Pkg xtab xtab is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{xtab}[2011/07/31]

 **Misplaced alignment** For \tablefirsthead, etc., enclose them as follows:


**tab character &**

```

\StartDefiningTabulars
\tablefirsthead
. . .
\StopDefiningTabulars

```

See section 9.10.1.

 **lateximage** supertabular and xtab are not supported inside a lateximage.

```

2 \newcommand{\LWRXT@firsthead}{}
3
4 \newcommand{\tablefirsthead}[1]{%
5 \long\gdef\LWRXT@firsthead{#1}%
6 }
7

```

```

8 \newcommand{\tablehead}[1]{}
9
10 \newcommand{\tablelasthead}[1]{}
11
12 \newcommand{\notablelasthead}{}
13
14 \newcommand{\tabletail}[1]{}
15
16 \newcommand{\LWRXT@lasttail}{}
17
18 \newcommand{\tablelasttail}[1]{%
19 \long\gdef\LWRXT@lasttail{#1}%
20 }

21 \newcommand{\tablecaption}[2][]{%
22 \long\gdef\LWRXT@caption{%
23 \ifblank{#1}%
24 {\caption{#2}}%
25 {\caption[#1]{#2}}%
26 }%
27 }
28
29 \let\topcaption\tablecaption
30 \let\bottomcaption\tablecaption

31 \newcommand*\LWRXT@caption{}
32
33 \newcommand*\shrinkheight[1]{}
34
35 \newcommand*\xentrystretch[1]{}
36
37 \NewDocumentEnvironment{xtabular}{s o m}
38 {%
39 \LWR@traceinfo{xtabular}%
40 \table%
41 \LWRXT@caption%
42 \begin{tabular}{#3}%
43 \TabularMacro\ifdefvoid{\LWRXT@firsthead}%
44 {\LWR@getmynexttoken}%
45 {\expandafter\LWR@getmynexttoken\LWRXT@firsthead}%
46 }%
47 {%
48 \ifdefvoid{\LWRXT@lasttail}%
49 {}%
50 {%
51 \TabularMacro\ResumeTabular%
52 \LWRXT@lasttail%
53 }%
54 \end{tabular}%
55 \endtable%

56 \gdef\LWRXT@caption{}%

```

```

57 \LWR@traceinfo{xtabular done}%
58 }
59
60 \NewDocumentEnvironment{mpxtabular}{s o m}
61 {\minipage{\linewidth}\xtabular{#3}}
62 {\endxtabular\endminipage}

```

---

File 414 **lwarp-xunicode.sty**

§ 513 Package **xunicode**

Pkg xunicode Error if xunicode is loaded after lwarp.

Patch lwarp-xunicode, but also verify that is was loaded before lwarp:

for HTML output:

```

1 \LWR@loadbefore{xunicode}%
2
3 \LWR@ProvidesPackagePass{xunicode}[2011/09/09]

```

`\textcircled` becomes a span with a rounded border. `\providecommand` is used to avoid conflict with `textcomp`.

```

4 \providecommand*\LWR@HTML@textcircled[1]{%
5 \InlineClass[border: 1px solid \LWR@currenttextcolor]{textcircled}{#1}%
6 }
7
8 \LWR@formatted{textcircled}

```

Nullify xunicode macros when generating filenames:

```

9 \FilenameNullify{%
10 \renewcommand*\textdegree{}%
11 \renewcommand*\textcelsius{}%
12 \renewcommand*\textohm{}%
13 \renewcommand*\textmu{}%
14 \renewcommand*\textlquill{}%
15 \renewcommand*\textrquill{}%
16 \renewcommand*\textcircledP{}%
17 \renewcommand*\texttwelveudash{}%
18 \renewcommand*\textthreequartersemdash{}%
19 \renewcommand*\textmho{}%
20 \renewcommand*\textnaira{}%
21 \renewcommand*\textpeso{}%
22 \renewcommand*\textrecipe{}%
23 \renewcommand*\textinterrobang{}%
24 \renewcommand*\textinterrobangdown{}%
25 \renewcommand*\textperthousand{}%
26 \renewcommand*\textpertenthousand{}%
27 \renewcommand*\textbaht{}%
28 \renewcommand*\textdiscount{}%
29 \renewcommand*\textservicemark{}%
30 \renewcommand*\textcircled[1]{#1}%

```

```

31 \renewcommand*\capitalcedilla}[1]{#1}%
32 \renewcommand*\capitalogonek}[1]{#1}%
33 \renewcommand*\capitalgrave}[1]{#1}%
34 \renewcommand*\capitalacute}[1]{#1}%
35 \renewcommand*\capitalcircumflex}[1]{#1}%
36 \renewcommand*\capitaltilde}[1]{#1}%
37 \renewcommand*\capitaldieresis}[1]{#1}%
38 \renewcommand*\capitalhungarumlaut}[1]{#1}%
39 \renewcommand*\capitalring}[1]{#1}%
40 \renewcommand*\capitalcaron}[1]{#1}%
41 \renewcommand*\capitalbreve}[1]{#1}%
42 \renewcommand*\capitalmacron}[1]{#1}%
43 \renewcommand*\capitaldotaccent}[1]{#1}%
44 }% FilenameNullify

```

---

File 415 **lwarp-xurl.sty**

§ 514 Package **xurl**

Pkg xurl xurl is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{xurl}[2018/06/02]


---

File 416 **lwarp-xy.sty**

§ 515 Package **xy**

*(Emulates or patches code by KRISTOFFER H. ROSE, ROSS MOORE.)*

Pkg xy xy is patched for use by lwarp.

 **\xypolygon** \xypolygon must be used inside the xy environment, or inside \xy ... \endxy.

**for HTML output:** 1 \LWR@ProvidesPackagePass{xy}[2013/10/06]

```

2 \AtBeginDocument{
3
4 \pretoto{\xy}{\begin{lateximage}[(-xy-~\packagediagramname)]}
5 \appto{\endxy}{\end{lateximage}}
6
7 \@ifundefined{xymatrix}{}{
8 \LetLtxMacro\LWR@origxymatrix\xymatrix
9
10 \renewcommand{\xymatrix}[1]{%
11 \begin{lateximage}[(-xy- xymatrix \packagediagramname)]
12 \LWR@origxymatrix{#1}
13 \end{lateximage}
14 }
15 }
16

```

```

17 \@ifundefined{xygraph}{}{
18 \LetLtxMacro\LWR@origxygraph\xygraph
19
20 \renewcommand{\xygraph}[1]{%
21 \begin{lateximage}[(-xy- xygraph \packagediagramname)]
22 \LWR@origxygraph{#1}
23 \end{lateximage}
24 }
25 }
26
27 }

```

---

File 417 **lwarp-zhlineskip.sty**

§ 516 Package **zhlineskip**

Pkg zhlineskip zhlineskip is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{zhlineskip}[2018/11/30]

```

2 \newcommand*\SetTextEnvironmentSinglespace[1]{}
3 \newcommand*\RestoreTextEnvironmentLeading{}
4 \newcommand*\SetMathEnvironmentSinglespace[1]{}
5 \newcommand*\RestoreMathEnvironmentLeading{}

```

---

File 418 **lwarp-zwpagelayout.sty**

§ 517 Package **zwpagelayout**

*(Emulates or patches code by ZDENĚK WAGNER.)*

Pkg zwpagelayout zwpagelayout is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{zwpagelayout}[2013/01/13]

```

2 \def\noBboxes{}
3 \@onlypreamble\noBboxes
4
5 \expandafter\ifx\csname definecolor\endcsname\relax \else
6 \definecolor{cmykblack}{cmyk}{0,0,0,1}
7 \definecolor{grblack}{gray}{0}
8 % \ifzwpl@redefineblack
9 % \definecolor{black}{cmyk}{0,0,0,1}\color{black}
10 % \fi
11 \definecolor{cmykred}{cmyk}{0,1,1,0}
12 \definecolor{cmykgreen}{cmyk}{1,0,1,0}
13 \definecolor{cmykblue}{cmyk}{1,1,0,0}
14 \definecolor{rgbred}{rgb}{1,0,0}
15 \definecolor{rgbgreen}{rgb}{0,1,0}

```

```

16 \definecolor{rgbbblue}{rgb}{0,0,1}
17 % \ifzwpl@redefinetcmyk
18 % \definecolor{red}{cmyk}{0,1,1,0}
19 % \definecolor{green}{cmyk}{1,0,1,0}
20 % \definecolor{blue}{cmyk}{1,1,0,0}
21 % \fi
22 \fi
23
24 \let\OverprintXeTeXExtGState\relax
25
26 \DeclareRobustCommand\SetOverprint{\ignorespaces}
27 \DeclareRobustCommand\SetKnockout{\ignorespaces}
28 \DeclareRobustCommand\textoverprint[1]{\SetOverprint#1}
29 \DeclareRobustCommand\textknockout[1]{\SetKnockout#1}
30
31 \def\SetPDFminorversion#1{}
32 \onlypreamble\SetPDFminorversion
33
34 \newcommand*\Vcorr{}
35
36 \DeclareRobustCommand\vb[1][{}]{
37 \NewDocumentCommand{\NewOddPage}{* o}{}
38 \NewDocumentCommand{\NewEvenPage}{* o}{}
39 \def\SetOddPageMessage#\gdef\ZW@oddwarning}
40 \def\SetEvenPageMessage#\gdef\ZW@evenwarning}
41 \def\ZW@oddwarning{Empty page inserted}\let\ZW@evenwarning\ZW@oddwarning
42
43 \def\clap#1{#1}
44
45 \def\CropFlap{2in}
46 \def\CropSpine{1in}
47 \def\CropXSpine{1in}
48 \def\CropXtrim{.25in}
49 \def\CropYtrim{.25in}
50 \def\UserWidth{5in}
51 \def\UserLeftMargin{1in}
52 \def\UserRightMargin{1in}
53 \def\UserTopMargin{1in}
54 \def\UserBotMargin{1in}
55 \def\thePageNumber{\LWR@origpound\,\arabic{page}}
56 \ifXeTeX
57 \def\ifcaseZWdriver{\ifcase2}
58 \else
59 \def\ifcaseZWdriver{\ifcase1}
60 \fi
61 \DeclareRobustCommand\ZWifdriver[2]{}

```

---

File 419 **lwarp-patch-komascript.sty**

§ 518 Package **patch-komascript**

Pkg lwarp-patch-komascript Patches for komascript classes.

lwarp loads this package when scrbook, scrartcl, or screprpt classes are detected.

Many features are ignored during the HTML conversion. The goal is source-level compatibility.

`\titlehead`, `\subject`, `\captionformat`, `\figureformat`, and `\tableformat` are not yet emulated.

 **Not fully tested!** [Please send bug reports!](#)

Some features have not yet been tested. Please contact the author with any bug reports.

**for HTML output:** `1 \ProvidesPackage{lwarp-patch-komascript}`

`typearea` is emulated.

`2 \RequirePackage{lwarp-typearea}`

`tocbasic` is emulated.

`3 \RequirePackage{lwarp-tocbasic}`

`scrextend` patches most of the new macros.

`4 \RequirePackage{lwarp-scrextend}`

Indexing macros, simplified for lwarp:

```

5 \AtBeginDocument{
6
7 \renewcommand*{\idx@heading}{%
8 \idx@@heading{\indexname}%
9 }
10
11 \renewenvironment{theindex}{%
12 \idx@heading%
13 \index@preamble\par\nobreak
14 \let\item\LWR@indexitem%
15 \let\subitem\LWR@indexsubitem%
16 \let\subsubitem\LWR@indexsubsubitem%
17 }
18 {}
19
20 \renewcommand*\indexspace{}
21
22 }% AtBeginDocument

```

The `\minisec` is placed inside a `<div>` of class `minisec`.

```

23 \renewcommand*{\minisec}[1]{
24 \begin{BlockClass}{minisec}
25 #1
26 \end{BlockClass}
27 }

```

The part and chapter preambles are placed as plain text just after each heading.

```

28 \@ifundefined{setpartpreamble}{}{
29 \RenewDocumentCommand{\setpartpreamble}{o o +m}{%
30 \renewcommand{\part@preamble}{#3}%
31 }
32 }
33
34 \@ifundefined{setchapterpreamble}{}{
35 \RenewDocumentCommand{\setchapterpreamble}{o o +m}{%
36 \renewcommand{\chapter@preamble}{#3}%
37 }
38 }

```

Simple captions are used in all cases.

```

39 \LetLtxMacro\captionbelow\caption
40 \LetLtxMacro\captionabove\caption
41
42 \LetLtxMacro\captionofbelow\captionof
43 \LetLtxMacro\captionofabove\captionof
44
45 \RenewDocumentEnvironment{captionbeside}{o m o o o s}
46 {}
47 {%
48 \IfValueTF{#1}%
49 {\caption[#1]{#2}}%
50 {\caption{#2}}%
51 }
52
53 \RenewDocumentEnvironment{captionofbeside}{m o m o o o s}
54 {}
55 {%
56 \IfValueTF{#2}%
57 {\captionof{#1}[#2]{#3}}%
58 {\captionof{#1}{#3}}%
59 }
60
61 \RenewDocumentCommand{\setcapindent}{s m}{}
62 \renewcommand*\setcaphanging{}
63 \renewcommand*\setcapwidth[2][{}]{
64 \renewcommand*\setcapdynwidth[2][{}]{
65 \RenewDocumentCommand{\setcapmargin}{s o m}{}

```

---

File 420 **lwarp-patch-memoir.sty**

§ 519 Package **patch-memoir**

*(Emulates or patches code by PETER WILSON.)*

Pkg lwarp-patch-memoir Patches for memoir class.

 **Not fully tested!** [Please send bug reports!](#)



lwarp loads this package when the memoir class is detected.

⚠ options clash

While emulating memoir, lwarp pre-loads a number of packages (section 519.1). This can cause an options clash when the user's document later loads the same packages with options. To fix this problem, specify the options before loading lwarp:

```
\documentclass{memoir}
...
\PassOptionsToPackage{options_list}{package_name}
...
\usepackage{lwarp}
...
\usepackage{package_name}
```

⚠ version numbers

memoir emulates a number of packages, and declares a version date for each which often does not match the date of the corresponding freestanding package. This can cause warnings about incorrect version numbers. Since lwarp is intended to support the freestanding packages, which are often newer than the date declared by memoir, it is hoped that memoir will update and change its emulated version numbers to match.

\verbfootnote is not supported.

\newfootnoteseries, etc. are not supported.

lwarp loads pagenote to perform memoir's pagenote functions, but there are minor differences in \pagenotesubhead and related macros.

Poem numbering is not supported.

The verbatim environment does not yet support the memoir enhancements. It is currently recommended to load and use fancyvrb instead.

The memoir glossary system is not yet supported by *lwarpmk*. The glossaries package may be used instead, but does require the glossary entries be changed from the memoir syntax to the glossaries syntax.

for HTML output: 1 \ProvidesPackage{lwarp-patch-memoir}

## § 519.1 Packages

These are pre-loaded to provide emulation for many of memoir's functions. memoir pretends that abstract, etc. are already loaded, via its "emulated" package mechanism, but lwarp is directly loading the "lwarp-" version of each, which happens to avoid memoir's emulation system.

```
2 \RequirePackage{lwarp-abstract}% req'd
3 \RequirePackage{lwarp-array}% req'd
4 \RequirePackage{lwarp-booktabs}% req'd
5 % \RequirePackage{lwarp-ccaption}% emulated below
6 \RequirePackage{lwarp-change page}% req'd
7 \RequirePackage{lwarp-crop}
8 \RequirePackage{lwarp-dcolumn}% req'd
9 \RequirePackage{lwarp-enumerate}% req'd
10 \RequirePackage{lwarp-epigraph}% req'd
11 \RequirePackage{lwarp-fancyvrb}% req'd
```

```

12 \RequirePackage{lwarp-footmisc}% req'd
13 \RequirePackage{lwarp-framed}% req'd
14 \RequirePackage{lwarp-hanging}% req'd
15 \RequirePackage{lwarp-makeidx}% req'd
16 \DisemulatePackage{moreverb}
17 \RequirePackage{lwarp-moreverb}
18 \RequirePackage{lwarp-mparhack}
19 \RequirePackage{lwarp-needspace}% req'd
20 \RequirePackage{lwarp-nextpage}% req'd
21 \RequirePackage{lwarp-pagenote}% req'd
22 \RequirePackage{lwarp-parskip}
23 \RequirePackage{lwarp-setspace}% req'd
24 \RequirePackage{lwarp-showidx}
25 \RequirePackage{lwarp-subfigure}% req'd
26 \makeindex

```

subfigure is emulated via subfig, which pre-defines subfigure and subtable, but memoir does not, so they must be tested for here:

```

27 \LetLtxMacro\LWR@memorignewsfloat\newsfloat
28 \RenewDocumentCommand{\newsfloat}{0{} m}{%
29 \@ifundefined{c@sub#2}{%
30 \LWR@memorignewsfloat[#1]{#2}%
31 }{}%
32 }
33
34 \RequirePackage{lwarp-tabularx}% req'd
35 \RequirePackage{lwarp-titling}% req'd
36 % \RequirePackage{lwarp-tocbibind}% not emulated by memoir
37 \RequirePackage{lwarp-tocloft}% req'd
38 \RequirePackage{lwarp-verse}% req'd

```

## § 519.2 Preliminary setup

Bypass the memoir package mechanism:

```

39 \LetLtxMacro\LWR@orig@label\@mem@old@label

```

memoir already set the page size to a default, so it must be forced large for lwarp's use, to avoid tag overflows off the page.

```

40 \setstocksize{190in}{20in}
41 \setlrmarginsandblock{2in}{2in}{*}
42 \setulmarginsandblock{1in}{1in}{*}

```

§ 519.3 **Laying out the page**

```
43 \renewcommand*\stockavi{}
44 \renewcommand*\stockav{}
45 \renewcommand*\stockaiv{}
46 \renewcommand*\stockaiii{}
47 \renewcommand*\stockbvi{}
48 \renewcommand*\stockbv{}
49 \renewcommand*\stockbiv{}
50 \renewcommand*\stockbiii{}
51 % \renewcommand*\stockmetriccrownvo{}% in docs but not in the package
52 \renewcommand*\stockmlargecrownvo{}
53 \renewcommand*\stockmdemyvo{}
54 \renewcommand*\stocksmallroyalvo{}
55 \renewcommand*\pageavi{}
56 \renewcommand*\pageav{}
57 \renewcommand*\pageaiv{}
58 \renewcommand*\pageaiii{}
59 \renewcommand*\pagebvi{}
60 \renewcommand*\pagebv{}
61 \renewcommand*\pagebiv{}
62 \renewcommand*\pagebiii{}
63 % \renewcommand*\pagemetriccrownvo{}% in docs but not in the package
64 \renewcommand*\pagemlargecrownvo{}
65 \renewcommand*\pagemdemyvo{}
66 \renewcommand*\pagesmallroyalvo{}
67
68 \renewcommand*\stockdbill{}
69 \renewcommand*\stockstatement{}
70 \renewcommand*\stockexecutive{}
71 \renewcommand*\stockletter{}
72 \renewcommand*\stockold{}
73 \renewcommand*\stocklegal{}
74 \renewcommand*\stockledger{}
75 \renewcommand*\stockbroadsheet{}
76 \renewcommand*\pagedbill{}
77 \renewcommand*\pagestatement{}
78 \renewcommand*\pageexecutive{}
79 \renewcommand*\pageletter{}
80 \renewcommand*\pageold{}
81 \renewcommand*\pagelegal{}
82 \renewcommand*\pageledger{}
83 \renewcommand*\pagebroadsheet{}
84
85 \renewcommand*\stockpottvo{}
86 \renewcommand*\stockfoolscapvo{}
87 \renewcommand*\stockcrownvo{}
88 \renewcommand*\stockpostvo{}
89 \renewcommand*\stocklargecrownvo{}
90 \renewcommand*\stocklargepostvo{}
91 \renewcommand*\stocksmalldemyvo{}
92 \renewcommand*\stockdemyvo{}
93 \renewcommand*\stockmediumvo{}
94 \renewcommand*\stocksmallroyalvo{}
95 \renewcommand*\stockroyalvo{}
96 \renewcommand*\stocksuperroyalvo{}

```

```
97 \renewcommand*\stockimperialvo{}
98 \renewcommand*\pagepottvo{}
99 \renewcommand*\pagefoolscapvo{}
100 \renewcommand*\pagecrownvo{}
101 \renewcommand*\pagepostvo{}
102 \renewcommand*\pagelargecrownvo{}
103 \renewcommand*\pagelargepostvo{}
104 \renewcommand*\pagesmalldemyvo{}
105 \renewcommand*\pagedemyvo{}
106 \renewcommand*\pagemediumvo{}
107 \renewcommand*\pagesmallroyalvo{}
108 \renewcommand*\pageroyalvo{}
109 \renewcommand*\pagesuperroyalvo{}
110 \renewcommand*\pageimperialvo{}
111
112 \renewcommand*\memfontfamily{}
113 \renewcommand*\memfontenc{}
114 \renewcommand*\memfontpack{}
115
116 \renewcommand*\anyptfilebase{}
117 \renewcommand*\anyptsizesize{10}
118
119 \renewcommand*\setstocksize[2]{}
120 \renewcommand*\settrimmedsize[3]{}
121 \renewcommand*\settrims[2]{}
122
123 % \newlength{\lxvchars}
124 % \setlength{\lxvchars}{305pt}
125 % \newlength{\xlvchars}
126 % \setlength{\xlvchars}{190pt}
127 \renewcommand*\setxlvchars[1]{}
128 \renewcommand*\setlxvchars[1]{}
129
130 \renewcommand*\settypeblocksize[3]{}
131 \renewcommand*\setlrmargins[3]{}
132 \renewcommand*\setlrmarginsandblock[3]{}
133 \renewcommand*\setbinding[1]{}
134 \renewcommand*\setulmargins[3]{}
135 \renewcommand*\setulmarginsandblock[3]{}
136 \renewcommand*\setcolsepandrulere[2]{}
137
138 \renewcommand*\setheadfoot[2]{}
139 \renewcommand*\setheaderspaces[3]{}
140 \renewcommand*\setmarginnotes[3]{}
141 \renewcommand*\setfootins[2]{}
142 \renewcommand*\checkandfixthelayout[1][1]{}
143 \renewcommand*\checkthelayout[1]{}
144 \renewcommand*\fixthelayout{}
145 %
146 % \newlength{\stockheight}
147 % \newlength{\trimtop}
148 % \newlength{\trimedge}
149 % \newlength{\stockwidth}
150 % \newlength{\spinemargin}
151 % \newlength{\foremargin}
```

```

152 % \newlength{\uppermargin}
153 % \newlength{\headmargin}
154 %
155 \renewcommand*\typeoutlayout{}
156 \renewcommand*\typeoutstandardlayout{}
157 \renewcommand*\settypeoutlayoutunit[1]{}
158 \renewcommand*\fixpdflayout{}
159 \renewcommand*\fixdvipslayout{}
160
161 \renewcommand*\medievalpage[1][{}
162 \renewcommand*\isopage[1][{}
163 \renewcommand*\semiisopage[1][{}
164
165 \renewcommand{\setpagebl}[3]{
166 \renewcommand{\setpageml}[3]{
167 \renewcommand{\setpagetl}[3]{
168 \renewcommand{\setpagetm}[3]{
169 \renewcommand{\setpagetr}[3]{
170 \renewcommand{\setpagemr}[3]{
171 \renewcommand{\setpagebr}[3]{
172 \renewcommand{\setpagebm}[3]{
173 \renewcommand{\setpagecc}[3]{

```

#### § 519.4 Text and fonts

```

174 \let\miniscule\tiny
175 \let\HUGE\Huge
176
177 \renewcommand*\abnormalparskip[1]{}
178 \renewcommand*\nonzeroparskip{}
179 \renewcommand*\traditionalparskip{}
180
181 \let\onelineskip\baselineskip
182
183 \let\OnehalfSpacing\onehalfspacing
184 \let\DoubleSpacing\doublespacing
185 \renewcommand*\setPagenoteSpacing[1]{}
186 \renewcommand*\setFloatSpacing[1]{}
187 \let\SingleSpacing\singlespacing
188 \let\setSingleSpace\SetSinglespace
189 \let\SingleSpace\singlespace
190 \let\endSingleSpace\endsinglespace
191 \let\Spacing\spacing
192 \let\endSpacing\endspacing
193 \let\OnehalfSpace\onehalfspace
194 \let\endOnehalfSpace\endonehalfspace
195 \csletcs{OnehalfSpace*}{onehalfspace}
196 \csletcs{endOnehalfSpace*}{endonehalfspace}
197 \let\DoubleSpace\doublespace
198 \let\endDoubleSpace\enddoublespace
199 \csletcs{DoubleSpace*}{doublespace}
200 \csletcs{endDoubleSpace*}{enddoublespace}
201 \renewcommand*\setDisplayskipStretch[1]{}
202 \renewcommand*\memdskipstretch{}
203 \renewcommand*\noDisplayskipStretch{}

```

```

204 \renewcommand*\memdskip{}
205
206 \renewcommand*\midslippy{}
207 \renewenvironment*\midslippypar{}{}
208
209 \renewcommand*\slippybottom{}

```

## § 519.5 Titles

```

210 \csletcs{titlingpage*}{titlingpage}
211 \csletcs{endtitlingpage*}{endtitlingpage}
212 \let\titlingpageend\relax
213 \newcommand{\titlingpageend}[2]{}
214 \let\andnext\and
215 \renewcommand*\thanksmarkstyle[1]{}
216 \renewcommand{\thanksfootmark}{%
217 \thanksscript{\tmark}%
218 }
219
220 % \newlength{\thanksmarksep}

```

## § 519.6 Abstracts

```

221 \renewcommand*\abstractcol{}
222 \renewcommand*\abstractintoc{}
223 \renewcommand*\abstractnum{}
224 \renewcommand*\abstractrunin{}

```

## § 519.7 Document divisions

```

225
226 \def\@appage{%
227 \part*\appendixpagename}
228 }
229 \renewcommand\mempreaddappagetotohook{}
230 \renewcommand\mempostaddappagetotohook{}
231
232 \def\@sappage{%
233 \part*\appendixpagename}
234 }
235
236 \csletcs{frontmatter*}{frontmatter}
237 \csletcs{mainmatter*}{mainmatter}
238 \renewcommand*\raggedbottomsection{}
239 \renewcommand*\normalbottomsection{}
240 \renewcommand*\bottomsectionskip{}
241 \renewcommand*\bottomsectionpenalty{}
242 \csletcs{appendixpage*}{appendixpage}
243 \renewcommand*\namedsubappendices{}
244 \renewcommand*\unnamedsubappendices{}
245 \renewcommand*\setsecnumdepth[1]{}% todo tocvsec2
246 \renewcommand*\maxsecnumdepth[1]{}% todo tocvsec2
247 \renewcommand*\beforebookskip{}
248 \renewcommand*\afterbookskip{}
249 \renewcommand*\beforepartskip{}

```

```
250 \renewcommand*\afterpartskip{}
251 \renewcommand*\midbookskip{}
252 \renewcommand*\midpartskip{}
253 \renewcommand*\printbookname{}
254 \renewcommand*\booknamefont{}
255 \renewcommand*\booknamenum{}
256 \renewcommand*\printbooknum{}
257 \renewcommand*\booknumfont{}
258 \renewcommand*\printpartname{}
259 \renewcommand*\partnamefont{}
260 \renewcommand*\partnamenum{}
261 \renewcommand*\printpartnum{}
262 \renewcommand*\partnumfont{}
263 \renewcommand*\printbooktitle}[1]{}
264 \renewcommand*\booktitlefont{}
265 \renewcommand*\printparttitle}[1]{}
266 \renewcommand*\parttitlefont{}
267 \renewcommand*\bookpageend{}
268 \renewcommand*\bookblankpage{}
269 \renewcommand*\nobookblankpage{}
270 \renewcommand*\partpageend{}
271 \renewcommand*\partblankpage{}
272 \renewcommand*\nopartblankpage{}
273 \RenewDocumentCommand{\newleadpage}{s o m m}{}% todo
274 \RenewDocumentCommand{\renewleadpage}{s o m m}{}% todo
275 \renewcommand*\leadpagetoclevel}{chapter}
276
277 \renewcommand*\openright{}
278 \renewcommand*\openleft{}
279 \renewcommand*\openany{}
280 \renewcommand*\clearforchapter{}
281 \renewcommand*\memendofchapterhook{}
282 \renewcommand*\chapterheadstart{}
283 % \newlength{\beforechapskip}
284 \renewcommand*\afterchapternum{}
285 % \newlength{\midchapskip}
286 \renewcommand*\afterchaptertitle{}
287 % \newlength{\afterchapskip}
288 \renewcommand*\printchaptername{}
289 \renewcommand*\chapnamefont{}
290 \renewcommand*\chapternamenum{}
291 \renewcommand*\printchapternum{}
292 \renewcommand*\chapnumfont{}
293 \renewcommand*\printchaptertitle}[1]{}
294 \renewcommand*\chapttitlefont{}
295 \renewcommand*\printchapternonum{}
296 \renewcommand*\indentafterchapter{}
297 \renewcommand*\noindentafterchapter{}
298 \renewcommand*\insertchapterspace{}
299
300 \renewcommand*\chapterstyle}[1]{}
301 \renewcommand*\makechapterstyle}[2]{}
302 \renewcommand*\chapindent{}
303 \let\chapterprecis\cftchapterprecis
304 \let\chapterprecishere\cftchapterprecishere
```

```
305 \let\chapterprecistoc\cftchapterprecistoc
306 \renewcommand*\precisfont{}
307 \renewcommand*\prechapterprecis{}
308 \renewcommand*\postchapterprecis{}
309 \renewcommand{\precistoc}[1]{}
310 \renewcommand*\precistocfont{}
311 \renewcommand*\precistocformat{}
312 % \newlength{\prechapterprecisshift}
313
314 \renewcommand*\setbeforesecskip}[1]{}
315 \renewcommand*\setaftersecskip}[1]{}
316 \renewcommand*\setsecindent}[1]{}
317 \renewcommand*\setsecheadstyle}[1]{}
318 \renewcommand*\setbeforesubsecskip}[1]{}
319 \renewcommand*\setaftersubsecskip}[1]{}
320 \renewcommand*\setsubsecindent}[1]{}
321 \renewcommand*\setsubseheadstyle}[1]{}
322 \renewcommand*\setbeforesubsubsecskip}[1]{}
323 \renewcommand*\setaftersubsubsecskip}[1]{}
324 \renewcommand*\setsubsubsecindent}[1]{}
325 \renewcommand*\setsubsubseheadstyle}[1]{}
326 \renewcommand*\setbeforeparaskip}[1]{}
327 \renewcommand*\setafterparaskip}[1]{}
328 \renewcommand*\setparaindent}[1]{}
329 \renewcommand*\setparaheadstyle}[1]{}
330 \renewcommand*\setbeforesubparaskip}[1]{}
331 \renewcommand*\setaftersubparaskip}[1]{}
332 \renewcommand*\setsubparaindent}[1]{}
333 \renewcommand*\setsubparaheadstyle}[1]{}
334 \renewcommand{\@hangfrom}[1]{#1}
335 \renewcommand{\sethangfrom}[1]{}
336 \renewcommand{\setsecnumformat}[1]{}
337
338 \renewcommand*\hangsecnum{}
339 \renewcommand*\defaultsecnum{}
340
341 \renewcommand*\sechook{}
342 \renewcommand{\setsechook}[1]{}
343 \renewcommand*\subsechook{}
344 \renewcommand{\setsubsechook}[1]{}
345 \renewcommand*\subsubsechook{}
346 \renewcommand{\setsubsubsechook}[1]{}
347 \renewcommand*\parahook{}
348 \renewcommand{\setparahook}[1]{}
349 \renewcommand*\subparahook{}
350 \renewcommand{\setsubparahook}[1]{}
351
352 \RenewDocumentCommand{\plainbreak}{s m}{\begin{center}~\end{center}}
353
354 \RenewDocumentCommand{\fancybreak}{s +m}{%
355 \begin{center}#2\end{center}%
356 }
357
358 \RenewDocumentCommand{\plainfancybreak}{s m m +m}{%
359 \begin{center}#4\end{center}%
```



```

360 }
361
362 \RenewDocumentCommand{\pfbreak}{s}{%
363 \begin{center}
364 \pfbreakdisplay
365 \end{center}
366 }
367
368 % \newlength{\pfbreakskip}
369 \renewcommand{\pfbreakdisplay}{*\quad*\quad*}
370
371 \renewcommand{\makeheadstyles}[2]{}
372 \renewcommand*\headstyles[1]{}

```

### § 519.8 **Pagination and headers**

```

373 \renewcommand*\savepagenumber{}
374 \renewcommand*\restorepagenumber{}
375 \renewcommand*\uppercaseheads{}
376 \renewcommand*\nouppercaseheads{}
377
378 \renewcommand*\bookpagemark[1]{}
379 \renewcommand*\partmark[1]{}
380 \renewcommand*\bibmark{}
381 \renewcommand*\indexmark{}
382 \renewcommand*\glossarymark{}
383
384 \LWR@origpagestyle{empty}
385 \renewcommand*\ps@empty{}
386 \renewcommand*\makepagestyle[1]{}
387 \renewcommand*\emptyshook{}%
388 % \renewcommand*\empty@oddhead{}
389 % \renewcommand*\empty@oddfoot{}
390 % \renewcommand*\empty@evenhead{}
391 % \renewcommand*\empty@evenfoot{}
392 \renewcommand*\@oddhead{}
393 \renewcommand*\@oddfoot{}
394 \renewcommand*\@evenhead{}
395 \renewcommand*\@evenfoot{}
396 \renewcommand*\aliaspagestyle[2]{}
397 \renewcommand*\copypagestyle[2]{}
398
399 \renewcommand*\makeevenhead[4]{}
400 \renewcommand*\makeoddhead[4]{}
401 \renewcommand*\makeevenfoot[4]{}
402 \renewcommand*\makeoddfoot[4]{}
403 \renewcommand*\makerunningwidth[3]{}
404 % \newlength{\headwidth}
405 \renewcommand*\makeheadrule[3]{}
406 \renewcommand*\makefootrule[3]{}
407 \renewcommand*\makeheadfootruleprefix[3]{}
408 % \newlength{\normalrulethickness}
409 % \setlength{\normalrulethickness}{.4pt}
410 % \newlength{\footruleheight}
411 % \newlength{\footruleskip}

```

```

412 \renewcommand*\makeheadposition}[5]{}
413 \renewcommand\makepsmarks}[2]{}
414 \renewcommand*\makeheadfootstrut}[3]{}
415
416 \renewcommand\createplainmark}[3]{}
417 \renewcommand\memUchead}[1]{}
418 \renewcommand\createmark}[5]{}
419 \renewcommand*\clearplainmark}[1]{}
420 \renewcommand*\clearmark}[1]{}
421 \renewcommand\addtopsmarks}[3]{}
422 \renewcommand\ifonlyfloats}[2]{#2}
423 \renewcommand*\mergepagefloatstyle}[3]{}
424
425 \renewcommand*\framepichead{}{}
426 \renewcommand*\framepictextfoot{}{}
427 \renewcommand*\framepichook{}{}
428 \renewcommand*\showheadfootlocoff{}{}
429 \renewcommand*\showtextblocklocoff{}{}

```

## § 519.9 Paragraphs and lists

```

430 \renewcommand\hangfrom}[1]{#1}
431 \let\centerfloat\centering
432 \renewcommand*\raggedyright}[1][{}{}
433 % \newlength\ragrparindent
434 \renewcommand\sourceatright}[2][\attribution{#2}]
435 \let\memorigdbs\LWR@endofline
436 \let\memorigpar\par
437 \let\atcentercr\LWR@endofline
438
439 \renewcommand*\linenottooshort}[1][{}{}
440 \renewcommand*\russianpar{}{}
441 \renewcommand*\lastlinerulefill{}{}
442 \renewcommand*\lastlineparrule{}{}
443 \renewcommand*\justlastraggedleft{}{}
444 \renewcommand*\raggedrightthenleft{}{}
445 \renewcommand*\leftcenterright{}{}
446
447 \renewcommand\leftspringright}[4]{%
448 \begin{minipage}{#1\linewidth}#3\end{minipage}\qqquad%
449 \begin{minipage}{#2\linewidth}\begin{flushright}#4\end{flushright}\end{minipage}%
450 }
451
452 \renewenvironment*{blockdescription}
453 {\LWR@descriptionstart\LWR@origdescription}
454 {\enddescription}
455 \renewcommand*\blockdescriptionlabel}[1]{\textbf{#1}}
456 \renewenvironment*{labelled}[1]{\begin{description}}{\end{description}}
457 \renewenvironment*{flexlabelled}[6]{\begin{description}}{\end{description}}
458 \renewcommand*\tightlists{}{}
459 \renewcommand*\defaultlists{}{}
460 \RenewDocumentCommand\firmlists}{s}{}
461 \renewcommand*\firmlist{}{}
462 \renewcommand*\tightlist{}{}
463 \renewcommand*\zerotrivseps{}{}

```

```
464 \renewcommand*\savetrivseps{}
465 \renewcommand*\restoretrivseps{}
```

## § 519.10 Contents lists

```
466 \csletcs{tableofcontents*}{tableofcontents}
467 \csletcs{listoffigures*}{listoffigures}
468 \csletcs{listoftables*}{listoftables}
469 \renewenvironment{KeepFromToc}{}{}
470 \renewcommand*\onocoltocetc{}
471 \renewcommand*\twocoltocetc{}
472 \renewcommand*\ensureonecol{}
473 \renewcommand*\restorefromonecol{}
474 \renewcommand*\doccoltocetc{}
475 \renewcommand*\maxtocdepth[1]{% tocvsec2
476 \renewcommand*\settocdepth[1]{% tocvsec2
477
478 \renewcommand\totheadstart{}
479 \renewcommand\printtoctitle[1]{}
480 \renewcommand\tocmark{}
481 \renewcommand\aftertoctitle{}
482 \renewcommand\lofheadstart{}
483 \renewcommand\printloftitle[1]{}
484 \renewcommand\lofmark{}
485 \renewcommand\afterloftitle{}
486 \renewcommand\lotheadstart{}
487 \renewcommand\printlottitle[1]{}
488 \renewcommand\lotmark{}
489 \renewcommand\afterlottitle{}
490
491 \renewcommand*\setpnumwidth[1]{}
492 \renewcommand*\setmarg[1]{}
493 \renewcommand*\cftbookbreak{}
494 \renewcommand*\cftpartbreak{}
495 \renewcommand*\cftchapterbreak{}

496 % \newlength{\cftbeforebookskip}
497 % \newlength{\cftbookindent}
498 % \newlength{\cftbooknumwidth}
499 \renewcommand*\cftbookfont{}
500 \renewcommand*\cftbookname{}
501 \renewcommand*\cftbookpresnum{}
502 \renewcommand*\cftbookaftersnum{}
503 \renewcommand*\cftbookaftersnumb{}
504 \renewcommand*\cftbookleader{}
505 \renewcommand*\cftbookdotsep[1]
506 \renewcommand*\cftbookpagefont{}
507 \renewcommand*\cftbookafterpnum{}
508 \renewcommand*\cftbookformatpnum[1]{}
509 \renewcommand*\cftbookformatpnumhook[1]{}


```

Part is already defined by tocloft.

```
510 % \newlength{\cftbeforechapterskip}
511 % \newlength{\cftchapterindent}
```

```
512 % \newlength{\cftchapternumwidth}
513 \renewcommand*{\cftchapterfont}{}
514 \renewcommand*{\cftchaptername}{}
515 \renewcommand*{\cftchapterpresnum}{}
516 \renewcommand*{\cftchapteraftersnum}{}
517 \renewcommand*{\cftchapteraftersnumb}{}
518 \renewcommand*{\cftchapterleader}{}
519 \renewcommand*{\cftchapterdotsep}{1}
520 \renewcommand*{\cftchapterpagefont}{}
521 \renewcommand*{\cftchapterafterpnum}{}
522 \renewcommand*{\cftchapterformatpnum}[1]{}
523 \renewcommand*{\cftchapterformatpnumhook}[1]{}

524 % \newlength{\cftbeforesectionsip}
525 % \newlength{\cftsectionindent}
526 % \newlength{\cftsectionnumwidth}
527 \renewcommand*{\cftsectionfont}{}
528 \renewcommand*{\cftsectionname}{}
529 \renewcommand*{\cftsectionpresnum}{}
530 \renewcommand*{\cftsectionaftersnum}{}
531 \renewcommand*{\cftsectionaftersnumb}{}
532 \renewcommand*{\cftsectionleader}{}
533 \renewcommand*{\cftsectiondotsep}{1}
534 \renewcommand*{\cftsectionpagefont}{}
535 \renewcommand*{\cftsectionafterpnum}{}
536 \renewcommand*{\cftsectionformatpnum}[1]{}
537 \renewcommand*{\cftsectionformatpnumhook}[1]{}

538 % \newlength{\cftbeforesubsectionskip}
539 % \newlength{\cftsubsectionindent}
540 % \newlength{\cftsubsectionnumwidth}
541 \renewcommand*{\cftsubsectionfont}{}
542 \renewcommand*{\cftsubsectionname}{}
543 \renewcommand*{\cftsubsectionpresnum}{}
544 \renewcommand*{\cftsubsectionaftersnum}{}
545 \renewcommand*{\cftsubsectionaftersnumb}{}
546 \renewcommand*{\cftsubsectionleader}{}
547 \renewcommand*{\cftsubsectiondotsep}{1}
548 \renewcommand*{\cftsubsectionpagefont}{}
549 \renewcommand*{\cftsubsectionafterpnum}{}
550 \renewcommand*{\cftsubsectionformatpnum}[1]{}
551 \renewcommand*{\cftsubsectionformatpnumhook}[1]{}

552 % \newlength{\cftbeforesubsubsectionskip}
553 % \newlength{\cftsubsubsectionindent}
554 % \newlength{\cftsubsubsectionnumwidth}
555 \renewcommand*{\cftsubsubsectionfont}{}
556 \renewcommand*{\cftsubsubsectionname}{}
557 \renewcommand*{\cftsubsubsectionpresnum}{}
558 \renewcommand*{\cftsubsubsectionaftersnum}{}
559 \renewcommand*{\cftsubsubsectionaftersnumb}{}
560 \renewcommand*{\cftsubsubsectionleader}{}
561 \renewcommand*{\cftsubsubsectiondotsep}{1}
562 \renewcommand*{\cftsubsubsectionpagefont}{}
563 \renewcommand*{\cftsubsubsectionafterpnum}{}
564 \renewcommand*{\cftsubsubsectionformatpnum}[1]{}

```

```
565 \renewcommand*{\cftsubsubsectionformatpnumhook}[1]{}

566 % \newlength{\cftbeforeparagraphskip}
567 % \newlength{\cftparagraphindent}
568 % \newlength{\cftparagraphnumwidth}
569 \renewcommand*{\cftparagraphfont}{}
570 \renewcommand*{\cftparagraphname}{}
571 \renewcommand*{\cftparagraphpresnum}{}
572 \renewcommand*{\cftparagraphaftersnum}{}
573 \renewcommand*{\cftparagraphaftersnumb}{}
574 \renewcommand*{\cftparagraphleader}{}
575 \renewcommand*{\cftparagraphdotsep}{1}
576 \renewcommand*{\cftparagraphpagefont}{}
577 \renewcommand*{\cftparagraphafterpnum}{}
578 \renewcommand*{\cftparagraphformatpnum}[1]{}
579 \renewcommand*{\cftparagraphformatpnumhook}[1]{}

580 % \newlength{\cftbeforesubparagraphskip}
581 % \newlength{\cftsubparagraphindent}
582 % \newlength{\cftsubparagraphnumwidth}
583 \renewcommand*{\cftsubparagraphfont}{}
584 \renewcommand*{\cftsubparagraphname}{}
585 \renewcommand*{\cftsubparagraphpresnum}{}
586 \renewcommand*{\cftsubparagraphaftersnum}{}
587 \renewcommand*{\cftsubparagraphaftersnumb}{}
588 \renewcommand*{\cftsubparagraphleader}{}
589 \renewcommand*{\cftsubparagraphdotsep}{1}
590 \renewcommand*{\cftsubparagraphpagefont}{}
591 \renewcommand*{\cftsubparagraphafterpnum}{}
592 \renewcommand*{\cftsubparagraphformatpnum}[1]{}
593 \renewcommand*{\cftsubparagraphformatpnumhook}[1]{}

594 % \newlength{\cftbeforefigureskip}
595 % \newlength{\cftfigureindent}
596 % \newlength{\cftfigurenumwidth}
597 \renewcommand*{\cftfigurefont}{}
598 \renewcommand*{\cftfigurename}{}
599 \renewcommand*{\cftfigurepresnum}{}
600 \renewcommand*{\cftfigureaftersnum}{}
601 \renewcommand*{\cftfigureaftersnumb}{}
602 \renewcommand*{\cftfigureleader}{}
603 \renewcommand*{\cftfiguredotsep}{1}
604 \renewcommand*{\cftfigurepagefont}{}
605 \renewcommand*{\cftfigureafterpnum}{}
606 \renewcommand*{\cftfigureformatpnum}[1]{}
607 \renewcommand*{\cftfigureformatpnumhook}[1]{}

608 % \newlength{\cftbeforesubfigureskip}
609 % \newlength{\cftsubfigureindent}
610 % \newlength{\cftsubfigurenumwidth}
611 \newcommand*{\cftsubfigurefont}{}
612 \newcommand*{\cftsubfigurename}{}
613 \newcommand*{\cftsubfigurepresnum}{}
614 \newcommand*{\cftsubfigureaftersnum}{}
615 \newcommand*{\cftsubfigureaftersnumb}{}
616 \newcommand*{\cftsubfigureleader}{}

```

```
617 \newcommand*\cftsubfiguredotsep}{1}
618 \newcommand*\cftsubfigurepagefont}{}
619 \newcommand*\cftsubfigureafterpnum}{}
620 \newcommand*\cftsubfigureformatpnum}[1]{}
621 \newcommand*\cftsubfigureformatpnumhook}[1]{}

622 % \newlength{\cftbeforetablesip}
623 % \newlength{\cfttableindent}
624 % \newlength{\cfttablenumwidth}
625 \renewcommand*\cfttablefont}{}
626 \renewcommand*\cfttablename}{}
627 \renewcommand*\cfttablepresnum}{}
628 \renewcommand*\cfttableaftersnum}{}
629 \renewcommand*\cfttableaftersnumb}{}
630 \renewcommand*\cfttableleader}{}
631 \renewcommand*\cfttabledotsep}{1}
632 \renewcommand*\cfttablepagefont}{}
633 \renewcommand*\cfttableafterpnum}{}
634 \renewcommand*\cfttableformatpnum}[1]{}
635 \renewcommand*\cfttableformatpnumhook}[1]{}

636 % \newlength{\cftbeforesubtablesip}
637 % \newlength{\cftsubtableindent}
638 % \newlength{\cftsubtablenumwidth}
639 \newcommand*\cftsubtablefont}{}
640 \newcommand*\cftsubtablename}{}
641 \newcommand*\cftsubtablepresnum}{}
642 \newcommand*\cftsubtableaftersnum}{}
643 \newcommand*\cftsubtableaftersnumb}{}
644 \newcommand*\cftsubtableleader}{}
645 \newcommand*\cftsubtabledotsep}{1}
646 \newcommand*\cftsubtablepagefont}{}
647 \newcommand*\cftsubtableafterpnum}{}
648 \newcommand*\cftsubtableformatpnum}[1]{}
649 \newcommand*\cftsubtableformatpnumhook}[1]{}

650 \renewcommand*\booknumberline}[1]{}
651 \renewcommand*\partnumberline}[1]{}
652 \renewcommand*\chapternumberline}[1]{}
653 \renewcommand*\numberlinehook}[1]{}
654 % \renewcommand*\cftwhatismyname}{}%
655 \renewcommand*\booknumberlinehook}[1]{}
656 \renewcommand*\partnumberlinehook}[1]{}
657 \renewcommand*\chapternumberlinehook}[1]{}
658 \renewcommand*\numberlinebox}[2]{}
659 \renewcommand*\booknumberlinebox}[2]{}
660 \renewcommand*\partnumberlinebox}[2]{}
661 \renewcommand*\chapternumberlinebox}[2]{}
662 %
663 % \newlength{\cftparfillskip}
664 \renewcommand*\cftpagenumbersoff}[1]{}
665 \renewcommand*\cftpagenumberon}[1]{}
666 \renewcommand*\cftlocalchange}[3]{}
667 \renewcommand*\cftaddtitleline}[4]{}
668 \renewcommand*\cftaddnumtitleline}[4]{}
669 \renewcommand*\cftinsertcode}[2]{}

```

```

670 \renewcommand{\cftinserthook}[2]{}
671 \renewcommand{\settocpreprocessor}[2]{}
672 \DeclareRobustCommand{\cftpagenumbersoff}[1]{}
673 \DeclareRobustCommand{\cftpagenumberon}[1]{}

```

### § 519.11 Floats and captions

`\newfloat` [*<1: within>*] [*<2: type>*] [*<3: ext>*] [*<4: capname>*]

```

674 \RenewDocumentCommand{\newfloat}{o m m m}{%
675 \IfValueTF{#1}%
676 {\DeclareFloatingEnvironment[fileext=#3,within=#1,name={#4}]{#2}}%
677 {\DeclareFloatingEnvironment[fileext=#3,name={#4}]{#2}}%

```

`newfloat` package automatically creates the `\listof` command for new floats, but `float` does not, so remove `\listof` here in case it is manually created later.

```

678 \cslet{listof#2s}\relax%
679 \cslet{listof#2es}\relax%
680 }

```

`\newlistof` [*<within>*] [*<type>*] [*<ext>*] [*<listofname>*]

Emulated through the `\newfloat` mechanism. Note that `memoir` uses a different syntax than `tocloft` for the name.

```

681 \RenewDocumentCommand{\newlistof}{o m m m}
682 {%
683 \IfValueTF{#1}
684 {\newlistentry[#1]{#2}{#3}{0}}
685 {\newlistentry{#2}{#3}{0}}
686 \@namedef{ext@#2}{#3}%
687 \@ifundefined{c@#3depth}{\newcounter{#3depth}}{}%
688 \setcounter{#3depth}{1}%
689 \@namedef{#3mark}{}%
690 \@namedef{#2}{\listof{#2}{#4}}
691 \@namedef{@cftmake#3title}{}
692 \@ifundefined{cftbefore#3titleskip}{
693 \expandafter\newlength\csname cftbefore#3titleskip\endcsname
694 \expandafter\newlength\csname cftafter#3titleskip\endcsname
695 }{}
696 \@namedef{cft#3titlefont}{}
697 \@namedef{cftafter#3title}{}
698 \@namedef{cft#3prehook}{}
699 \@namedef{cft#3posthook}{}
700 }

```

```

701 \renewcommand{\setfloatadjustment}[2]{}

```

Borrowed from the `lwarp` version of `keyfloat`:

```

702 \NewDocumentEnvironment{KFLTmemoir@marginfloat}{0{-1.2ex} m}
703 {% start
704 \LWR@BlockClassWP{float:right; width:2in; margin:10pt}{}{marginblock}%
705 \captionsetup{type=#2}%
706 }

```

```

707 {%
708 \endLWR@BlockClassWP%
709 }
710
711 \DeclareDocumentEnvironment{marginfigure}{o}
712 {\begin{KFLTmemoir@marginfloat}{figure}}
713 {\end{KFLTmemoir@marginfloat}}
714
715 \DeclareDocumentEnvironment{margintable}{o}
716 {\begin{KFLTmemoir@marginfloat}{table}}
717 {\end{KFLTmemoir@marginfloat}}

718 \renewcommand{\setmarginfloatcaptionadjustment}[2]{}
719 \renewcommand{\setmpjustification}[2]{}
720 \renewcommand*\mpjustification{}
721 \renewcommand*\setfloatlocations[2]{}
722 \DeclareDocumentCommand\suppressfloats{o}{}
723 \renewcommand*\FloatBlock{}
724 \renewcommand*\FloatBlockAllowAbove{}
725 \renewcommand*\FloatBlockAllowBelow{}
726 \renewcommand*\setFloatBlockFor{}
727
728 \renewcommand\captiontitlefinal[1]{}
729
730 \renewcommand\flgtable{\tablename}
731 \renewcommand\flgfigure{\figurename}
732 \renewcommand\flgtoctable{}
733 \renewcommand\flgtoctofigure{}
734
735
736 \renewcommand\subcaption[2][{}]{%
737 \ifblank{#1}{\subfloat[#2]}{\subfloat[#1][#2]}}%
738 }
739
740 \renewcommand\contsubcaption{\ContinuedFloat\subcaption}
741
742 \LetLtxMacro\subcaptionref\subref
743
744 \renewcommand*\tightsubcaptions{}
745 \renewcommand*\loosesubcaptions{}
746
747 \renewcommand*\subcaptionsize[1]{}
748 \renewcommand*\subcaptionlabelfont[1]{}
749 \renewcommand*\subcaptionfont[1]{}
750 \renewcommand*\subcaptionstyle[1]{}
751
752 \renewcommand*\hangsubcaption{}
753 \renewcommand*\shortsubcaption{}
754 \renewcommand*\normalsubcaption{}
755
756 \RenewDocumentEnvironment{sidecaption}{o m o}
757 {}
758 {
759 \IfValueTF{#1}{\caption[#1][#2]}{\caption{#2}}%
760 \IfValueT{#3}{\label{#3}}%

```



```

761 }
762
763 % \newlength{\sidecapwidth}
764 % \newlength{\sidecapsep}
765 \renewcommand*\setsidecaps[2]{}
766 \renewcommand*\sidecapmargin[1]{}
767 % \newif\ifscapmargleft
768 \scapmargleftfalse
769 \renewcommand*\setsidecappos[1]{}
770
771 \RenewDocumentEnvironment{sidecontcaption}{m o}
772 {}
773 {}
774 \ContinuedFloat%
775 \caption{#1}%

```

Without \@capttype, the section is referred to instead.

```

776 \IfValueT{#2}{\label[\@capttype]{#2}}%
777 }

```

\sidenamedlegend does not appear to use the toc argument.

```

778 \renewenvironment{sidenamedlegend}[2][]{
779 \begin{center}
780 \@nameuse{\@capttype name}\CaptionSeparator#2
781 \end{center}
782 }
783 {}
784
785 \renewenvironment{sidelegend}[1]
786 {\begin{center}
787 #1
788
789 }
790 {\end{center}}
791
792 \renewcommand*\sidecapstyle{}
793 \renewcommand*\overridescapmargin[1]{}
794 % \newlength{\sidecapraise}
795 \renewcommand*\sidecapfloatwidth{\linewidth}
796
797 \LetLtxMacro\ctabular\tabular
798 \LetLtxMacro\endctabular\endtabular
799
800 \renewcommand{\autorows}[5][]{%
801 #5
802 }
803
804 \renewcommand{\autocols}[5][]{%
805 #5
806 }

```

§ 519.12 **Page notes**

```

807 \renewcommand*{\feetabovefloat}{}
808 \renewcommand*{\feetbelowfloat}{}
809 \renewcommand*{\feetatbottom}{}
810
811 \renewcommand*{\verbfootnote}[2][{}
812 \PackageError{lwarp, memoir}
813 {Verbatim footnotes are not yet supported by lwarp.}
814 {This may be improved some day.}
815 }
816
817 \renewcommand*{\plainfootnotes}{}
818 \renewcommand*{\twocolumnfootnotes}{}
819 \renewcommand*{\threecolumnfootnotes}{}
820 \renewcommand*{\paragraphfootnotes}{}
821 \renewcommand*{\footfudgefiddle}{}
822
823 \renewcommand*{\newfootnoteseries}[1]{
824 \PackageError{lwarp, memoir}
825 {Memoir footnote series are not yet supported by lwarp.}
826 {This may be improved some day.}
827 }
828
829 \renewcommand*{\plainfootstyle}[1]{}
830 \renewcommand*{\twocolumnfootstyle}[1]{}
831 \renewcommand*{\threecolumnfootstyle}[1]{}
832 \renewcommand*{\paragraphfootstyle}[1]{}
833
834 \renewcommand*{\footfootmark}{}
835 \renewcommand*{\footmarkstyle}[1]{}
836
837 % \newlength{\footmarkwidth}
838 % \newlength{\footmarksep}
839 % \newlength{\footparindent}
840
841 \renewcommand*{\foottextfont}{}
842
843 \renewcommand*{\marginparmargin}[1]{}
844 \renewcommand*{\sideparmargin}[1]{}
845
846 \LetLtxMacro\sidepar\marginpar
847 \renewcommand*{\sideparfont}{}
848 \renewcommand*{\sideparform}{}
849 \LWR@providelength{\sideparvshift}
850
851 \renewcommand*{\parnopar}{}
852
853 \renewcommand{\sidebar}[1]{\begin{quote}#1\end{quote}}
854 \renewcommand*{\sidebarmargin}[1]{}
855 \renewcommand*{\sidebarfont}{}
856 \renewcommand*{\sidebarform}{}
857 % \newlength{\sidebarhsep}
858 % \newlength{\sidebarvsep}
859 % \newlength{\sidebarwidth}
860 % \newlength{\sidebartopsep}

```

```

861 \renewcommand{\setsidebarheight}[1]{}
862 \renewcommand*\setsidebars[6]{}
863 \renewcommand*\footnotesatfoot{}
864 \renewcommand*\footnotesinmargin{}
865
866 \LetLtxMacro\sidefootnote\footnote
867 \LetLtxMacro\sidefootnotemark\footnotemark
868 \LetLtxMacro\sidefootnotetext\footnotetext
869
870 \renewcommand*\sidefootmargin[1]{}
871 % \newlength{\sidefoothsep}
872 % \newlength{\sidefootvsep}
873 % \newlength{\sidefootwidth}
874 % \newlength{\sidefootadjust}
875 % \newlength{\sidefootheight}
876 \renewcommand*\setsidefootheight[1]{}
877 % \renewcommand*\sidefootfont{}% in docs but not in the package
878 \renewcommand*\setsidefeet[6]{}
879 \renewcommand*\sidefootmarkstyle[1]{}
880 \renewcommand*\sidefoottextfont{}
881 \renewcommand*\sidefootform{}
882
883 \renewcommand*\continuousnotenums{\pncontopttrue}% from pagenote
884 \renewcommand*\notepageref{}
885 \renewcommand*\prenotetext{}
886 \renewcommand*\postnotetext{}
887 \renewcommand*\idtextinnotes[1]{}
888 \renewcommand*\printpageinnotes[1]{}
889 \renewcommand*\printpageinnoteshyperref[1]{}
890 \renewcommand*\foottopagenote{}
891 \renewcommand*\pagetofootnote{}

```

### § 519.13 **Decorative text**

```

892 \renewcommand*\epigraphposition[1]{}
893 \renewcommand*\epigraphtextposition[1]{}
894 \renewcommand*\epigraphsourceposition[1]{}
895 \renewcommand*\epigraphfontsize[1]{}
896 \renewcommand*\epigraphforheader[2]{}
897 \renewcommand*\epigraphpicture{}

```

### § 519.14 **Poetry**

```

898 \renewcommand*\vinphantom{}
899 \renewcommand*\vleftofline[1]{#1}
900 % \let\linenumfrequency\poemlines
901 % \renewcommand*\linenumfont[1]{}
902
903 \DeclareDocumentCommand{\PoemTitle}{s o o m}{%
904 \IfValueTF{#2}%
905 {\poemtitle[#2]{#4}}%
906 {\poemtitle{#4}}%
907 }
908
909 \renewcommand*\NumberPoemTitle{}

```

```

910 \renewcommand*\PlainPoemTitle{}
911 \renewcommand*\poemtitlestyle{}
912 \renewcommand*\poemtitlestarmark}[1]{}
913 \renewcommand*\poemtitlestarpstyle{}
914 \renewcommand*\PoemTitleheadstart{}
915 \renewcommand*\printPoemTitlenonum{}
916 \renewcommand*\printPoemTitlenum{}
917 \renewcommand*\afterPoemTitlenum{}
918 \renewcommand*\printPoemTitletitle}[1]{}
919 \renewcommand*\afterPoemTitle{}
920 \newlength{\midpoemtitleskip}
921 \renewcommand*\PoemTitlenumfont{}
922 \renewcommand*\PoemTitlefont{}

```

### § 519.15 Boxes, verbatims and files

```

923 \renewenvironment{qframe}{\framed}{\endframed}
924 \renewenvironment{qshade}{\shaded}{\endshaded}

```

Use the comment package:

```

925 \renewcommand*\commentsoff}[1]{\includecomment{#1}}
926 \renewcommand*\commentson}[1]{\excludecomment{#1}}
927 \LetLtxMacro\renewcomment\commentson
928
929 \renewcommand*\setverbatimfont}[1]{}
930 \renewcommand*\tabson}[1]{}
931 \renewcommand*\tabsoff{}
932 \renewcommand*\wrappingon{}
933 \renewcommand*\wrappingoff{}
934 \renewcommand*\verbatimindent{}
935 \renewcommand*\verbatimbreakchar}[1]{}

936 \DefineVerbatimEnvironment{fboxverbatim}{Verbatim}{frame=single}

```

`boxedverbatim` is already defined by `moreverb`. `boxedverbatim*` does not appear to work at all, even in a minimal print memoir document.

```

937 \renewcommand*\bvbox{}
938 \renewcommand*\bvtopandtail{}
939 \renewcommand*\bvsvides{}
940 \renewcommand*\nobvbox{}
941 % \newlength\bvboxsep
942 \renewcommand*\bvtoprulehook{}
943 \renewcommand*\bvtopmidhook{}
944 \renewcommand*\bvendrulehook{}
945 \renewcommand*\bvleftsidehook{}
946 \renewcommand*\bvrightsidehook{}
947 \renewcommand*\bvperpagetrue{}
948 \renewcommand*\bvperpagefalse{}
949 \renewcommand{\bvtopofpage}[1]{}
950 \renewcommand{\bvendofpage}[1]{}
951 \renewcommand*\linenumberfrequency}[1]{}
952 \renewcommand*\resetbvlinenumber{}
953 \renewcommand*\setbvlinenums}[2]{}

```

```

954 \renewcommand*\linenumberfont}[1]{}
955 \renewcommand*\bvnumbersinside{}
956 \renewcommand*\bvnumbersoutside{}

```

### § 519.16 Cross referencing

```

957 \renewcommand*\fref}[1]{\cref{#1}}
958 \renewcommand*\tref}[1]{\cref{#1}}
959 \renewcommand*\pref}[1]{\cpageref{#1}}
960 \renewcommand*\Aref}[1]{\cref{#1}}
961 \renewcommand*\Bref}[1]{\cref{#1}}
962 \renewcommand*\Pref}[1]{\cref{#1}}
963 \renewcommand*\Sref}[1]{\cref{#1}}
964 \renewcommand*\figurerefname{Figure}
965 \renewcommand*\tablerefname{Table}
966 \renewcommand*\pagerefname{page}
967 \renewcommand*\bookrefname{Book~}
968 \renewcommand*\partrefname{Part~}
969 \renewcommand*\chapterrefname{Chapter~}
970 \renewcommand*\sectionrefname{\S}
971 \renewcommand*\appendixrefname{Appendix~}
972 \LetLtxMacro\titleref\nameref
973 \renewcommand*\headnameref{}
974 \renewcommand*\tocnameref{}
975
976 \providecounter{LWR@currenttitle}
977
978 \renewcommand*\currenttitle{%
979 \addtocounter{LWR@currenttitle}{1}%
980 \label{currenttitle\arabic{LWR@currenttitle}}%
981 \nameref{currenttitle\arabic{LWR@currenttitle}}%
982 }
983
984 \renewcommand*\theTitleReference}[2]{}
985 \renewcommand*\namerefon{}
986 \renewcommand*\namerefoff{}

```

### § 519.17 Back matter

Redefined to write the LWR@autoindex counter instead of page. Note that memoir has two versions, depending on the use of hyperref.

```

987 \AtBeginDocument{
988
989 \def\@wrindexhyp#1||\{\%
990 \addtocounter{LWR@autoindex}{1}%
991 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}%
992 % \ifshowindexmark\@showidx{#1}\fi
993 \protected@write\@auxout{\%
994 {\string\@wrindexm@m{\@idxfile}{#1}{\arabic{LWR@autoindex}}}%
995 \endgroup
996 \@esphack}%

```

`\specialindex` behaves like a regular `\index`, pointing to where `\specialindex` is used. If `\specialindex` is used inside a figure or table after the `\caption`, then the hyperlink will be given the name of that particular figure or table.

```

997 \def\@wrsindexhyp#1||\{\%
998 \addtocounter{LWR@autoindex}{1}\%
999 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}\%
1000 % \ifshowindexmark\@showidx{#1}\fi
1001 \protected@write\@auxout{\%
1002 {\%
1003 \string\@wrsindexm@{\@idxfile}{#1}{\@nameuse{the\@sptheidx}}\%
1004 \string\@wrsindexm@{\@idxfile}{#1}{\arabic{LWR@autoindex}}\%
1005 }%\%
1006 \endgroup
1007 \@esphack}\%
1008
1009 }\% \AtBeginDocument

```

Patched to use `_html` filename and `\BaseJobname`:

```

1010 \catcode'_ =12%
1011 \renewcommand*\makeindex}[1][\BaseJobname]{\%
1012 \if@filesw
1013 \def\gindex{\@bsphack%
1014 \ifnextchar [{\@index}{\@index[\BaseJobname]}}
1015 \def\specialindex{\@bsphack\@spindex}%
1016 \makememindexhook
1017 \expandafter\newwrite\csname #1@idxfile\endcsname
1018 \expandafter\immediate\openout \csname #1@idxfile\endcsname #1_html.idx\relax
1019 \typeout{Writing index file #1_html.idx }%
1020 \fi}
1021 \catcode'_ =8%

```

Patched to use `_html` filename and `\BaseJobname`. This will later be patched by the `lwarp` core.

```

1022 \catcode'_ =12%
1023 \renewcommand*\printindex}[1][\BaseJobname]{\input@{#1_html.ind}}
1024 \catcode'_ =8%

1025 \DeclareDocumentCommand{\newblock}{}{}
1026 %
1027 \renewcommand*\showindexmarks{}
1028 \renewcommand*\hideindexmarks{}
1029
1030 \renewcommand*\xindyindex{}

```

§ 519.18 **Miscellaneous**

```

1031 \renewcommand*\changemarks{}
1032 \renewcommand*\nochangemarks{}
1033 \renewcommand*\added[1]{}
1034 \renewcommand*\deleted[1]{}
1035 \renewcommand*\changed[1]{}
1036
1037 \renewcommand*\showtrimsoff{}
1038 \renewcommand*\showtrimson{}
1039 \renewcommand*\trimXmarks{}
1040 \renewcommand*\trimLmarks{}
1041 \renewcommand*\trimFrame{}
1042 \renewcommand*\trimNone{}
1043 \renewcommand*\trimmarkscolor{}
1044 \renewcommand*\trimmarks{}
1045 \renewcommand*\tmarktl{}
1046 \renewcommand*\tmarktr{}
1047 \renewcommand*\tmarkbr{}
1048 \renewcommand*\tmarkbl{}
1049 \renewcommand*\tmarktm{}
1050 \renewcommand*\tmarkmr{}
1051 \renewcommand*\tmarkbm{}
1052 \renewcommand*\tmarkml{}
1053 \renewcommand*\trimmark{}
1054 \renewcommand*\quarkmarks{}
1055 \renewcommand*\registrationColour[1]{}
1056
1057 \renewcommand*\leavespergathering[1]{}
1058
1059 \renewcommand*\noprelistbreak{}
1060
1061 \renewcommand*\cleartorecto{}
1062 \renewcommand*\cleartoverso{}
1063
1064 \renewenvironment{vplace}[1][1]{}{}

```

§ 519.19 **caption emulation**

```

1065 \renewcommand*\captiondelim[1]{\renewcommand*\CaptionSeparator}{#1}}
1066 \renewcommand*\captionnamefont[1]{}
1067 \renewcommand*\captiontitlefont[1]{}
1068 \renewcommand*\flushleft{}
1069 \renewcommand*\centerlastline{}
1070 \renewcommand*\captionstyle[2][1]{}
1071 \DeclareDocumentCommand\captionwidth{m}{}
1072 \renewcommand*\changecaptionwidth{}
1073 \renewcommand*\normalcaptionwidth{}
1074 \renewcommand*\hangcaption{}
1075 \renewcommand*\indentcaption[1]{}
1076 \renewcommand*\normalcaption{}
1077 \renewcommand\precaption[1]{}
1078 \renewcommand\postcaption[1]{}
1079 \renewcommand\midbicapTION[1]{}
1080 \renewcommand\contcaption[1]{%

```

```

1081 % \ContinuedFloat%
1082 % \caption{#1}%
1083 \begin{LWR@figcaption}% later becomes \caption*
1084 \LWR@isolate{\@nameuse{\@capttype name}}~%
1085 \thechapter.\the\value{\@capttype}\CaptionSeparator\LWR@isolate{#1}%
1086 \end{LWR@figcaption}
1087 }

```

```

1088 \newlength{\abovelegendskip}
1089 \setlength{\abovelegendskip}{0.5\baselineskip}
1090 \newlength{\belowlegendskip}
1091 \setlength{\belowlegendskip}{\abovelegendskip}

```

The extra \\ here forces a <br> in HTML when \legend is used in a \marginpar.

```

1092 \renewcommand{\legend}[1]{\begin{center}#1\\end{center}}
1093
1094 \renewcommand{\namedlegend}[2][]{
1095 \begin{center}
1096 \@nameuse{fleg\@capttype}\CaptionSeparator#2\\
1097 \end{center}
1098 \@nameuse{flegtoc\@capttype}{#1}
1099 }
1100
1101 \renewcommand{\newfixedcaption}[3][\caption]{%
1102 \renewcommand{#2}{\def\@capttype{#3}#1}}
1103 \renewcommand{\renewfixedcaption}[3][\caption]{%
1104 \renewcommand{#2}{\def\@capttype{#3}#1}}
1105 \renewcommand{\providefixedcaption}[3][\caption]{%
1106 \providecommand{#2}{\def\@capttype{#3}#1}}
1107
1108 \renewcommand{\bitwonumcaption}[6][]{%
1109 \ifblank{#2}{\caption{#3}}{\caption[#2]{#3}}%
1110 \addtocounter{\@capttype}{-1}%
1111 \begingroup%
1112 \csdef{\@capttype name}{#4}%
1113 \ifblank{#5}{\caption{#6}}{\caption[#5]{#6}}%
1114 \endgroup%
1115 \ifblank{#1}{ }\{\label{#1}}%
1116 }
1117
1118 \LetLtxMacro\bionenumcaption\bitwonumcaption% todo
1119
1120 \renewcommand{\bicaption}[5][]{%
1121 \ifblank{#2}{\caption{#3}}{\caption[#2]{#3}}%
1122 \begin{LWR@figcaption}% later becomes \caption*
1123 \LWR@isolate{#4} \thechapter.\the\value{\@capttype}\CaptionSeparator\LWR@isolate{#5}%
1124 \end{LWR@figcaption}
1125 \ifblank{#1}{ }\{\label{#1}}%
1126 }
1127
1128 \renewcommand{\bicontcaption}[3]{%
1129 \contcaption{#1}%
1130 \begingroup%
1131 \csdef{\@capttype name}{#2}%
1132 \contcaption{#3}%

```



```

1133 \endgroup%
1134 }

1135 % only in ccaption, not in memoir:
1136 % \LetLtxMacro\longbitwonumcaption\bitwonumcaption%
1137 % \LetLtxMacro\longbionenumcaption\bitwonumcaption%
1138 % \LetLtxMacro\longbicaption\bicaption%
1139
1140 \RenewDocumentCommand{\subtop}{O{} O{} m}{%
1141 \subfloat[#1][#2]{#3}%
1142 }
1143
1144 \RenewDocumentCommand{\subbottom}{O{} O{} m}{%
1145 \subfloat[#1][#2]{#3}%
1146 }
1147
1148 \renewcommand{\contsubtop}{%
1149 \ContinuedFloat\addtocounter{\@capttype}{1}%
1150 \subtop}
1151
1152 \renewcommand{\contsubbottom}{%
1153 \ContinuedFloat\addtocounter{\@capttype}{1}%
1154 \subbottom}
1155
1156 \renewcommand{\subconcluded}{\}
1157
1158 \let\subfigure\subbottom
1159 \let\subtable\subtop
1160
1161 \let\contsubtable\contsubtop
1162 \let\contsubfigure\contsubbottom

1163 \newcommand{\newfloatentry}[4][\@empty]{TODO: newfloatentry}
1164 \newcommand{\newfloatlist}[5][\@empty]{TODO: newfloatlist}
1165 \newcommand{\newfloatenv}[4][\@empty]{TODO: newfloatenv}
1166 \DeclareRobustCommand{\newfloatpagesoff}[1]{\}
1167 \DeclareRobustCommand{\newfloatpageson}[1]{\}
1168 \newcommand{\setnewfloatindents}[3]{\}

```

## § 519.20 Final patchwork

```

1169 \newlistof{tableofcontents}{toc}{\contentsname}
1170 \newlistof{listoffigures}{lof}{\listfigurename}
1171 \newlistof{listoftables}{lot}{\listtablename}

```

# Change History

## § 520 Chg Hist

For the most recent changes, see page [1036](#).

|       |                                                                                    |                                                              |
|-------|------------------------------------------------------------------------------------|--------------------------------------------------------------|
| v0.10 | General: 2016/03/08 Initial version . . . 1                                        | Test Suite: Assigned cleveref name for Test Float. . . . . 1 |
| v0.11 | General: 2016/03/11 . . . . . 1                                                    | Test Suite: Floatrow . . . . . 1                             |
|       | Added section: Operating-System portability. . . . . 213                           |                                                              |
|       | Added section: Selecting the operating system. . . . . 122                         |                                                              |
|       | Test Suite: MS-WINDOWS in README.txt . . . . . 1                                   |                                                              |
|       | Test Suite: limages and index in README.txt . . . . . 1                            |                                                              |
| v0.12 | \LWR@newhtmlfile: Bugfix: toc with numbered files. . . . . 357                     |                                                              |
|       | General: 2016/03/14 . . . . . 1                                                    |                                                              |
|       | Global: Uses \p@(type) in float captions. . . . . 1                                |                                                              |
|       | Test Suite: Sub-figures . . . . . 1                                                |                                                              |
| v0.13 | \CaptionSeparator: Fix for newer babel package. . . . . 477                        |                                                              |
|       | \LWR@LwarpStart: \up and \fup . . . 376                                            |                                                              |
|       | General: 2016/03/24 . . . . . 1                                                    |                                                              |
|       | Fix dollar-redefined bug for newer package. . . . . 917                            |                                                              |
|       | Removed package: subfig . . . . . 1                                                |                                                              |
|       | Test Suite: Ordinals, Subcaption . . . 1                                           |                                                              |
| v0.14 | \LWR@htmlsectionfilename: Fix: Links to home page. . . . . 319                     |                                                              |
|       | General: 2016/03/31 . . . . . 1                                                    |                                                              |
|       | floatrow: Added. . . . . 709                                                       |                                                              |
|       | Docs: Commands for a successful HTML conversion. . . . . 126                       |                                                              |
|       | Docs: Commands into a warpprint environment. . . . . 124                           |                                                              |
|       | Docs: Newclude limitations. . . . 169                                              |                                                              |
|       | Docs: Table: Cross-referencing data structures. . . . . 462                        |                                                              |
|       | Docs: Table: Float data structures. 473                                            |                                                              |
|       | Docs: Trademarks section. . . . . 193                                              |                                                              |
|       | Docs: Troubleshooting cross-references. . . . . 188                                |                                                              |
|       | Test Suite: Assigned cleveref name for Test Float. . . . . 1                       |                                                              |
|       | Test Suite: Floatrow . . . . . 1                                                   |                                                              |
| v0.15 | General: 2016/04/06 . . . . . 1                                                    |                                                              |
|       | Added. . . . . 714                                                                 |                                                              |
|       | Ampersand (&): Fixed handling when passed as an argument. . . 409                  |                                                              |
|       | Docs: Added warning icons for items needing special attention. 196                 |                                                              |
|       | Docs: Clarify print/HTML output. 123                                               |                                                              |
|       | Docs: Moved the supported features table to the introduction. 78                   |                                                              |
|       | Files: lwarp_formal.css added. . . . 1                                             |                                                              |
|       | Fix: steps counter . . . . . 714                                                   |                                                              |
|       | Fixed & handling. . . . . 712                                                      |                                                              |
|       | Test Suite: test_suite_formal.css file added. . . . . 1                            |                                                              |
| v0.16 | General: 2016/04/11 . . . . . 1                                                    |                                                              |
|       | \titlingpage: Improved print-output spacing. . . . . 384                           |                                                              |
|       | xfrac: Adjusted for the use of any font. . . . . 973                               |                                                              |
|       | Added XeLaTeX, LuaLaTeX support. . . . . 197                                       |                                                              |
|       | Docs: Font and UTF-8 support. . 109                                                |                                                              |
|       | Docs: Moved location of \usepackage{lwarp}. . . . . 111                            |                                                              |
|       | Docs: Text not converting. . . . . 188                                             |                                                              |
|       | Lwarp no longer selects fonts. 109, 223                                            |                                                              |
|       | Removed package: suffix . . . . . 1                                                |                                                              |
|       | Test Suite: Improved titlingpage. 384                                              |                                                              |
|       | Test Suite: Lwarp no longer selects fonts. . . . . 1                               |                                                              |
|       | Test Suite: Supports XeLaTeX, LuaLaTeX. . . . . 1                                  |                                                              |
| v0.17 | \LWR@htmlsectionfilename: Fix: Links when entire doc is one HTML page. . . . . 319 |                                                              |
|       | General: 2016/04/14 . . . . . 1                                                    |                                                              |
|       | mdframed: Added. . . . . 797                                                       |                                                              |

|                                                                                     |     |                                                                                        |               |
|-------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------|---------------|
| Test Suite: Fix: Print-version<br>front-matter page numbers. . . . .                | 1   | \LWR@minipagestartpars: Suppresses<br>paragraph tags between<br>minipages. . . . .     | 566           |
| Test Suite: Mdframed . . . . .                                                      | 1   | \LWR@subsingledollar: MATHJAX<br>support. . . . .                                      | 500           |
| v0.18                                                                               |     | \LateximageFontSizeName: Add:<br>User-adjustable math/lateximage<br>font size. . . . . | 521           |
| \LWR@includegraphicsb: Add: svgz<br>file extension. . . . .                         | 736 | \hspace: Fix: \hspace length<br>computations. . . . .                                  | 568           |
| em, ex, %, px dimensions<br>preserved. . . . .                                      | 736 | \minipagefullwidth: Added: No<br>width tag for the next minipage in<br>HTML. . . . .   | 545           |
| Fix: \linewidth, \textwidth,<br>\textheight inside a minipage. . . . .              | 736 | \warpHTMLonly: Added. . . . .                                                          | 222           |
| Improved HTML output linebreaks. . . . .                                            | 736 | \warpprintonly: Replaces<br>\rowprintedonly. . . . .                                   | 222           |
| \LWR@myshorttoc: Reorganize<br>\HomeHTMLFilename logic. . . . .                     | 481 | \xfracHTMLfontsize: Added. . . . .                                                     | 973           |
| \LWR@newhtmlfile: sideroc after title,<br>improving responsive design. . . . .      | 356 | General: 2016/06/08 . . . . .                                                          | 1             |
| \LWR@requesttoc: Reorganize<br>\HomeHTMLFilename logic. . . . .                     | 378 | css for table note item. . . . .                                                       | 915           |
| \LWR@subhyperref: Improved HTML<br>output linebreaks. . . . .                       | 469 | MATHJAX support added. . . . .                                                         | 509, 515, 517 |
| \LWR@subhyperrefclass: Improved<br>HTML output linebreaks. . . . .                  | 470 | multirow: Added optional args. . . . .                                                 | 815           |
| \LWR@subinlineimage: Suppress extra<br>space. . . . .                               | 471 | Adapts to tikz version. . . . .                                                        | 917           |
| \hspace: \hspace supported. . . . .                                                 | 568 | Avoids MATHJAX. . . . .                                                                | 499           |
| General: 2016/05/19 . . . . .                                                       | 1   | cleveref: Loaded \AtEndPreamble. . . . .                                               | 540           |
| File: lwarp.css: Improved toc<br>outline display. . . . .                           | 1   | Docs: Math options. . . . .                                                            | 111           |
| Files: lwarp.css and<br>lwarp_formal.css: Improved<br>responsive design. . . . .    | 1   | Docs: Table: Cross-referencing data<br>structures, updated. . . . .                    | 462           |
| Microtype disabled during HTML<br>generation . . . . .                              | 223 | File: lwarp.css: tnoteitemheader<br>added. . . . .                                     | 1             |
| PDF Unicode input characters. . . . .                                               | 211 | File: lwarp_mathjax.txt added. . . . .                                                 | 1             |
| Test Suite: Verse package . . . . .                                                 | 1   | Introduction: MATHJAX support<br>mentioned. . . . .                                    | 75            |
| lateximage: pdfcrop: -- hires added. . . . .                                        | 525 | Options: mathsvg and mathjax . . . . .                                                 | 216           |
| Reorganize \HomeHTMLFilename<br>logic. . . . .                                      | 525 | Supports colored \rule. . . . .                                                        | 964           |
| Suppress extra space. . . . .                                                       | 525 | titles: null \pagestyle and<br>\thispagestyle for HTML. . . . .                        | 918           |
| verse: Supports verse, memoir<br>packages. . . . .                                  | 952 | v0.20                                                                                  |               |
| minipage: Fix: \linewidth,<br>\textwidth, \textheight inside a<br>minipage. . . . . | 545 | \BlockClassSingle: Renamed from<br>"LWR@htmldivclassline". . . . .                     | 332           |
| v0.19                                                                               |     | \HTMLDescription: Added<br>\NewHTMLdescription. (Renamed<br>in v0.30.) . . . . .       | 343           |
| \HTMLFilename: Docs: Escape<br>filename underscores. . . . .                        | 319 | \HTMLFilename: No longer escape<br>underscores. . . . .                                | 319           |
| \HomeHTMLFilename: Docs: Escape<br>filename underscores. . . . .                    | 319 | \HomeHTMLFilename: No longer<br>escape underscores. . . . .                            | 319           |
| \LWR@LwarpStart: Enabled \ equal to<br>\newline. . . . .                            | 375 | \InlineClass: Renamed from<br>"inlineclass". . . . .                                   | 332           |
| \LWR@doequation: MATHJAX support. . . . .                                           | 512 | \LWR@LwarpStart: Fix: math cross<br>references. . . . .                                | 376           |
| \LWR@doubledollar: MATHJAX<br>support. . . . .                                      | 506 | \LWR@closeparagraph: \unskip extra<br>spaces. . . . .                                  | 336           |
| \LWR@filestart: lwarp_mathjax.txt<br>loaded. . . . .                                | 372 | No break tags in the start/end of a<br>tabular. . . . .                                | 336           |
|                                                                                     |     | \LWR@endofline: Fix: \ . . . . .                                                       | 566           |

|                                                                                                          |       |                                                                              |     |
|----------------------------------------------------------------------------------------------------------|-------|------------------------------------------------------------------------------|-----|
| \LWR@filestart: Adds meta description. . . . .                                                           | 372   | letterspace: User-interface emulated. . . . .                                | 774 |
| \LWR@htmldivclass: Added optional style. . . . .                                                         | 330   | listings: Added. . . . .                                                     | 778 |
| \LWR@htmlElementclass: Added optional style. . . . .                                                     | 330   | lrcaption: Added. . . . .                                                    | 787 |
| \LWR@htmlsectionfilename: HTMLFilename: removed additional trailing '-', and may be empty. . . . .       | 319   | lwarp-newproject: Added. . . . .                                             | 246 |
| Sections called "Index" or "index" have an underscore prepended to their filenames if no prefix. . . . . | 319   | microtype: User-interface emulated. . . . .                                  | 809 |
| \LWR@includegraphicsb: Fix: \linewidth in a floatrow. . . . .                                            | 736   | needspace: Added. . . . .                                                    | 823 |
| Fix: Expands filename. . . . .                                                                           | 736   | nowidow: Added. . . . .                                                      | 827 |
| \LWR@longtabledatacaptiontag: Fix: Pars in captions. . . . .                                             | 445   | placeins: Added. . . . .                                                     | 852 |
| \LWR@section: Combined higher-level sections together into files. . . . .                                | 363   | ragged2e: Added. . . . .                                                     | 859 |
| \LWR@setOSWindows: Auto-detects operating system. . . . .                                                | 215   | setspace: Improved support. . . . .                                          | 878 |
| \LWR@subhtmlElementclass: Factored code. . . . .                                                         | 329   | textpos: Added. . . . .                                                      | 909 |
| \SetHTMLFileNumber: Add: Control file numbers. . . . .                                                   | 319   | titleps: Added. . . . .                                                      | 918 |
| \cpagerefFor: User-redefinable word for page references. . . . .                                         | 541   | titlesec: Added. . . . .                                                     | 921 |
| \dotfill: Inserts an ellipsis. . . . .                                                                   | 566   | titletoc: Added. . . . .                                                     | 923 |
| \hfill: Inserts a \quad. . . . .                                                                         | 566   | titling: Improved compatibility. . . . .                                     | 925 |
| \hrulefill: Inserts a short rule. . . . .                                                                | 566   | tocloft: Added. . . . .                                                      | 933 |
| \hspace: Add: Supports HTML thin breakable space. . . . .                                                | 568   | wallpaper: Added. . . . .                                                    | 958 |
| \hyperindexref: Print mode provided in case hyperref not used. . . . .                                   | 491   | wrapfig: Added. . . . .                                                      | 959 |
| \pageref: Added. . . . .                                                                                 | 468   | xetexko-vertical: Added. . . . .                                             | 972 |
| \tracinglwarp: Added. . . . .                                                                            | 234   | Added @, <, > columns. . . . .                                               | 403 |
| General: 2017/02/09 . . . . .                                                                            | 1     | Added single-expansion data arrays. . . . .                                  | 315 |
| afterpage: Added. . . . .                                                                                | 588   | Code factored into independent lwarp_html files. . . . .                     | 579 |
| alltt: Added. . . . .                                                                                    | 593   | Docs: Examples for generating HTML file names. . . . .                       | 120 |
| bookmark: Added. . . . .                                                                                 | 622   | Docs: Improved index. . . . .                                                | 1   |
| caption and subcaption supported. . . . .                                                                | 1     | Enhanced titling support. . . . .                                            | 382 |
| cleveref and referencing patches: Applied \AfterEndPreamble. . . . .                                     | 540   | File: lwarp.css: Minor fixes for validation. . . . .                         | 1   |
| draftwatermark: Added. . . . .                                                                           | 675   | File: lwarpmk used to compile print, HTML, indexes, and lateximages. . . . . | 1   |
| eso-pic: Added. . . . .                                                                                  | 688   | Fix: \linewidth in a floatrow. . . . .                                       | 712 |
| everypage: Added. . . . .                                                                                | 689   | Moved sidebar and example code to test suite. . . . .                        | 1   |
| extramarks: Added. . . . .                                                                               | 689   | Page geometry set to 6in wide with large margins. . . . .                    | 224 |
| fancyhdr: Added. . . . .                                                                                 | 695   | Parallel versions of aux files for print/HTML. . . . .                       | 1   |
| float: Improved float caption type handling. . . . .                                                     | 707   | Removed reliance on make, grep, gawk. . . . .                                | 1   |
| hyperref: Additional user macros. . . . .                                                                | 748   | Tabular: \unskip extra spaces. . . . .                                       | 403 |
| keyfloat: Added. . . . .                                                                                 | 765   | Test Suite: HTML meta descriptions. . . . .                                  | 1   |
|                                                                                                          |       | verbatim: Added. . . . .                                                     | 393 |
|                                                                                                          |       | BlockClass: Added optional style. . . . .                                    | 331 |
|                                                                                                          |       | Renamed from "blockclass". . . . .                                           | 331 |
|                                                                                                          |       | LWR@nestspan: Fix: Minipages inside a span. . . . .                          | 327 |
|                                                                                                          | v0.21 |                                                                              |     |
|                                                                                                          |       | \LWR@LwarpStart: Changed lateximages to a .txt file. . . . .                 | 375 |

|                                                                                                  |     |       |                                                                                                                                                        |          |
|--------------------------------------------------------------------------------------------------|-----|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| \LWR@filestart: Skip title if not given. . . . .                                                 | 372 | v0.24 | \LWR@htmlfileref: Fix: Index links while \tracinglwrap. . . . .                                                                                        | 464      |
| \LWR@newhtmlfile: Skip title if not given. . . . .                                               | 356 |       | \hspace: Add: \hspace \fill converts to 2em . . . . .                                                                                                  | 568      |
| \marginpar: Fixed source listing. . .                                                            | 349 |       | \hypertocfloat: List of floats responds to lofdepth, lotdepth. . . . .                                                                                 | 487      |
| \marginparBlock: Fixed source listing. . . . .                                                   | 349 |       | General: 2017/03/15 . . . . .                                                                                                                          | 1        |
| General: 2017/02/23 . . . . .                                                                    | 1   |       | floatrow: Support for subfig. . . . .                                                                                                                  | 709      |
| fontenc: Added. . . . .                                                                          | 719 |       | subfig: Added. . . . .                                                                                                                                 | 895      |
| <i>lwrapmk</i> : Fix: <b>lwrapmk</b> again for WINDOWS. . . . .                                  | 295 |       | tikz: For tikz v3.0.0 or later, auto-loads tikz babel library if necessary. . . . .                                                                    | 917      |
| <i>lwrapmk</i> : Fix: <b>lwrapmk</b> <b>l</b> images for WINDOWS. . . . .                        | 295 |       | Docs: Filename underscore. . . . .                                                                                                                     | 115, 128 |
| <i>lwrapmk</i> : Fix: <i>lwrapmk</i> uses lateximages text file instead of shell script. . . . . | 295 |       | Fix for inline images. . . . .                                                                                                                         | 917      |
| Add: Errors for misplaced packages. . . . .                                                      | 197 |       | No longer preloads subcaption; conflicted with subfig. . . . .                                                                                         | 225      |
| Docs: Added internet class. . . . .                                                              | 84  |       | picture: Fix for inline images. . . . .                                                                                                                | 543      |
| Docs: Added TeX2page, GladTeX. . .                                                               | 84  | v0.25 |                                                                                                                                                        |          |
| Docs: Installing on WINDOWS. . . .                                                               | 90  |       | \LWR@loadnever: Added the ability to prevent conflicting packages. . . . .                                                                             | 199      |
| File: <i>lwrap_tutorial.txt</i> added. . .                                                       | 94  |       | \addcontentsline: Handles theorems. . . . .                                                                                                            | 479      |
| v0.22                                                                                            |     |       | General: 2016/03/22 . . . . .                                                                                                                          | 1        |
| \LWR@parseDcolumn: Added tabular D column. . . . .                                               | 418 |       | amsthm: Added. . . . .                                                                                                                                 | 596      |
| \LWR@parsebangcolumn: Added tabular ! column. . . . .                                            | 414 |       | ellipsis: Added. . . . .                                                                                                                               | 678      |
| \LWR@parsetablecols: Unknown table column types become l. Added tabular D, !, X columns. . . . . | 419 |       | emptypage: Added. . . . .                                                                                                                              | 679      |
| \LWR@printmccoldata: Added tabular D, !, and X columns. . . . .                                  | 440 |       | framed: Added. . . . .                                                                                                                                 | 723      |
| General: 2017/03/02 . . . . .                                                                    | 1   |       | lips: Added. . . . .                                                                                                                                   | 777      |
| abstract: Added. . . . .                                                                         | 581 |       | mdframed: Help avoid hyphenation. . . . .                                                                                                              | 798      |
| changepage: Added. . . . .                                                                       | 634 |       | ntheorem: Added. . . . .                                                                                                                               | 828      |
| dcolumn: Added. . . . .                                                                          | 672 |       | showidx: Added. . . . .                                                                                                                                | 879      |
| ftnright: Added. . . . .                                                                         | 726 |       | theorem: Added. . . . .                                                                                                                                | 910      |
| geometry: Nullified commands. . . . .                                                            | 727 |       | Basic L <sup>A</sup> T <sub>E</sub> X theorems: improved css. . . . .                                                                                  | 394      |
| layout: Added. . . . .                                                                           | 771 |       | Docs: Adds credits for patched code. . . . .                                                                                                           | 1        |
| lscap: Added. . . . .                                                                            | 786 |       | Docs: Testing <i>lwrap</i> . . . . .                                                                                                                   | 186      |
| mcaption: Added. . . . .                                                                         | 796 |       | Fix: Allows XE <sup>L</sup> A <sub>T</sub> E <sub>X</sub> and Lua <sup>L</sup> A <sub>T</sub> E <sub>X</sub> to preload graphics and graphicx. . . . . | 201      |
| nameref: Added. . . . .                                                                          | 821 | v0.26 |                                                                                                                                                        |          |
| nextpage: Added. . . . .                                                                         | 823 |       | General: 2017/03/31 . . . . .                                                                                                                          | 1        |
| parskip: Added. . . . .                                                                          | 843 |       | <i>lwrap.css</i> : Improved responsive marginpar and marginblock. . . . .                                                                              | 253      |
| showkeys: Added. . . . .                                                                         | 879 |       | cutwin: Added. . . . .                                                                                                                                 | 670      |
| sidecap: Added. . . . .                                                                          | 880 |       | endnotes: Added. . . . .                                                                                                                               | 681      |
| tabularx: Added. . . . .                                                                         | 902 |       | floatflt: Added. . . . .                                                                                                                               | 708      |
| varioref: Supported. . . . .                                                                     | 134 |       | footmisc: Added. . . . .                                                                                                                               | 719      |
| verse: Added. . . . .                                                                            | 952 |       | footnotehyper: Added. . . . .                                                                                                                          | 721      |
| v0.23                                                                                            |     |       | footnote: Added. . . . .                                                                                                                               | 720      |
| \LWR@parsetablecols: Fix for vert bar column type. . . . .                                       | 419 |       | marginfix: Added. . . . .                                                                                                                              | 794      |
| \LWR@printmccoldata: Fix for vert bar column type. . . . .                                       | 440 |       | marginnote: Added. . . . .                                                                                                                             | 795      |
| General: 2017/03/02 . . . . .                                                                    | 1   |       | mparhack: Added. . . . .                                                                                                                               | 812      |
|                                                                                                  |     |       | pagenote: Supported as-is. . . . .                                                                                                                     | 841      |

|                                                                                                    |        |                                                                                                                                   |     |
|----------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------|-----|
| sidenotes: Added. . . . .                                                                          | 881    | tabularx: Fix for optional pos. . .                                                                                               | 902 |
| Docs: Improved MiKTeX install instructions. . . . .                                                | 89, 91 | tabulary: Added. . . . .                                                                                                          | 903 |
| Dollar span avoided in a lateximage. . . . .                                                       | 499    | <i>lwarpmk</i> : Add: <b>printglossary</b> and <b>htmlglossary</b> commands. . . . .                                              | 295 |
| Footnotes now are L <sup>A</sup> T <sub>E</sub> X boxes instead of pagenotes. . . . .              | 344    | Added boolean FormatEpub. . . . .                                                                                                 | 239 |
| lateximage: Labels track page numbers of lateximages. . . . .                                      | 525    | Added boolean FormatWP. . . . .                                                                                                   | 239 |
| Print mode now uses a minipage of \linewidth. . . . .                                              | 525    | Added boolean HTMLDebugComments. . . . .                                                                                          | 234 |
| picture: Fix for \makebox in picture. . . . .                                                      | 543    | Added boolean HTMLMarkFloats, changed to WPMarkFloats as of v0.42. . . . .                                                        | 240 |
| v0.27                                                                                              |        | Docs: Modifying lwarpmk and index processing. . . . .                                                                             | 186 |
| \LWR@footnotetext: Fix for table footnote par tags. . . . .                                        | 345    | File: <i>lwrap_mathjax.txt</i> : Updated CDN repository. . . . .                                                                  | 293 |
| General: 2017/04/04 . . . . .                                                                      | 1      | Forced oneside to maintain large right margin. . . . .                                                                            | 224 |
| lettrine: Added. . . . .                                                                           | 774    | v0.29                                                                                                                             |     |
| microtype: Fix with XeL <sup>A</sup> T <sub>E</sub> X, LuaL <sup>A</sup> T <sub>E</sub> X. . . . . | 809    | \LWR@includegraphicsb: Fix: Error when no optional arguments. . .                                                                 | 736 |
| soul: Added. . . . .                                                                               | 888    | General: 2017/04/15 . . . . .                                                                                                     | 1   |
| ulem: Added. . . . .                                                                               | 947    | *.lwarpmkconf: Add: language option for config files. . . . .                                                                     | 253 |
| Docs: Installing utilities for MACOS. . . . .                                                      | 92     | <i>lwarpmk.conf</i> : Add: language option for config files. . . . .                                                              | 253 |
| Docs: Limitations of saveboxes. . . . .                                                            | 129    | <i>lwarpmk</i> : Add: language option for config files. . . . .                                                                   | 295 |
| Page geometry modified to reduce line overflow. . . . .                                            | 224    | Add: <i>lwrapmkLang</i> option for <i>lwrap</i> . . . . .                                                                         | 218 |
| v0.28                                                                                              |        | Docs: Using a glossary . . . . .                                                                                                  | 105 |
| \@wrindex: Improved indexing. . . . .                                                              | 489    | v0.30                                                                                                                             |     |
| \HTMLauthor: Added \HTMLauthor. (Renamed in v0.30.) . . . . .                                      | 342    | \CSSFilename: Renamed from \NewCSS. . . . .                                                                                       | 341 |
| \LWR@LwrapEnd: If FormatEpub or FormatWP, no bottom nav. . . . .                                   | 378    | \HTMLauthor: Renamed from \HTMLauthor. . . . .                                                                                    | 342 |
| \LWR@LwrapStart: FormatWordProcessor forces single-file output. . . . .                            | 375    | \HTMLDescription: Renamed from \NewHTMLdescription. . . . .                                                                       | 343 |
| \LWR@filestart: Adds HTML meta author. . . . .                                                     | 372    | \HTMLFirstPageTop: Renamed from \SetFirstPageTop. . . . .                                                                         | 340 |
| \LWR@forcenewpage: Forces new PDF page before major environments. . . . .                          | 323    | \HTMLLanguage: Renamed from \MetaLanguage. . . . .                                                                                | 371 |
| \LWR@htmlcomment: Breaks ligatures in HTML comments. . . . .                                       | 329    | \HTMLPageBottom: Renamed from \SetPageBottom. . . . .                                                                             | 340 |
| \LWR@includegraphicsb: Adapts to graphics syntax. . . . .                                          | 736    | \HTMLPageTop: Renamed from \SetPageTop. . . . .                                                                                   | 340 |
| \LWR@newhtmlfile: If FormatEpub or FormatWP: skips headers, footers, nav. . . . .                  | 356    | General: 2017/04/29 . . . . .                                                                                                     | 1   |
| \LWR@parsetablecols: Added L, C, R, J column types. . . . .                                        | 419    | <i>lwrap-newproject</i> removed, and combined with <i>lwrap</i> . . . . .                                                         | 246 |
| \LWR@startref: Removed space. . . . .                                                              | 466    | <i>lwarpmk</i> : Add: <i>xdyfile</i> configuration option. . . . .                                                                | 295 |
| \chapter: If EPUB, prints footnotes before each section. . . . .                                   | 369    | <i>lwarpmk</i> : Fix: <i>xindy</i> and <i>texindy</i> adjusted for <i>pdflatex</i> , <i>xelatex</i> and <i>lualatex</i> . . . . . | 295 |
| \hyperindexref: Improved indexing. . . . .                                                         | 491    |                                                                                                                                   |     |
| \textup: Fixed span class. . . . .                                                                 | 556    |                                                                                                                                   |     |
| General: 2017/04/14 . . . . .                                                                      | 1      |                                                                                                                                   |     |
| glossaries: Added. . . . .                                                                         | 729    |                                                                                                                                   |     |
| graphics: Added. . . . .                                                                           | 731    |                                                                                                                                   |     |

|                                                                                                                     |     |                                                                                  |          |
|---------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------|----------|
| <i>lwarpmk</i> : Fix: <i>xindy</i> now used for print index generation with <i>latexmk</i> . . . . .                | 295 | Add: Tabular at and bang columns now have their own HTML columns. . . . .        | 403      |
| <i>lwarpmk</i> : Language now used for both index and glossary generation. . . . .                                  | 295 | cleveref: Fix: Loaded \AtEndPreamble. . . . .                                    | 540      |
| File: <i>lwrap_html</i> . <i>xdy</i> renamed to <i>lwrap</i> . <i>xdy</i> . . . . .                                 | 291 | Fix: Incorrectly-inline math environments. . . . .                               | 517      |
| Fix: *.css files only written in print mode. . . . .                                                                | 253 | New handling of & to localize catcode changes. . . . .                           | 403      |
| Fix: <i>lwrap</i> . <i>xdy</i> only written in print mode. . . . .                                                  | 291 | v0.34                                                                            |          |
| Fix: <i>lwrap_mathjax</i> . <i>txt</i> : Only written in print mode. . . . .                                        | 293 | \@fnsymbol: Text symbols instead of math. . . . .                                | 385      |
| Option <i>lwrapmklang</i> changed to <i>IndexLanguage</i> . . . . .                                                 | 218 | \InlineClass: Moved optional argument in front of mandatory. . . . .             | 332      |
| Option <i>OSWindows</i> replaces macro \warpOSWindows. . . . .                                                      | 218 | \LWRhtmldivclass: Moved optional argument in front of mandatory. . . . .         | 330      |
| Option <i>xdyFilename</i> added. . . . .                                                                            | 217 | \LWRhtmlElementclass: Moved optional argument in front of mandatory. . . . .     | 330      |
| Option <i>latexmk</i> replaces macro \UseLatexmk. . . . .                                                           | 219 | \LWRhtmlElementclassline: Moved optional argument in front of mandatory. . . . . | 330      |
| Options <i>HomeHTMLFilename</i> and <i>HTMLFilename</i> replace macros \HomeHTMLFilename and \HTMLFilename. . . . . | 218 | \LWRhtmlspanclass: Moved optional argument in front of mandatory. . . . .        | 328      |
| v0.31                                                                                                               |     | \LWRnullfonts: Improved font control. . . . .                                    | 558      |
| General: 2017/05/15 . . . . .                                                                                       | 1   | \LWRrestoreorigformatting: booktabs: Works inside lateximage. . . . .            | 493      |
| keyfloat: Improved compatibility. . . . .                                                                           | 765 | Improved font control. . . . .                                                   | 493      |
| v0.32                                                                                                               |     | \LWR@subhtmlElementclass: Moved optional argument in front of mandatory. . . . . | 329      |
| \RequirePackage: Fix: Ignores blanks in package list. . . . .                                                       | 229 | \LWR@tabledatacolumnntag: booktabs: Works inside lateximage. . . . .             | 452      |
| General: 2016/06/09 . . . . .                                                                                       | 1   | \fboxBlock: Added. . . . .                                                       | 552      |
| glossaries: Prevent error with \glo@name not defined. . . . .                                                       | 491 | \makebox: Fix: Handles paren arg. . . . .                                        | 550      |
| <i>lwarpmk</i> : Fix: <i>io.lines()</i> changed to <i>file:lines()</i> due to <i>luatex</i> changes. . . . .        | 295 | General: 2017/08/08 . . . . .                                                    | 1        |
| v0.33                                                                                                               |     | <i>babel-french</i> : Adds fixed-width HTML spaces to punctuation. . . . .       | 325      |
| \HTMLAuthor: Fix: Provides empty default author if none given. . . . .                                              | 342 | <i>balance</i> : Added. . . . .                                                  | 613      |
| \LWR@loadbefore: Fix: No \PackageError if already loaded. . . . .                                                   | 199 | booktabs: Works inside lateximage. . . . .                                       | 455, 623 |
| \LWR@parseatcolumn: Fix: Column alignment with leftmost @. . . . .                                                  | 413 | boxedminipage2e: Added. . . . .                                                  | 625      |
| \LWR@tabledatasinglecolumnntag: Fix: Macros in tabular could cause extra data cell. . . . .                         | 427 | crop: Added. . . . .                                                             | 667      |
| \LWR@vspace: Add: \vspace nullified. . . . .                                                                        | 569 | enumerate: Added. . . . .                                                        | 681      |
| \StartDefiningTabulars: Add: Avoids error: Misplaced alignment tab character &. . . . .                             | 316 | enumitem: Added, no longer required. . . . .                                     | 681      |
| General: 2017/07/10 . . . . .                                                                                       | 1   | everyshi: Added. . . . .                                                         | 689      |
| <i>amsmath</i> : Removed <i>fleqn</i> option. . . . .                                                               | 593 | <i>fancybox</i> : Added. . . . .                                                 | 691      |
| <i>fancyhdr</i> : Fix: Optional args for \thead, etc. . . . .                                                       | 695 | <i>fancyvrb</i> : Added, no longer required. . . . .                             | 697      |
|                                                                                                                     |     | figcaps: Added. . . . .                                                          | 703      |

|                                                                                                                            |     |                                                                                          |     |
|----------------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------------|-----|
| filecontents: Required. Patched for morewrites. . . . .                                                                    | 225 | \LWR@HTMLsanitize: Fix for babel-french. . . . .                                         | 522 |
| floatpag: Added. . . . .                                                                                                   | 709 | \LWR@HTMLsanitizeexpand: Fix for babel-french. . . . .                                   | 522 |
| flushend: Added. . . . .                                                                                                   | 715 | \LWR@closeparagraph: Extra HTML source space after paragraphs. . . . .                   | 336 |
| fullpage: Added. . . . .                                                                                                   | 726 | \LWR@currenttextcolor: Fix for \rule when xcolor not loaded. . . . .                     | 564 |
| hyperxmp: Added. . . . .                                                                                                   | 753 | \LWR@nullfonts: Fix: Filenames while using MATHJAX. . . . .                              | 558 |
| idxlayers: Added. . . . .                                                                                                  | 754 | \LWR@restoreorigformatting: siunitx: Improved super/subscripts in a lateximage. . . . .  | 493 |
| marginfit: Added. . . . .                                                                                                  | 794 | \LWR@section: Improved spacing. . . . .                                                  | 363 |
| mdframed: Improved mdtheorem patch. . . . .                                                                                | 804 | \LWR@stoppars: Extra HTML source space after paragraphs. . . . .                         | 338 |
| moreverb: Added. . . . .                                                                                                   | 811 | \fbox: Fix: Uses \fboxrule and \fboxsep. . . . .                                         | 551 |
| paralist: Added. . . . .                                                                                                   | 842 | \framebox: Fix: Handles width and horiz position. . . . .                                | 550 |
| pdfscape: Added. . . . .                                                                                                   | 844 | \makebox: Fix: Handles width and horiz position. . . . .                                 | 550 |
| pdfsync: Added. . . . .                                                                                                    | 848 | General: 2017/08/17 . . . . .                                                            | 1   |
| prelim2e: Added. . . . .                                                                                                   | 853 | babel-french: Adjustements for French variants, load order, footnotes, ellipses. . . . . | 325 |
| rotfloat: Added. . . . .                                                                                                   | 866 | footnote: Extra HTML source space after paragraphs. . . . .                              | 720 |
| savetrees: Added. . . . .                                                                                                  | 867 | siunitx: Fix for babel-french. . . . .                                                   | 533 |
| shadow: Added. . . . .                                                                                                     | 879 | siunitx: Improved symbol support. . . . .                                                | 883 |
| syntonly: Added. . . . .                                                                                                   | 901 | transparent: Added. . . . .                                                              | 943 |
| titles: No longer required. . . . .                                                                                        | 918 | upref: Added. . . . .                                                                    | 951 |
| titleref: Prevented. . . . .                                                                                               | 921 | xcolor: Added \fcolorboxBlock, \colorboxBlock. . . . .                                   | 960 |
| xmpincl: Added. . . . .                                                                                                    | 976 | xcolor: Fix: Background none in print mode. . . . .                                      | 960 |
| Added. . . . .                                                                                                             | 968 | xcolor: Refactored \LWR@colorstyle. . . . .                                              | 964 |
| Docs: Horizontal space limitations. . . . .                                                                                | 1   | xcolor: Uses \fboxrule and \fboxsep. . . . .                                             | 960 |
| Docs: Misplaced alignment character. . . . .                                                                               | 188 | xcolor: \fcolorbox etc. now work inside lateximage. . . . .                              | 960 |
| File: lwrap_mathjax.txt: Version change. . . . .                                                                           | 293 | Docs: Reorganized: Special cases and limitations. . . . .                                | 126 |
| File: README.txt: updated. . . . .                                                                                         | 1   | Source: Improved formatting. . . . .                                                     | 1   |
| Fix: Added the eqnarray environments. . . . .                                                                              | 517 | tabular: Fix for babel-french. . . . .                                                   | 457 |
| Improved font control. . . . .                                                                                             | 554 | lateximage: Footnotes appear in regular text instead of the lateximage minipage. . . . . | 525 |
| Lists refactored to remove enumitem requirement. . . . .                                                                   | 395 |                                                                                          |     |
| Verbatim refactored to remove fancyvrb requirement. . . . .                                                                | 391 |                                                                                          |     |
| tabular: booktabs: Works inside lateximage. . . . .                                                                        | 457 |                                                                                          |     |
| lateximage: Fix: lateximage with minipage, \parbox, \makebox, \fbox, \framebox, \raisebox, \scalebox, \reflectbox. . . . . | 525 |                                                                                          |     |
| BlockClass: Moved optional argument in front of mandatory. . . . .                                                         | 331 |                                                                                          |     |
| fminipage: Added. . . . .                                                                                                  | 552 |                                                                                          |     |
| LWR@nestspan: Fix: Minipages, BlocksClass, and lists inside a span. . . . .                                                | 327 |                                                                                          |     |
| v0.35                                                                                                                      |     |                                                                                          |     |
| General: 2017/08/08 . . . . .                                                                                              | 1   |                                                                                          |     |
| Fix: \textbf and related. . . . .                                                                                          | 554 | v0.37                                                                                    |     |
| v0.36                                                                                                                      |     | \include: Maintains independent aux files for HTML. . . . .                              | 232 |
| \LWR@footnotetext: Extra HTML source space after paragraphs. . . . .                                                       | 345 | General: 2017/08/19 . . . . .                                                            | 1   |
| Force HTML superscripts. . . . .                                                                                           | 345 | L <sup>A</sup> T <sub>E</sub> X accents: Added. . . . .                                  | 244 |



|                                                                        |          |                                                                                             |          |
|------------------------------------------------------------------------|----------|---------------------------------------------------------------------------------------------|----------|
| babel-french: Adjustment for load order. . . . .                       | 325      | Supports authblk with <div>s of class oneauthor instead of tabular. . . . .                 | 386, 927 |
| color: Prevented. . . . .                                              | 664      | \AddSubtitlePublished: Added. . . . .                                                       | 387      |
| comment: Maintains independent cutfiles for print, HTML. . . . .       | 222      | \LWR@domulticolumn: Add: Optional vpos and # rows. . . . .                                  | 443      |
| siunitx: Improved symbol support. . . . .                              | 883      | \LWR@restoreorigformatting: Appended with \appto instead of calling various macros. . . . . | 493      |
| textcomp: Improved support. . . . .                                    | 906      | \LWR@tabledatacolumnntag: Don't start a data cell if see \TabularMacro. . . . .             | 452      |
| <i>lwarpmk</i> : Removes additional HTML aux files. . . . .            | 295      | \ResumeTabular: Added. . . . .                                                              | 451      |
| File handles reorganized. . . . .                                      | 232      | \TabularMacro: Added. . . . .                                                               | 451      |
| v0.38                                                                  |          | \multicolumnrow: Added. . . . .                                                             | 449, 817 |
| \@secnctformat: Added for appendix. . . . .                            | 363      | \printauthor: Removed minipages. . . . .                                                    | 383      |
| \ForceHTMLPage: Added. . . . .                                         | 360      | Supports authblk with <div>s of class oneauthor instead of tabular. . . . .                 | 383      |
| \ForceHTMLTOC: Added. . . . .                                          | 361      | \thanksmarkseries: Removed minipage footnotes. . . . .                                      | 929      |
| \LWR@section: \part* starts a new HTML page, for appendix. . . . .     | 363      | General: 2017/09/05 . . . . .                                                               | 1        |
| Modified spacing, uses \numberline. . . . .                            | 363      | a4wide: Added. . . . .                                                                      | 581      |
| \numberline: Added trailing \quad. . . . .                             | 485      | a4: Added. . . . .                                                                          | 580      |
| \part: Fix with article class. . . . .                                 | 369      | a5comb: Added. . . . .                                                                      | 581      |
| General: 2017/08/27 . . . . .                                          | 1        | addlines: Added. . . . .                                                                    | 588      |
| appendix: Added. . . . .                                               | 601      | anysize: Added. . . . .                                                                     | 601      |
| arabicfront: Added. . . . .                                            | 603      | authblk: Added. . . . .                                                                     | 610      |
| chappg: Added. . . . .                                                 | 637      | bigdelim: Added. . . . .                                                                    | 619      |
| color: Forces xcolor as well. . . . .                                  | 664      | bigstrut: Added. . . . .                                                                    | 621      |
| fix2col: Added. . . . .                                                | 704      | ebook: Added. . . . .                                                                       | 677      |
| fncychap: Added. . . . .                                               | 715      | fullwidth: Added. . . . .                                                                   | 726      |
| grffile: Added. . . . .                                                | 744      | midpage: Added. . . . .                                                                     | 810      |
| metalogo: Added. . . . .                                               | 806      | multirow: Add: New optional vpos argument. . . . .                                          | 815      |
| nonumonpart: Added. . . . .                                            | 826      | multirow: Add: Supports left/right border for bigdelim. . . . .                             | 815      |
| nopageno: Added. . . . .                                               | 826      | multirow: Fix: Long text argument. . . . .                                                  | 815      |
| pagenote: Option page disabled. . . . .                                | 841      | supertabular: Added. . . . .                                                                | 900      |
| realscripts: Added. . . . .                                            | 860      | textarea: Added. . . . .                                                                    | 905      |
| relsize: Added. . . . .                                                | 862      | titling: Improved compatibility. . . . .                                                    | 925      |
| romanbarpagenumber: Added. . . . .                                     | 865      | titling: Removed extraneous center environments. . . . .                                    | 926      |
| romanbar: Added. . . . .                                               | 865      | typearea: Added. . . . .                                                                    | 946      |
| scalefnt: Added. . . . .                                               | 867      | xtabular: Added. . . . .                                                                    | 977      |
| siunitx: Removed from <i>lwarp</i> core. . . . .                       | 883      | zwpagelayout: Added. . . . .                                                                | 981      |
| textcomp: Removed from <i>lwarp</i> core. . . . .                      | 906      | Docs: Reorganized tabular discussion. . . . .                                               | 161      |
| tocbibind: Added. . . . .                                              | 930      | Titlepage \published and \subtitle removed. . . . .                                         |          |
| xltxtra: Added. . . . .                                                | 975      | \AddSubtitlePublished restores. . . . .                                                     | 387      |
| <i>lwarpmk</i> : Added <b>print1</b> and <b>html1</b> actions. . . . . | 295      | titlepage: Clear pending footnotes. . . . .                                                 | 382      |
| Added \markboth, \sloppy, etc. . . . .                                 | 323      | Removed minipages. . . . .                                                                  | 382      |
| Docs: Enhanced <i>Supported Features</i> table. . . . .                | 78       | titlingpage: Clear pending footnotes. . . . .                                               | 925      |
| Docs: Index, tocbibind. . . . .                                        | 140      |                                                                                             |          |
| Docs: Starred sections. . . . .                                        | 137      |                                                                                             |          |
| v0.39                                                                  |          |                                                                                             |          |
| \@maketitle: titling version. . . . .                                  | 927      |                                                                                             |          |
| Native L <sup>A</sup> T <sub>E</sub> X version. . . . .                | 386      |                                                                                             |          |
| Removed minipages. . . . .                                             | 386, 927 |                                                                                             |          |

|                                                                                                               |                                                                                              |
|---------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| v0.40                                                                                                         |                                                                                              |
| \@chapcntformat: Added for<br>tocbibind, anonchap. . . . .                                                    | 363                                                                                          |
| \LWR@HTMLhline: Added. . . . .                                                                                | 456                                                                                          |
| \LWR@includegraphicsb: Add: Full<br>\graphicspath support. . . . .                                            | 736                                                                                          |
| \LWR@nullfonts: Fix: Long arguments<br>for expandable command. . . . .                                        | 558                                                                                          |
| \LWR@restoreorigformatting:<br>Improved L <sup>A</sup> T <sub>E</sub> X logos inside a<br>lateximage. . . . . | 493                                                                                          |
| Improved symbols inside a<br>lateximage. . . . .                                                              | 493                                                                                          |
| Nullified \InlineClass, etc. inside<br>a lateximage. . . . .                                                  | 493                                                                                          |
| \LWR@tabledatacolumnntag: Fix for<br>bigdelim: \ldelim, \rdelim. . . . .                                      | 452                                                                                          |
| \chapter: Added support for<br>quotchap. . . . .                                                              | 369                                                                                          |
| \multicolumnrow: Fix: Adapts to older<br>multirow and xparse. . . . .                                         | 449                                                                                          |
| \simplechapterdelim: Added for<br>tocbibind, anonchap. . . . .                                                | 363                                                                                          |
| \underline: Added. . . . .                                                                                    | 563                                                                                          |
| General: 2017/09/25 . . . . .                                                                                 | 1                                                                                            |
| adjmulticol: Added. . . . .                                                                                   | 587                                                                                          |
| anonchap: Added. . . . .                                                                                      | 600                                                                                          |
| bigdelim: Improved<br>documentation. . . . .                                                                  | 619                                                                                          |
| cuted: Added. . . . .                                                                                         | 670                                                                                          |
| dblfnote: Added. . . . .                                                                                      | 671                                                                                          |
| fnpos: Added. . . . .                                                                                         | 717                                                                                          |
| graphics: Moved out of the lwarp<br>core. . . . .                                                             | 731                                                                                          |
| graphics: Restores<br>\includegraphics and<br>\DeclareGraphicsExtensions in<br>a lateximage. . . . .          | 731                                                                                          |
| graphicx: Moved out of the lwarp<br>core. . . . .                                                             | 743                                                                                          |
| grffile: Directly supported. . . . .                                                                          | 744                                                                                          |
| midfloat: Added. . . . .                                                                                      | 810                                                                                          |
| multirow: Improved bigdelim<br>borders. . . . .                                                               | 815                                                                                          |
| pnfnote: Added. . . . .                                                                                       | 850                                                                                          |
| quotchap: Added. . . . .                                                                                      | 858                                                                                          |
| sectsty: Added. . . . .                                                                                       | 876                                                                                          |
| stabular: Added. . . . .                                                                                      | 892                                                                                          |
| tabs: Added. . . . .                                                                                          | 902                                                                                          |
| textcomp: Additional symbols,<br>improved XeLaTeX and LuaLaTeX<br>support. . . . .                            | 906                                                                                          |
| tocbibind: Improved for<br>\simplechapter. . . . .                                                            | 930                                                                                          |
| xfrac: No longer preloaded. . . . .                                                                           | 226                                                                                          |
|                                                                                                               | xltxtra: Fix for \showhyphens with<br>XeLaTeX. . . . .                                       |
|                                                                                                               | 975                                                                                          |
|                                                                                                               | v0.41                                                                                        |
|                                                                                                               | \LWR@addcmidruletrim: Add:<br>\cmidrule trims. . . . .                                       |
|                                                                                                               | 432                                                                                          |
|                                                                                                               | \LWR@clearmidrules: Add:<br>\cmidrule trims. . . . .                                         |
|                                                                                                               | 430                                                                                          |
|                                                                                                               | \LWR@closetabledatocell: Add:<br>Mute > for \bottomrule. . . . .                             |
|                                                                                                               | 408                                                                                          |
|                                                                                                               | Fix: At/bang column with<br>\multirow. . . . .                                               |
|                                                                                                               | 408                                                                                          |
|                                                                                                               | Fix: Cancel < for \multicolumn. . . . .                                                      |
|                                                                                                               | 408                                                                                          |
|                                                                                                               | \LWR@domulticolumn: Add:<br>\cmidrule trims. . . . .                                         |
|                                                                                                               | 443                                                                                          |
|                                                                                                               | Added vertical rules. . . . .                                                                |
|                                                                                                               | 444                                                                                          |
|                                                                                                               | \LWR@nullifyNoAutoSpacing: Fix:<br>\NoAutoSpacing in a tabular with<br>babel-french. . . . . |
|                                                                                                               | 456                                                                                          |
|                                                                                                               | \LWR@parsebarcolumn: Added vertical<br>rules. . . . .                                        |
|                                                                                                               | 415                                                                                          |
|                                                                                                               | \LWR@printatbang: Add: \cmidrule<br>trims. . . . .                                           |
|                                                                                                               | 426                                                                                          |
|                                                                                                               | Add: Mute at and bang columns for<br>\bottomrule. . . . .                                    |
|                                                                                                               | 426                                                                                          |
|                                                                                                               | \LWR@printbartag: Added vertical<br>rules. . . . .                                           |
|                                                                                                               | 425                                                                                          |
|                                                                                                               | \LWR@subaddcmidruletrim: Added. . . . .                                                      |
|                                                                                                               | 432                                                                                          |
|                                                                                                               | \LWR@subcmidrule: Add: \cmidrule<br>trims. . . . .                                           |
|                                                                                                               | 430                                                                                          |
|                                                                                                               | \LWR@tabledatasinglecolumnntag:<br>Add: \cmidrule trims. . . . .                             |
|                                                                                                               | 427                                                                                          |
|                                                                                                               | Add: Mute < for \bottomrule. . . . .                                                         |
|                                                                                                               | 427                                                                                          |
|                                                                                                               | \LWR@tabularfinishrow: Unfinished<br>tabular rows automatically filled. . . . .              |
|                                                                                                               | 410                                                                                          |
|                                                                                                               | \mcolrowcell: Added for<br>\multicolumnrow cells. . . . .                                    |
|                                                                                                               | 455                                                                                          |
|                                                                                                               | General: 2017/10/07 . . . . .                                                                |
|                                                                                                               | 1                                                                                            |
|                                                                                                               | multirow: Add: \cmidrule trims. . . . .                                                      |
|                                                                                                               | 815                                                                                          |
|                                                                                                               | Added vertical rules. . . . .                                                                |
|                                                                                                               | 816                                                                                          |
|                                                                                                               | Fix: < spec. . . . .                                                                         |
|                                                                                                               | 816                                                                                          |
|                                                                                                               | Improved rules. . . . .                                                                      |
|                                                                                                               | 623                                                                                          |
|                                                                                                               | tabular: Fix: \NoAutoSpacing in a<br>tabular with babel-french. . . . .                      |
|                                                                                                               | 457                                                                                          |
|                                                                                                               | v0.42                                                                                        |
|                                                                                                               | \@ensuredmath: Improved<br>\ensuremath. . . . .                                              |
|                                                                                                               | 507                                                                                          |
|                                                                                                               | \@textsubscript: Added. . . . .                                                              |
|                                                                                                               | 563                                                                                          |
|                                                                                                               | \@textsuperscript: Added. . . . .                                                            |
|                                                                                                               | 563                                                                                          |
|                                                                                                               | \LWR@HTMLhLine: If FormatWP force<br>explicit border. . . . .                                |
|                                                                                                               | 456                                                                                          |
|                                                                                                               | \LWR@addformatwppalignment: If<br>FormatWP add explicit style for cell<br>alignment. . . . . |
|                                                                                                               | 434                                                                                          |
|                                                                                                               | \LWR@addrulewidth: If FormatWP<br>force explicit border. . . . .                             |
|                                                                                                               | 433                                                                                          |

|                                                                                                            |     |                                                                                      |     |
|------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------|-----|
| <code>\LWR@amsmathbody</code> : Fix: Numbering and naming AMS math environments. . . . .                   | 524 | <code>algorithmicx</code> : If FormatWP add <code>\quads</code> . . . . .            | 592 |
| <code>\LWR@amsmathbodynumbered</code> : Fix: Numbering and naming AMS math environments. . . . .           | 524 | <code>epigraph</code> : If FormatWP add HTML styles. . . . .                         | 682 |
| <code>\LWR@doequation</code> : If FormatWP print LaTeX expression. . . . .                                 | 512 | <code>fancybox</code> : If FormatWP add HTML styles. . . . .                         | 691 |
| <code>\LWR@domulticolumn</code> : If FormatWP add cell alignment. . . . .                                  | 444 | <code>floatflt</code> : Added width. . . . .                                         | 708 |
| <code>\LWR@doubledollar</code> : If FormatWP print LaTeX expression. . . . .                               | 506 | <code>includegraphics</code> : Fix: Class key. . . . .                               | 735 |
| Improved <code>\ensuremath</code> . . . . .                                                                | 506 | <code>keyfloat</code> : If FormatWP add explicit HTML style. . . . .                 | 769 |
| Improved line spacing with <code>mathjax</code> . . . . .                                                  | 506 | <code>moreverb</code> : Simplified formatting of listings. . . . .                   | 811 |
| <code>\LWR@floatbegin</code> : If FormatWP add a text frame. . . . .                                       | 474 | <code>multirow</code> : If FormatWP add cell alignment. . . . .                      | 816 |
| <code>\LWR@floatend</code> : If FormatWP add a text frame. . . . .                                         | 475 | <code>overpic</code> : Added. . . . .                                                | 840 |
| <code>\LWR@htmlmathlabel</code> : If FormatWP print LaTeX expression. . . . .                              | 516 | <code>realscripts</code> : Fix for subscripts in a <code>lateximage</code> . . . . . | 860 |
| <code>\LWR@includegraphicsb</code> : Fix: Filename expansion. . . . .                                      | 736 | <code>sidenotes</code> : If FormatWP add explicit HTML style. . . . .                | 881 |
| If FormatWP, use explicit size. . . . .                                                                    | 737 | <code>siunitx</code> : Improved <code>\ensuremath</code> . . . . .                   | 883 |
| <code>\LWR@remembertag</code> : Fix: Numbering and naming AMS math environments. . . . .                   | 524 | <code>soul</code> : If FormatWP, add explicit styles. . . . .                        | 888 |
| <code>\LWR@restoreorigformatting</code> : Improved <code>\ensuremath</code> . . . . .                      | 494 | <code>textcomp</code> : Improved <code>\interrobangdown</code> . . . . .             | 906 |
| <code>\LWR@subaddcmidruletrim</code> : Opt if no rule given. . . . .                                       | 432 | <code>wrapfig</code> : If FormatWP add explicit HTML style. . . . .                  | 959 |
| <code>\LWR@subsingledollar</code> : If FormatWP print LaTeX expression. . . . .                            | 500 | Added boolean <code>WPMarkLOFT</code> . . . . .                                      | 240 |
| <code>\LWR@tabledatasinglecolumntag</code> : If FormatWP add cell alignment. . . . .                       | 428 | Added boolean <code>WPMarkMath</code> . . . . .                                      | 240 |
| <code>\LaTeX</code> : If FormatWP use explicit style. . . . .                                              | 574 | Added boolean <code>WPMarkMinipages</code> . . . . .                                 | 240 |
| <code>\TeX</code> : If FormatWP use explicit style. . . . .                                                | 573 | Added boolean <code>WPMarkTOC</code> . . . . .                                       | 240 |
| <code>\hspace</code> : If FormatWP add <code>\quads</code> . . . . .                                       | 568 | Added boolean <code>WPTitleHeading</code> . . . . .                                  | 241 |
| <code>\listoffigures</code> : Added boolean <code>WPMarkLOFT</code> . . . . .                              | 483 | Docs: Added support page. . . . .                                                    | 2   |
| <code>\listoftables</code> : Added boolean <code>WPMarkLOFT</code> . . . . .                               | 483 | Docs: Improper <code>\prevdepth</code> . . . . .                                     | 188 |
| <code>\marginpar</code> : If FormatWP emulate a <code>wrapfig</code> . . . . .                             | 349 | Docs: Reorganized math limitations . . . . .                                         | 152 |
| <code>\marginparBlock</code> : If FormatWP emulate a <code>wrapfig</code> . . . . .                        | 349 | File: <code>lwarp_mathjax.txt</code> : Updated <code>siunitx</code> script. . . . .  | 293 |
| <code>\rule</code> : If FormatWP add <code>\quads</code> . . . . .                                         | 572 | Fix: Numbering and naming AMS math environments. . . . .                             | 523 |
| <code>\tableofcontents</code> : Added boolean <code>WPMarkTOC</code> . . . . .                             | 482 | If FormatWP force explicit border. . . . .                                           | 623 |
| <code>\underline</code> : If FormatWP, use explicit styles for <code>\underline</code> , etc. . . . .      | 563 | If FormatWP, shift section headings. . . . .                                         | 241 |
| General: 2017/10/30 . . . . .                                                                              | 1   | <code>tabbing</code> : Added. . . . .                                                | 393 |
| <code>\textbf</code> and related: If FormatWP, use explicit styles for <code>\textsc</code> , etc. . . . . | 554 | <code>lateximage</code> : Fix: Numbering and naming AMS math environments. . . . .   | 526 |
|                                                                                                            |     | <code>center</code> : If FormatWP use explicit <code>text-align</code> . . . . .     | 530 |
|                                                                                                            |     | <code>minipage</code> : Added boolean <code>WPMarkMinipages</code> . . . . .         | 548 |
|                                                                                                            |     | If FormatWP add a text frame. . . . .                                                | 546 |
|                                                                                                            |     | <code>eqnarray</code> : Fix: Numbering and naming AMS math environments. . . . .     | 518 |
|                                                                                                            |     | If FormatWP print LaTeX expression. . . . .                                          | 517 |
|                                                                                                            |     | <code>LWR@BlockClassWP</code> : Added to factor code. . . . .                        | 332 |

|                                                                                    |               |                                                     |     |
|------------------------------------------------------------------------------------|---------------|-----------------------------------------------------|-----|
| LWR@figcaption: If FormatWP forces italic captions. . . . .                        | 478           | \addcontentsline: Automatic                         |     |
| v0.43                                                                              |               | \LWR@newfloatanchor. . . . .                        | 479 |
| \LWR@domulticolumn: Fix for vertical rules. . . . .                                | 444           | \chapter: Add preamble for koma-script. . . . .     | 369 |
| Fix: Multicolumn trim. . . . .                                                     | 443, 444      | \marginparBlock: Added. . . . .                     | 349 |
| \LWR@maybeprintpendingfootnotes: Added FootnoteDepth. . . . .                      | 348           | \nopagecolor: xcolor: Fix for \nopagecolor. . . . . | 965 |
| \LWR@nullfonts: Fix: Nullify dollar inside filenames. . . . .                      | 558           | \part: Add preamble for koma-script. . . . .        | 369 |
| \LWR@parsetablecols: Ignore spaces in col spec. . . . .                            | 419           | \title: Added \thetitle. . . . .                    | 342 |
| \LWR@printmcoltype: Added vertical rules. . . . .                                  | 439           | General: 2017/11/22 . . . . .                       | 1   |
| \LWR@section: Fix: Expansion in comparison. . . . .                                | 364           | algorithmix: Improved comment symbol. . . . .       | 592 |
| Fix: Math in section name. . . . .                                                 | 365, 367      | atbegshi: Added. . . . .                            | 607 |
| Fix: Nullify fonts inside HTML comment. . . . .                                    | 365           | cancel: Added. . . . .                              | 628 |
| \TabularMacro: \newcommand instead of \relax to fix supertabular and xtab. . . . . | 451           | changepage: Additional options. . . . .             | 634 |
| \href: Made robust. . . . .                                                        | 470           | easy-todo: Added. . . . .                           | 676 |
| \nameref: Made robust. . . . .                                                     | 468           | fancyref: Added. . . . .                            | 696 |
| \noinkurl: Made robust. . . . .                                                    | 470           | fixmetodonotes: Added. . . . .                      | 706 |
| \url: Made robust. . . . .                                                         | 471           | fixme: Added. . . . .                               | 705 |
| General: 2017/11/08 . . . . .                                                      | 1             | fontenc: Allowed after lwarp. . . . .               | 719 |
| LWR@currentautosec: Added. . . . .                                                 | 363           | hang: Added. . . . .                                | 745 |
| breakurl: Added. . . . .                                                           | 625           | ifoddpage: Added. . . . .                           | 755 |
| hyperref: Made robust. . . . .                                                     | 748, 750, 752 | ltxtable: Added. . . . .                            | 788 |
| hyperref: \Gauge added. . . . .                                                    | 752           | luatodonotes: Improved. . . . .                     | 789 |
| luatodonotes: Added. . . . .                                                       | 789           | lwarp-patch-komascript: Added. . . . .              | 983 |
| todonotes: Added. . . . .                                                          | 940           | overpic: Fix: Groups for lateximages. . . . .       | 840 |
| Added FootnoteDepth. . . . .                                                       | 344           | pdfsync: Fixes. . . . .                             | 848 |
| Docs: HTML settings table. . . . .                                                 | 115           | preview: Added. . . . .                             | 854 |
| Docs: Reorganized HTML customization. . . . .                                      | 115           | scrxtextend: Added. . . . .                         | 868 |
| v0.44                                                                              |               | scrhack: Added. . . . .                             | 871 |
| \@currentlabelname: Adjustment for koma-script. . . . .                            | 462           | scrlayer-notecolumn: Added. . . . .                 | 873 |
| \HTMLTitle: Added. . . . .                                                         | 342           | scrlayer-scrpage: Added. . . . .                    | 873 |
| \LWR@addformatwpalignment: Fix for multicolumn alignment if FormatWP. . . . .      | 434           | scrlayer: Added. . . . .                            | 871 |
| \LWR@backgroundcolor: Added. . . . .                                               | 964           | section: Added. . . . .                             | 875 |
| \LWR@filestart: Add \HTMLTitle. . . . .                                            | 374           | soulpos: Added. . . . .                             | 889 |
| Fix \HTMLAuthor. . . . .                                                           | 373           | soulutf8: Added. . . . .                            | 890 |
| \LWR@listitem: Added list and trivlist. . . . .                                    | 398           | supertabular: Fix for caption. . . . .              | 901 |
| \LWR@patchlists: Added list and trivlist. . . . .                                  | 400           | tikz: Fix: Groups for lateximages. . . . .          | 917 |
| \LWR@strresult: Fix: \providecommand. . . . .                                      | 406           | tocbasic: Added. . . . .                            | 929 |
| \LWR@textcurrentcolor: xcolor: Added \LWR@textcurrentcolor. . . . .                | 963           | tocloft: Added \newlistentry. . . . .               | 938 |
|                                                                                    |               | tocloft: Improved \newlistof. . . . .               | 938 |
|                                                                                    |               | tocstyle: Added. . . . .                            | 939 |
|                                                                                    |               | todonotes: Improved. . . . .                        | 940 |
|                                                                                    |               | todo: Added. . . . .                                | 939 |
|                                                                                    |               | typearea: Added expert commands. . . . .            | 946 |
|                                                                                    |               | watermark: Added. . . . .                           | 958 |
|                                                                                    |               | xcolor: Added                                       |     |
|                                                                                    |               | \LWR@currenttextcolorstyle. . . . .                 | 963 |
|                                                                                    |               | xcolor: Added                                       |     |
|                                                                                    |               | \LWR@findcurrenttextcolor. . . . .                  | 963 |
|                                                                                    |               | xtab: Fix for caption. . . . .                      | 978 |
|                                                                                    |               | Adjustment for koma-script. . . . .                 | 209 |

|                                                                        |     |                                                                   |          |
|------------------------------------------------------------------------|-----|-------------------------------------------------------------------|----------|
| AMS environments: Fix: Groups for lateximages. . . . .                 | 594 | continue: Added. . . . .                                          | 666      |
| If pdfLaTeX, require T1 and UTF-8 encoding. . . . .                    | 210 | endfloat: Added. . . . .                                          | 679      |
| picture: overpic: Fix: Groups for lateximages. . . . .                 | 543 | epigraph: Support for memoir. . .                                 | 683      |
| list: Added list and trivlist. . .                                     | 398 | fancyvrb: Improvements. . .                                       | 697–699  |
| LWR@nestspan: Added list and trivlist. . . . .                         | 327 | flafter: Added. . . . .                                           | 706      |
| v0.45                                                                  |     | ftrace: Added. . . . .                                            | 714      |
| \@currentHref: Added. . . . .                                          | 469 | footnpag: Added. . . . .                                          | 722      |
| \@donoparitem: Modified for HTML. . .                                  | 396 | fwlw: Added. . . . .                                              | 727      |
| \@item: Modified for HTML. . . . .                                     | 396 | hanging: Added. . . . .                                           | 746      |
| \@mklab: Modified for HTML. . . . .                                    | 396 | hyperref: Fix: Underscore in URL. . . . .                         | 748, 749 |
| \CSSFilename: Improved filenames with underscores. . . . .             | 341 | lwarp-patch-memoir: Added. . . .                                  | 985      |
| \LWR@LwarpStart: Fix: Lateximages on incorrect pages with Mathjax. . . | 376 | memhfixc: Added. . . . .                                          | 806      |
| \LWR@includegraphicsb: Improved URLs with underscores. . . . .         | 736 | memoir: Added. . . . .                                            | 577      |
| \LWR@newautoidanchor: Fix: No anchor if frozen autoid. . . . .         | 476 | natbib: Added. . . . .                                            | 821      |
| \LWR@notmemoirloadafter: Added. . .                                    | 198 | pagesel: Added. . . . .                                           | 841      |
| \LWR@printpendingmpfootnotes: Added. . . . .                           | 349 | prettyref: Added. . . . .                                         | 854      |
| \LWR@startref: Fix: Labels with underscores. . . . .                   | 467 | subfigure: Added. . . . .                                         | 899      |
| \LWR@subhyperref: Improved URLs with underscores. . . . .              | 469 | subfig: Fix for subcaption end tag. . .                           | 898      |
| \LWR@subhyperrefclass: Improved URLs with underscores. . . . .         | 470 | subfig: Fix: Math in subcaptions. . .                             | 896      |
| \LWR@sublabel: Fix: Labels with underscores. . . . .                   | 465 | textfit: Added. . . . .                                           | 909      |
| \LWR@tabledatacolumntag: Fix: Empty line between rows. . . . .         | 454 | titleref: Added. . . . .                                          | 921      |
| \chapter: Add optional heading title for memoir. . . . .               | 369 | turnthepage: Added. . . . .                                       | 945      |
| \newpage: Added. . . . .                                               | 566 | Allows memoir's preloaded packages. . . . .                       | 201      |
| \nolinkurl: Fix: Underscore in URL. . .                                | 470 | Docs: xparse warnings. . . . .                                    | 171      |
| \normalmarginpar: Added. . . . .                                       | 350 | Docs: Fix for double hyphens. . . .                               | 92       |
| \reversemarginpar: Added. . . . .                                      | 350 | Docs: Improved install instructions. . .                          | 93       |
| \section: Add optional heading title for memoir. . . . .               | 370 | Docs: Improved MiKTeX install instructions. . . . .               | 89       |
| \tableofcontents: Fix: Empty sidetoc. . . . .                          | 482 | Docs: Moved table so doesn't interfere with install docs. . . . . | 88       |
| Fix: Patch \@AtBeginDocument. . .                                      | 482 | File: lwarp_mathjax.txt: Allow MATHJAX inside tabbing. . . . .    | 293      |
| \url: Improved URLs with underscores. . . . .                          | 471 | File: lwarp_mathjax.txt: Allow MATHJAX inside verse. . . . .      | 293      |
| General: 2018/01/14 . . . . .                                          | 1   | Fix: Empty sidetoc. . . . .                                       | 482      |
| array: Added. . . . .                                                  | 603 | Improved: Robust \, \ , and \textellipsis commands. . . . .       | 565      |
| babel-french: Robust commands. . . . .                                 | 325 | Separate LWR@thisautoidWP for word processor <div>s. . . . .      | 476      |
| backref: Added. . . . .                                                | 613 | thebibliography: Patched to emphasize titles. . . . .             | 492      |
| breakurl: Fix: Underscore in URL. . . .                                | 625 | minipage: Fix: Improper \prevdepth. . . . .                       | 546, 548 |
| changebar: Added. . . . .                                              | 633 | v0.46                                                             |          |
| cite: Added. . . . .                                                   | 663 | \LWR@closeparagraph: Fix: Tabular empty lines. . . . .            | 337      |
|                                                                        |     | \LWR@closeprevious: Fix: Stack unnesting. . . . .                 | 323      |
|                                                                        |     | \LWR@forcenewpage: Fix: Improper \prevdepth. . . . .              | 323      |
|                                                                        |     | \LWR@lookforpackagename: Fix: Spaces in \usepackage. . . . .      | 229      |
|                                                                        |     | \LWR@providelength: Added. . . . .                                | 212      |

|                                         |          |
|-----------------------------------------|----------|
| \LWRPrintStack: Name changed from       |          |
| \PrintStack. . . . .                    | 322      |
| \popclose: Fix: Stack unnesting. . .    | 314      |
| \pushclose: Fix: Stack unnesting. . .   | 314      |
| General: 2018/01/23 . . . . .           | 1        |
| LWR@tabularpardepth added. . . . .      | 406      |
| amsthm: Adapted to trivlist             |          |
| changes. . . . .                        | 598      |
| mdframed: Fixes for svg math or         |          |
| lateximage in title. . . . .            | 800      |
| mdframed: Fixes for footnotes. . .      | 801      |
| ntheorem: Adapted to trivlist           |          |
| changes. . . . .                        | 828      |
| theorem: Adapt to trivlist              |          |
| changes. . . . .                        | 912, 913 |
| tabular: Fix: Tabular empty lines. .    | 460      |
| list: Fix: Stack unnesting. . . . .     | 399      |
| v0.47                                   |          |
| \LWR@HTML@caption@begin: Fix:           |          |
| Argument passed to                      |          |
| \LWR@origcaption@begin. . . . .         | 478      |
| \LWR@LwarpStart: Fix for svg math in    |          |
| \nameref. . . . .                       | 377      |
| \LWR@WPcell: Fix: Line wrap at HTML     |          |
| hyphen. . . . .                         | 434      |
| \LWR@createautosec: Fix: Line wrap      |          |
| at HTML hyphen. . . . .                 | 362      |
| \LWR@domulticolumn: Fix: Line wrap      |          |
| at HTML hyphen. . . . .                 | 443      |
| \LWR@floatbegin: Fix: Line wrap at      |          |
| HTML hyphen. . . . .                    | 474      |
| \LWR@htmlclosecomment: Add \mbox        |          |
| to prevent line breaks. . . . .         | 328      |
| \LWR@newautoidanchor: Fix: Line         |          |
| wrap at HTML hyphen. . . . .            | 476      |
| \LWR@printopenlist: Fix: Line wrap      |          |
| at HTML hyphen. . . . .                 | 395      |
| \LWR@startref: Fix: Line wrap at        |          |
| HTML hyphen. . . . .                    | 466      |
| \LWR@sublabel: Fix: Line wrap at        |          |
| HTML hyphen. . . . .                    | 465      |
| \LWR@subsingledollar: Added svg         |          |
| math image baseline adjust and          |          |
| em sizing. . . . .                      | 500      |
| Fix: Line wrap at HTML hyphen. . .      | 504      |
| \captionlistentry: Fix: Line wrap at    |          |
| HTML hyphen. . . . .                    | 479      |
| \hypertoc: Fix: Line wrap at HTML       |          |
| hyphen. . . . .                         | 486      |
| \hypertocfloat: Fix: Line wrap at       |          |
| HTML hyphen. . . . .                    | 487      |
| General: 2018/01/30 . . . . .           | 1        |
| adjmulticol: Fix: Line wrap at HTML     |          |
| hyphen. . . . .                         | 587      |
| blowup: Added. . . . .                  | 621      |
| caption: Added. . . . .                 | 629      |
| caption: Also loads lwarp-caption. .    | 231      |
| changepage: Fix for pagecheck           |          |
| macros. . . . .                         | 634      |
| endheads: Added. . . . .                | 680      |
| epigraph: Fix: Line wrap at HTML        |          |
| hyphen. . . . .                         | 682      |
| hanging: Fix: Line wrap at HTML         |          |
| hyphen. . . . .                         | 747      |
| hang: Fix: Line wrap at HTML            |          |
| hyphen. . . . .                         | 745      |
| keyfloat: Fix for svg math in           |          |
| captions. . . . .                       | 766      |
| midpage: Fix: Line wrap at HTML         |          |
| hyphen. . . . .                         | 810      |
| multirow: Fix: Line wrap at HTML        |          |
| hyphen. . . . .                         | 815      |
| multitoc: Added. . . . .                | 818      |
| ntheorem: Fix: Line wrap at HTML        |          |
| hyphen. . . . .                         | 832      |
| realscripts: Fix: Line wrap at HTML     |          |
| hyphen. . . . .                         | 860      |
| scrextend: Fix: Line wrap at HTML       |          |
| hyphen. . . . .                         | 868      |
| sectionbreak: Added. . . . .            | 876      |
| sidenotes: Fix for svg math in          |          |
| captions. . . . .                       | 881      |
| subfig: Fix for svg math in             |          |
| captions. . . . .                       | 896      |
| subfig: Fix: Support \nameref. . .      | 895      |
| xurl: Added. . . . .                    | 980      |
| <i>lwarpmk: pdfcrop</i> : Removed hires |          |
| option for improved crop                |          |
| accuracy. . . . .                       | 295      |
| lateximage: Added css style option. .   | 525      |
| Fix: Line wrap at HTML hyphen. . .      | 529      |
| center: Fix: Line wrap at HTML          |          |
| hyphen. . . . .                         | 530      |
| minipage: Fix: Line wrap at HTML        |          |
| hyphen. . . . .                         | 546, 547 |
| flushleft: Fix: Line wrap at HTML       |          |
| hyphen. . . . .                         | 531      |
| flushright: Fix: Line wrap at HTML      |          |
| hyphen. . . . .                         | 530      |
| enumerate: Fix: Line wrap at HTML       |          |
| hyphen. . . . .                         | 399      |
| itemize: Fix: Line wrap at HTML         |          |
| hyphen. . . . .                         | 399      |
| LWR@BlockClassWP: Fix: Line wrap at     |          |
| HTML hyphen. . . . .                    | 332      |
| v0.48                                   |          |
| \@@@setcpageref: Fix for new v0.21 of   |          |
| cleveref. . . . .                       | 542      |
| \@@@setcref: Fix for new v0.21 of       |          |
| cleveref. . . . .                       | 541      |

|                                                                                                                                         |          |                                                                                                                       |               |
|-----------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------------------------------------------|---------------|
| <code>\@@@setcrefrange</code> : Fix for new v0.21 of <code>cleveref</code> . . . . .                                                    | 541      | <code>colortbl</code> : Added. . . . .                                                                                | 423, 434, 664 |
| <code>\@biblabel</code> : Improved bibliography label. . . . .                                                                          | 492      | <code>fancyref</code> : Now directly supported. . . . .                                                               | 696           |
| <code>\@item</code> : Honors <code>\makeLabel</code> . . . . .                                                                          | 396      | <code>hypcap</code> : Added. . . . .                                                                                  | 747           |
| <code>\@maketitle</code> : Fix: Errors with IEEEtran class. . . . .                                                                     | 386      | <code>hypernat</code> : Added. . . . .                                                                                | 748           |
| <code>\LWR@LwarpStart</code> : Adjusted space around captions. . . . .                                                                  | 376      | <code>hyperref</code> : <code>\texorpdfstring</code> now uses the T <sub>E</sub> X string. . . . .                    | 752           |
| <code>\LWR@ProvidesPackageDrop</code> : Fix: Options with braces. . . . .                                                               | 231      | <code>luatodonotes</code> : Improved <code>\todotoc</code> . . . . .                                                  | 789           |
| <code>\LWR@addtabularhrulecolor</code> : <code>colortbl</code> : Added. . . . .                                                         | 435      | <code>siunitx</code> : Changes fraction to symbol. . . . .                                                            | 885           |
| <code>\LWR@addtabularrulecolors</code> : <code>colortbl</code> : Added. . . . .                                                         | 436      | <code>siunitx</code> : Improved <code>svg math</code> . . . . .                                                       | 883, 885      |
| <code>\LWR@closetabledatcell</code> : <code>colortbl</code> : Added. . . . .                                                            | 408, 409 | <code>siunitx</code> : Improved color output. . . . .                                                                 | 883           |
| <code>\LWR@includegraphicsb</code> : Fix: Virtual page size limited to a group. . . . .                                                 | 736, 739 | <code>stfloats</code> : Added. . . . .                                                                                | 893           |
| <code>\LWR@lookforpackagename</code> : Fix: Parsing similar package names. . . . .                                                      | 228      | <code>todonotes</code> : Improved <code>\todotoc</code> . . . . .                                                     | 941           |
| <code>\LWR@newautopagelabel</code> : Fix: TOC, LOF, LOT links. . . . .                                                                  | 355      | <code>vmargin</code> : Added. . . . .                                                                                 | 954           |
| <code>\LWR@newhtmlfile</code> : Fix: TOC, LOF, LOT links. . . . .                                                                       | 359      | <code>xfrac</code> : Fix: Added groups around super/subscripts to localize <code>LWR@nestspan</code> changes. . . . . | 973           |
| <code>\LWR@nullfonts</code> : Fix: <code>\newline</code> in title. . . . .                                                              | 558      | Docs: Converting an existing document. . . . .                                                                        | 108           |
| <code>\LWR@parsedrequirepackagenames</code> : Fix: Parsing similar package names. . . . .                                               | 227      | Improved font control. . . . .                                                                                        | 561           |
| <code>\LWR@parsetablecols</code> : Fix: Ignore optional tabular column arguments. . . . .                                               | 422      | <code>tabular</code> : <code>colortbl</code> : Added. . . . .                                                         | 458           |
| <code>\LWR@restoreorigformatting</code> : Fix: Spacing in <code>svg math</code> , <code>lateximage</code> , <code>Tikz</code> . . . . . | 493      | <code>lateximage</code> : Print mode boxed to natural width. . . . .                                                  | 530           |
| <code>\LWR@section</code> : Fix: TOC, LOF, LOT links. . . . .                                                                           | 367      | <code>abstract</code> : Allow optional name. . . . .                                                                  | 388           |
| <code>\LWR@tabledatasingletag</code> : <code>colortbl</code> : Added. . . . .                                                           | 428      | v0.49                                                                                                                 |               |
| <code>\LWR@textcurrentfont</code> : Added. Improves font control. . . . .                                                               | 561      | <code>\LWR@addtabularcellcolor</code> : <code>xcolor</code> : Added tabular row colors. . . . .                       | 438           |
| <code>\bibliography</code> : Fix: <code>\BaseJobname</code> for bibliography. . . . .                                                   | 492      | <code>\LWR@domulticolumn</code> : <code>xcolor</code> : Added tabular row colors. . . . .                             | 444           |
| <code>\centerline</code> : Added. . . . .                                                                                               | 532      | <code>\LWR@printlength</code> : Fix: Group <code>printlen</code> changes. . . . .                                     | 226           |
| <code>\l@part</code> : Adapts to classes without <code>\part</code> . . . . .                                                           | 487      | <code>\affiliation</code> : Fix: Adapts to classes which already provide. . . . .                                     | 381           |
| <code>\leftline</code> : Added. . . . .                                                                                                 | 532      | <code>\href</code> : Fix: Adapt to classes. . . . .                                                                   | 470           |
| <code>\mbox</code> : Nullified for HTML. . . . .                                                                                        | 549      | <code>\noalign</code> : Fix: <code>\noalign</code> inside <code>tabular</code> . . . . .                              | 455           |
| <code>\rightline</code> : Added. . . . .                                                                                                | 532      | <code>\url</code> : Fix: Adapt to classes. . . . .                                                                    | 471           |
| <code>\thempfootnote</code> : Removed <code>\itshape</code> . . . . .                                                                   | 348      | General: 2018/02/19 . . . . .                                                                                         | 1             |
| General: 2018/02/14 . . . . .                                                                                                           | 1        | <code>amsmath</code> : Fix: Patches for <code>\eqref</code> . . . . .                                                 | 593           |
| <code>acronym</code> : Added. . . . .                                                                                                   | 586      | <code>eso-pic</code> : Fix for <code>\AddToShipoutPicture</code> . . . . .                                            | 688           |
| <code>acro</code> : Added. . . . .                                                                                                      | 584      | <code>figsize</code> : Added. . . . .                                                                                 | 703           |
| <code>chapterbib</code> : Added. . . . .                                                                                                | 637      | <code>fnlineno</code> : Added. . . . .                                                                                | 716           |
|                                                                                                                                         |          | <code>hypdestopt</code> : Added. . . . .                                                                              | 747           |
|                                                                                                                                         |          | <code>hyphenat</code> : Added. . . . .                                                                                | 753           |
|                                                                                                                                         |          | <code>lineno</code> : Added. . . . .                                                                                  | 775           |
|                                                                                                                                         |          | <code>luacolor</code> : Added. . . . .                                                                                | 788           |
|                                                                                                                                         |          | <code>pagegrid</code> : Added. . . . .                                                                                | 841           |
|                                                                                                                                         |          | <code>pdfrender</code> : Added. . . . .                                                                               | 847           |
|                                                                                                                                         |          | <code>resizegather</code> : Added. . . . .                                                                            | 864           |
|                                                                                                                                         |          | <code>vertbars</code> : Added. . . . .                                                                                | 954           |
|                                                                                                                                         |          | <code>vwcol</code> : Added. . . . .                                                                                   | 956           |
|                                                                                                                                         |          | <code>xcolor</code> : Added tabular row colors. . . . .                                                               | 423, 969      |





|                                                                                             |     |                                                                                                                   |     |
|---------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------------------------------------|-----|
| Fix: SVG math with enclosed lateximage. . . . .                                             | 501 | lateximage: Added additional hashing option. . . . .                                                              | 525 |
| Improved svg math baseline. . . . .                                                         | 503 | Fix: lateximage inside $\mathcal{AMS}$ \text. . . . .                                                             | 526 |
| SVG math baseline improved with invisible rule at corner. . . . .                           | 505 | Processing for complicated display math. . . . .                                                                  | 528 |
| Typeset svg math only once during measurement. . . . .                                      | 502 | alignat: Fix: Added. . . . .                                                                                      | 596 |
| \LWR@textcurrentcolor: xcolor: \LWR@textcurrentcolor if xcolor not loaded. . . . .          | 564 | eqnarray: Fix: \addcontentsline inside svg math. Provides an autoid anchor. . . . .                               | 518 |
| \addcontentsline: Add missing support for float mechanism if necessary. . . . .             | 480 | LWR@displaymathother: Processing for complicated display math. . . . .                                            | 509 |
| No anchor ID if inside svg image. . . . .                                                   | 480 | LWR@equationother: Processing for complicated display math. . . . .                                               | 509 |
| \displaymathnormal: Processing for complicated display math. . . . .                        | 514 | v0.52                                                                                                             |     |
| \displaymathother: Processing for complicated display math. . . . .                         | 515 | \@ensuredmath: Improved hashing expansion. . . . .                                                                | 507 |
| \textcolor: Fix: SVG math color. . . . .                                                    | 965 | \@mpfootnotetext: Fix: Paragraph handling. . . . .                                                                | 347 |
| General: 2018/03/24 . . . . .                                                               | 1   | \CustomizeMathJax: Added. . . . .                                                                                 | 355 |
| HTML entity used for text dollar. . . . .                                                   | 499 | \LWR@footnotetext: Fix: Paragraph handling. . . . .                                                               | 346 |
| lwarp_one_limage.txt: <i>pdftocairo</i> -noshrink added. . . . .                            | 292 | \LWR@addbaselinemarker: Warnings if lwarp_baseLine_marker.png is not present or if graphicx/s not loaded. . . . . | 499 |
| afterpackage: No longer required. . . . .                                                   | 224 | \LWR@customizedMathJax: Added. . . . .                                                                            | 355 |
| chemfig: Added. . . . .                                                                     | 637 | \LWR@doequation: Fix: equation* now based on equation instead of displaymath. . . . .                             | 512 |
| chemformula: Added. . . . .                                                                 | 639 | Fix: equation* with split. . . . .                                                                                | 512 |
| chemgreek: Added. . . . .                                                                   | 643 | \LWR@filenamenoblanks: Fix: \FileDepth with non-utf8 encoding. . . . .                                            | 354 |
| chemmacros: Added. . . . .                                                                  | 644 | \LWR@nullfonts: Fix: \texorpdfstring in section names. . . . .                                                    | 560 |
| chemnum: Added. . . . .                                                                     | 661 | \LWR@section: Fix: Footnote numbering: Limited HTML comment if starred. . . . .                                   | 365 |
| epstopdf-base: Added. . . . .                                                               | 684 | Fix: Footnote numbering: Use short toc entry for HTMLDebug comments. . . . .                                      | 365 |
| fancybox: Fix: Optional tag for \item in a span. . . . .                                    | 694 | \LWR@subsingledollar: Added user-adjustable svg math font scaling. . . . .                                        | 503 |
| grid: Added. . . . .                                                                        | 744 | \LateximageFontScale: Added user-adjustable svg math font scaling. . . . .                                        | 521 |
| listings: Forces cleared options. . . . .                                                   | 779 | \href: Fix: #, %, &, ~, _ in URL. . . . .                                                                         | 470 |
| ltxgrid: Added. . . . .                                                                     | 787 | \nolinkurl: Fix: #, %, &, ~, _ in URL. . . . .                                                                    | 470 |
| mhchem: Added. . . . .                                                                      | 808 | \theHTMLTitleSeparator: Fix: \FileDepth with non-utf8 encoding. . . . .                                           | 371 |
| tikz: Fix for \tikz macro. . . . .                                                          | 917 | \url: Fix: #, %, &, ~, _ in URL. . . . .                                                                          | 471 |
| tikz: Fix for tikz with optional argument. . . . .                                          | 917 |                                                                                                                   |     |
| titling: Fix for \thanks mark. . . . .                                                      | 927 |                                                                                                                   |     |
| <i>lwarpmk</i> : <i>pdfcrop</i> : Restored hires option. . . . .                            | 295 |                                                                                                                   |     |
| <i>lwarpmk</i> : <i>pdftocairo</i> -noshrink added. . . . .                                 | 295 |                                                                                                                   |     |
| AMS environments: Fix: \addcontentsline inside svg math. Provides an autoid anchor. . . . . | 594 |                                                                                                                   |     |
| Docs: tikz limitations. . . . .                                                             | 158 |                                                                                                                   |     |
| Docs: Multiple authors and affiliations. . . . .                                            | 136 |                                                                                                                   |     |
| Docs: Things to avoid. . . . .                                                              | 126 |                                                                                                                   |     |
| Docs: Updated Converting an existing document. . . . .                                      | 108 |                                                                                                                   |     |
| Fix: Remember original \# in case is redefined. . . . .                                     | 242 |                                                                                                                   |     |

|                                       |          |                                           |          |
|---------------------------------------|----------|-------------------------------------------|----------|
| General: 2018/04/01                   | 1        | \raggedright: Added debug comment.        | 531      |
| breakurl: Fix: #, %, &, ~, _ in URL.  | 625      | General: 2018/04/22                       | 1        |
| endfloat: Updated for v2.6.           | 679      | *.lwarpmkconf: Option                     |          |
| fancyvrb: Initial support for         |          | IndexLanguage changed to                  |          |
| \VerbatimFootnotes.                   | 691, 697 | xindyLanguage.                            | 253      |
| hyperref: Fix: #, %, &, ~, _ in       |          | *.lwarpmkconf: Option                     |          |
| URL.                                  | 748–751  | pdftotextEnc added.                       | 253      |
| nicefrac: Added.                      | 824      | *.lwarpmkconf: Option                     |          |
| url: Added.                           | 951      | xdyFilename changed to                    |          |
| <i>lwarpmk</i> : Fix: Memory overflow |          | xindyStyle.                               | 253      |
| when spawning tasks.                  | 295      | *.lwarpmkconf: Option                     |          |
| <i>lwarpmk</i> : Fix: Skip image      |          | xindyCodepage added.                      | 253      |
| generation if from page 0.            | 295      | lwarpmk.css: Fix:                         |          |
| Changed FootnoteDepth default to      |          | Text-decoration-skip: auto.               | 253      |
| \subsubsection.                       | 344      | lwarpmk.conf: Option                      |          |
| Docs: Improved install instructions.  | 90       | IndexLanguage changed to                  |          |
| Fix: MathJax script line wraps.       |          | xindyLanguage.                            | 253      |
| Reduced right margin.                 | 224      | lwarpmk.conf: Option                      |          |
| If pdfLaTeX, allow other input        |          | pdftotextEnc added.                       | 253      |
| encoding.                             | 210      | lwarpmk.conf: Option                      |          |
| pkggraphics: Added defaults.          | 733, 734 | xdyFilename changed to                    |          |
| pkggraphicx: Updated for v1.1a.       | 734      | xindyStyle.                               | 253      |
| pkggraphicx: Updated for v1.1b.       | 734      | lwarpmk.conf: Option                      |          |
| Restore \kill in a lateximage.        | 786      | xindyCodepage added.                      | 253      |
| tabbing: Fix to allow inside          |          | bibunits: Added.                          | 619      |
| lateximage.                           | 393      | chnpage: Added.                           | 662      |
| lateximage: Fix for hash expansion.   | 527      | forest: Added.                            | 723      |
| v0.53                                 |          | glossaries: Fix when not using            |          |
| General: 2018/04/01                   | 1        | babel or polyglossia.                     | 730      |
| <i>lwarpmk</i> : Added                |          | gridset: Added.                           | 744      |
| <i>lwarpmk cleanimages</i> .          | 295      | hyperref: Fix: \hyperref and              |          |
| <i>lwarpmk</i> : Added warning for    |          | \hyperlink with special chars in          |          |
| corrupted images.                     | 295      | text.                                     | 750, 751 |
| Docs: <i>lwarpmk cleanimages</i> .    | 106      | hyperref: Fix: \ref in \hyperref          |          |
| Docs: <i>lwarpmk pdftohtml</i> .      | 106      | and \hyperlink caused nested              |          |
| v0.54                                 |          | link.                                     | 750, 751 |
| \LWR@afterendverbatim: Added          |          | lwarpmk-patch-memoir: Update for          |          |
| vspace argument.                      | 393      | v3.7g.                                    | 990      |
| \LWR@atbeginverbatim: Improved        |          | magaz: Added.                             | 791      |
| column alignment.                     | 392      | ragged2e: Fix: \centering, etc.           | 859      |
| \LWR@earlyloadnever: Added.           | 200      | textcomp: Fix for                         |          |
| \LWR@endfloatalignment: Honor         |          | \textperthousand.                         | 906      |
| \centering, etc. in floats.           | 476      | tikz: Fixes for \pgfpicture,              |          |
| \LWR@floatalignment: Honor            |          | minipages, fit, align, font.              | 917      |
| \centering, etc. in floats.           | 476      | <i>lwarpmk</i> : Added pdftotextenc.      | 295      |
| \LWR@floatbegin: Honor \centering,    |          | <i>lwarpmk</i> : Added xindycodepage.     | 295      |
| etc. in floats.                       | 474      | <i>lwarpmk</i> : Changed language to      |          |
| \LWR@floatend: Honor \centering,      |          | xindylanguage.                            | 295      |
| etc. in floats.                       | 475      | <i>lwarpmk</i> : Changed xdyfile to       |          |
| \LateximageFontSizeName: Defaults     |          | xindystyle.                               | 295      |
| to normalsize.                        | 521      | <i>lwarpmk</i> : Improved error if        |          |
| \centering: Added debug comment.      | 531      | configuration file does not exist.        | 295      |
| \raggedleft: Added debug              |          | <i>lwarpmk</i> : Increased prominence for |          |
| comment.                              | 531      | error for an unknown command.             | 295      |

|                                                                                                            |          |                                                                                                                            |          |
|------------------------------------------------------------------------------------------------------------|----------|----------------------------------------------------------------------------------------------------------------------------|----------|
| <i>lwarpmk</i> : Verifies HTML version exists before <i>lwarpmk</i> images. . . . .                        | 295      | Adds support for double vertical rules. . . . .                                                                            | 444      |
| <i>lwarpmk</i> : Verifies image references before <i>lwarpmk</i> images. . . . .                           | 295      | <code>\LWR@floatbegin</code> : Adds a <code>&lt;class&gt;</code> per float package style. . . . .                          | 474      |
| Add: <code>pdftotextEnc</code> . . . . .                                                                   | 218      | <code>\LWR@multicolparttext</code> : Fix: <code>\multicolumn</code> parameters. . . . .                                    | 439      |
| Add: <code>xindyCodepage</code> . . . . .                                                                  | 218      | <code>\LWR@openparagraph</code> : Added support for <code>parnotes</code> . . . . .                                        | 335      |
| Added early check for disallowed packages. . . . .                                                         | 200      | <code>\LWR@parsebarcolumn</code> : Adds support for double vertical rules. . . . .                                         | 415      |
| Docs: BibTeX. . . . .                                                                                      | 138      | <code>\LWR@parsecoloncolumn</code> : <code>arydshln</code> : Added. . . . .                                                | 416      |
| Docs: Macros in sectioning names. . . . .                                                                  | 126      | <code>\LWR@parsesemicoloncolumn</code> : <code>arydshln</code> : Added. . . . .                                            | 417      |
| Never load <code>aecompl</code> . . . . .                                                                  | 200      | <code>\LWR@parsetablecols</code> : Added array <code>W</code> column. . . . .                                              | 422      |
| Option <code>IndexLanguage</code> changed to <code>xindyLanguage</code> . . . . .                          | 218      | <code>\LWR@printmccoldata</code> : Added array <code>W</code> column. . . . .                                              | 441      |
| Option <code>xdyFilename</code> changed to <code>xindyStyle</code> . . . . .                               | 217      | Fix: <code>\multicolumn</code> parameters. . . . .                                                                         | 440      |
| verse: Fix: Line spacing. . . . .                                                                          | 390      | <code>\LWR@printmccoltype</code> : Added array <code>W</code> column. . . . .                                              | 439      |
| v0.55                                                                                                      |          | Adds support for dashed vertical rules. . . . .                                                                            | 439      |
| <code>\LWR@LwarpStart</code> : Fix: Overfull boxes in <code>lateximages</code> . . . . .                   | 375      | Adds support for double vertical rules. . . . .                                                                            | 439      |
| <code>\LWR@floatbegin</code> : Fix: Float optional args. . . . .                                           | 474      | <code>\LWR@tabledatacolumnntag</code> : Fix: <code>\morecmidrules</code> . . . . .                                         | 453      |
| <code>\LWR@nullfonts</code> : Removed extraneous space which appeared in file links. . . . .               | 560      | <code>\LWR@textcurrentfont</code> : Added <code>span.textbf</code> , etc. . . . .                                          | 561      |
| <code>\phantomsection</code> : Fix: <code>\ForceHTMLTOC</code> with <code>\phantomsection</code> . . . . . | 572      | General: 2018/05/12 . . . . .                                                                                              | 1        |
| General: 2018/04/26 . . . . .                                                                              | 1        | <code>*.lwarpmkconf</code> : Records <code>--shell-escape</code> . . . . .                                                 | 253      |
| <code>clrdblpg</code> : Added. . . . .                                                                     | 664      | <code>lwarp.css</code> : Added <code>div.textbf</code> , etc. . . . .                                                      | 253      |
| Fix: <code>\centering</code> , etc. for <code>koma-script</code> . . . . .                                 | 474      | <code>lwarp.css</code> : Added <code>span.textbf</code> , etc. . . . .                                                     | 253      |
| Fix: QED symbols in <code>lateximage</code> . . . . .                                                      | 599, 838 | <code>lwarpmk.conf</code> : Records <code>--shell-escape</code> . . . . .                                                  | 253      |
| v0.56                                                                                                      |          | <code>arydshln</code> : Added. . . . .                                                                                     | 404, 604 |
| <code>\LWR@addcdashline</code> : <code>arydshln</code> : Added. . . . .                                    | 434      | <code>lua-check-hyphen</code> : Added. . . . .                                                                             | 788      |
| <code>\LWR@addmulticolvertulecolor</code> : Adds support for dashed vertical rules. . . . .                | 442      | <code>paralist</code> : Fixes for <code>compactenum</code> , <code>compactitem</code> , <code>compactdesc</code> . . . . . | 842      |
| Adds support for double vertical rules. . . . .                                                            | 442      | <code>parnotes</code> : Added. . . . .                                                                                     | 842      |
| <code>\LWR@addtabularhrulecolor</code> : Adds support for <code>arydshln</code> dashed rules. . . . .      | 435      | <code>quoting</code> : Added. . . . .                                                                                      | 859      |
| Adds support for double <code>\hlines</code> and <code>\midrules</code> . . . . .                          | 435      | <code>tocenter</code> : Added. . . . .                                                                                     | 933      |
| <code>\LWR@addtabularrulecolors</code> : Adds support for dashed vertical rules. . . . .                   | 436      | <code>underscore</code> : Added. . . . .                                                                                   | 949      |
| Adds support for double vertical rules. . . . .                                                            | 436      | <i>lwarpmk</i> : Added <code>lwarpmk pdftosvg</code> . . . . .                                                             | 295      |
| <code>\LWR@closeparagraph</code> : Added support for <code>parnotes</code> . . . . .                       | 337      | <i>lwarpmk</i> : Supports <code>--shell-escape</code> . . . . .                                                            | 295      |
| <code>\LWR@domulticolumn</code> : Adds support for dashed vertical rules. . . . .                          | 444      | Added <code>\thinspace</code> . . . . .                                                                                    | 565      |
|                                                                                                            |          | Docs: <b>lwarpmk pdftosvg</b> . . . . .                                                                                    | 106      |
|                                                                                                            |          | <code>LWR@blocktextcurrentfont</code> : Added <code>div.textbf</code> , etc. . . . .                                       | 561      |

|                                                                                  |     |
|----------------------------------------------------------------------------------|-----|
| v0.57                                                                            |     |
| \BlockClassSingle: Improved print/HTML output selection. . . . .                 | 332 |
| \InlineClass: Improved print/HTML output selection. . . . .                      | 332 |
| \LWR@customizeMathJax: MathJax: Supports \footnote, \footnotemark. . . . .       | 355 |
| \LWR@ref@ignorestar: subcaption: Fix: \subref. . . . .                           | 468 |
| \LWR@subhyperref: Fix: Text catcodes. . . . .                                    | 469 |
| \LWR@subhyperreftext: Fix: Text catcodes. . . . .                                | 470 |
| \LWR@subsingledollar: Fix: Dynamic inline math expressions. 501, 502, 504        |     |
| \LWR@vspace: Improved print/HTML output selection. . . . .                       | 569 |
| \StartDefiningMath: Added. . . . .                                               | 316 |
| \boxframe: xcolor: Fix: Colored \boxframe. . . . .                               | 969 |
| \colorbox: xcolor: New system for switching print and HTML outputs. . . . .      | 965 |
| \colorboxBlock: xcolor: New system for switching print and HTML outputs. . . . . | 966 |
| \fboxBlock: Improved print/HTML output selection. . . . .                        | 552 |
| \fcolorbox: xcolor: New system for switching print and HTML outputs. . . . .     | 966 |
| \framebox: Improved print/HTML output selection. . . . .                         | 550 |
| \href: Fix: Text catcodes. . . . .                                               | 470 |
| \inlinemathother: Added. . . . .                                                 | 317 |
| \listof: Fix: Provide \l@name if not defined. . . . .                            | 484 |
| \makebox: Improved print/HTML output selection. . . . .                          | 550 |
| \mathimagename: Added. . . . .                                                   | 498 |
| \mbox: Improved print/HTML output selection. . . . .                             | 549 |
| \multicolumnrow: multirow: Improved print/HTML output selection. . . . .         | 817 |
| Improved print/HTML output selection. . . . .                                    | 449 |
| \newfloat: rotfloat: Added float styles. . . . .                                 | 866 |
| rotfloat: Fix for listof sideways floats. . . . .                                | 866 |
| \packagediagramname: Added. . . . .                                              | 498 |
| \parbox: Improved print/HTML output selection. . . . .                           | 549 |
| \raisebox: Improved print/HTML output selection. . . . .                         | 554 |
| \reflectbox: Improved print/HTML output selection. . . . .                       | 743 |
| \resizebox: Improved print/HTML output selection. . . . .                        | 743 |
| \rotatebox: Improved print/HTML output selection. . . . .                        | 741 |
| \rule: Fix: Colored rules. . . . .                                               | 571 |
| \scalebox: Improved print/HTML output selection. . . . .                         | 742 |
| \textcolor: xcolor: New system for switching print and HTML outputs. . . . .     | 965 |
| General: 2018/06/06 . . . . .                                                    | 1   |
| lwrap.css: Added ruled, boxed, boxruled floats. . . . .                          | 253 |
| lwrap.css: Increased float vertical margins. . . . .                             | 253 |
| algorithm2e: Added. . . . .                                                      | 588 |
| bigdelim: Improved print/HTML output selection. . . . .                          | 619 |
| breakurl: Fix: Text catcodes. . . . .                                            | 625 |
| colortbl: New system for switching print and HTML outputs. . . . .               | 665 |
| ellipsis: Added \midwordellipsis. 678                                            |     |
| errata: Added. . . . .                                                           | 686 |
| float: Added float styles. . . . .                                               | 707 |
| float: Fix: Do not pre-define \l@name. . . . .                                   | 707 |
| ltablex: Added. . . . .                                                          | 786 |
| marginnote: Fix: Long optional argument. . . . .                                 | 795 |
| multirow: Improved print/HTML output selection. . . . .                          | 815 |
| register: Added. . . . .                                                         | 861 |
| subcaption: Fix: \subref. . . . .                                                | 749 |
| trimclip: Added. . . . .                                                         | 943 |
| vowel: Added. . . . .                                                            | 955 |
| xellipsis: Added. . . . .                                                        | 971 |
| xfrac: Improved print/HTML \scalebox control. . . . .                            | 973 |
| xltabular: Added. . . . .                                                        | 975 |
| xpiano: Added. . . . .                                                           | 976 |
| lwarpmk: Improved code factoring. . . . .                                        | 295 |
| lwarpmk: Improved error handling. . . . .                                        | 295 |
| Docs: Recompiling lwarpmk or css files. . . . .                                  | 186 |
| Docs: Recreating the index for lwrap source. . . . .                             | 183 |
| New system for switching print and HTML outputs. . . . .                         | 237 |

|                                                                                                  |     |                                                                                                                 |      |
|--------------------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------|------|
| minipage: Improved print/HTML<br>output selection. . . . .                                       | 545 | cases: Added. . . . .                                                                                           | 632  |
| BlockClass: Improved print/HTML<br>output selection. . . . .                                     | 331 | imakeidx: Added. . . . .                                                                                        | 756  |
| fminipage: Improved print/HTML<br>output selection. . . . .                                      | 552 | index: Added. . . . .                                                                                           | 759  |
| LWR@BlockClassWP: Improved<br>print/HTML output selection. . .                                   | 332 | intopdf: Added. . . . .                                                                                         | 761  |
| v0.58                                                                                            |     | lwarp-patch-komascript: Modified<br>indexing. . . . .                                                           | 983  |
| \LWR@HTML@caption@begin: Improved<br>print/HTML output selection. . .                            | 478 | lwarp-patch-memoir: Fix for<br>\specialindex. . . . .                                                           | 1006 |
| \LWR@HTML@caption@end: Improved<br>print/HTML output selection. . .                              | 479 | lwarp-patch-memoir: Fix for<br>multiple indexes. . . . .                                                        | 1006 |
| \LWR@HTML@ref: Improved print/HTML<br>output selection. . . . .                                  | 468 | makeidx: Added. Moved from<br>warp core. . . . .                                                                | 791  |
| \LWR@doindexentry: Adds support for<br>\see, \seealso, \emph, \textbf,<br>etc. . . . .           | 490 | memoir: Fix for \firsthlline,<br>\lasthlline. . . . .                                                           | 450  |
| \LWR@hyperindexrefnullified: Adds<br>support for \see, \seealso,<br>\emph, \textbf, etc. . . . . | 490 | memoir: Fix for booktabs. . . .                                                                                 | 455  |
| \LWR@indexitem: Accepts optional arg<br>for repeatindex. . . . .                                 | 489 | pdfpages: Added. . . . .                                                                                        | 845  |
| \dotfill: Improved print/HTML<br>output selection. . . . .                                       | 566 | pdfx: Added. . . . .                                                                                            | 849  |
| \hfill: Improved print/HTML output<br>selection. . . . .                                         | 566 | repeatindex: Added. . . . .                                                                                     | 864  |
| \hrulefill: Improved print/HTML<br>output selection. . . . .                                     | 566 | splitidx: Added. . . . .                                                                                        | 891  |
| \hyperindexref: Adds support for<br>\see, \seealso, \emph, \textbf,<br>etc. . . . .              | 491 | textcomp: Improved print/HTML<br>output selection. . . . .                                                      | 906  |
| \printindex: Fix: Extra \newpage to<br>flush pending \index writes. . .                          | 791 | <i>lwarpmk</i> : Added makeindex and<br>xindy options. . . . .                                                  | 295  |
| General: 2018/07/07 . . . . .                                                                    | 1   | <i>lwarpmk</i> : Added -p option for<br>project name. . . . .                                                   | 295  |
| *.lwarpmkconf: Added option<br>makeindexstyle. . . . .                                           | 253 | <i>lwarpmk</i> : Added optional list of<br>names for <b>lwarpmk printindex</b><br>and /cmdslwarpmk htmlindex. . | 295  |
| *.lwarpmkconf: Added options<br>makeindex and xindy. . . . .                                     | 253 | <i>lwarpmk</i> : Glossary generation now<br>uses <i>makeglossaries</i> . . . . .                                | 295  |
| *.lwarpmkconf: Generated<br>\AtBeginDocument. . . . .                                            | 253 | <i>lwarpmk</i> : <b>lwarpmk clean</b> removes<br>all *.ind and *.idx files. . . .                               | 295  |
| lwarp.xdy: Requires<br>makeindex.xdy. . . . .                                                    | 291 | Added makeindex option. . . . .                                                                                 | 219  |
| lwarp.xdy: Supports bold, italic. .                                                              | 291 | Added xindy option. . . . .                                                                                     | 219  |
| lwarp_html.ist: Added. . . . .                                                                   | 291 | Added option makeindexStyle. .                                                                                  | 217  |
| lwarpmk.conf: Added option<br>makeindexstyle. . . . .                                            | 253 | Docs: Index, <i>makeindex</i> ,<br>imakeidx. . . . .                                                            | 140  |
| lwarpmk.conf: Added options<br>makeindex and xindy. . . . .                                      | 253 | Docs: Misplaced \omit. . . . .                                                                                  | 188  |
| lwarpmk.conf: Generated<br>\AtBeginDocument. . . . .                                             | 253 | Fix: memoir and ccaption. . . .                                                                                 | 201  |
| array: Improved print/HTML output<br>selection. . . . .                                          | 603 | Improved print/HTML output<br>selection. . . . .                                                                | 565  |
| attachfile2: Added. . . . .                                                                      | 608 | Replaced each \csuse with<br>\@nameuse to force error if<br>undefined. . . . .                                  | 1    |
| attachfile: Added. . . . .                                                                       | 607 | v0.59                                                                                                           |      |
|                                                                                                  |     | tabbing: Improved print/HTML<br>output selection. . . . .                                                       | 393  |
|                                                                                                  |     | \LWR@addbaselinemarker: Uses .eps<br>if DVI <i>latex</i> . . . . .                                              | 499  |
|                                                                                                  |     | \LWR@includegraphicsb: Fix: Expand<br>filename. . . . .                                                         | 737  |
|                                                                                                  |     | Now works with .pdf and .eps<br>filename extensions. . . . .                                                    | 736  |
|                                                                                                  |     | \LWR@latexmkcmd: Fix:<br>--shell-escape with <i>latexmk</i> . .                                                 | 248  |

|                                                                                                                                                   |     |                                                                                                                                    |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------------------------------------------------------|----------|
| <code>\LWR@writeconf</code> : Compilation<br>commands now preassigned by<br><i>lwarp</i> instead of being computed<br>by <i>lwarpmk</i> . . . . . | 252 | <code>\LWR@tabledatasinglecolumn</code> :<br><i>tabular</i> : Improved memory<br>management: Not using<br><i>xstring</i> . . . . . | 427, 428 |
| <code>\[</code> : Fix with <code>\displaymathnormal</code> . . . . .                                                                              | 507 | <code>\LWR@tabularendofline</code> : Fix:<br>Slowdown for long tables. . . . .                                                     | 412      |
| General: 2018/09/07 . . . . .                                                                                                                     | 1   | General: 2018/09/19 . . . . .                                                                                                      | 1        |
| <i>Slunits</i> : Added. . . . .                                                                                                                   | 882 | <i>tabular</i> : Improved memory<br>management: Global boolean. . . . .                                                            | 405      |
| <i>accsupp</i> : Added. . . . .                                                                                                                   | 584 | <i>tabular</i> : Improved memory<br>management: Not using<br><i>xstring</i> . . . . .                                              | 406, 816 |
| <i>amsmath</i> : Moved from the <i>lwarp</i><br>core. . . . .                                                                                     | 593 | 2up: Added. . . . .                                                                                                                | 580      |
| <i>asymptote</i> : Added. . . . .                                                                                                                 | 606 | booklet: Added. . . . .                                                                                                            | 622      |
| <i>axessibility</i> : Added. . . . .                                                                                                              | 612 | <b>bophook</b> : Added. . . . .                                                                                                    | 624      |
| <i>breqn</i> : Added. . . . .                                                                                                                     | 626 | diagbox: Fix for <i>par</i> tags. . . . .                                                                                          | 673      |
| <i>bxpapersize</i> : Added. . . . .                                                                                                               | 627 | draftfigure: Added. . . . .                                                                                                        | 675      |
| <i>canoniclayout</i> : Added. . . . .                                                                                                             | 629 | fancytabs: Added. . . . .                                                                                                          | 697      |
| <i>chemformula</i> : Fix for <code>\NMR</code> . . . . .                                                                                          | 659 | fullminipage: Added. . . . .                                                                                                       | 726      |
| <i>draftcopy</i> : Added. . . . .                                                                                                                 | 675 | grid-system: Added. . . . .                                                                                                        | 744      |
| <i>epstopdf-base</i> : Improved. . . . .                                                                                                          | 684 | layaureo: Added. . . . .                                                                                                           | 770      |
| <i>epstopdf</i> : Improved. . . . .                                                                                                               | 684 | leading: Added. . . . .                                                                                                            | 774      |
| <i>fnbreak</i> : Added. . . . .                                                                                                                   | 715 | listings: Fix for HTML entities. . . . .                                                                                           | 778      |
| <i>nccfancyhdr</i> : Added. . . . .                                                                                                               | 822 | listings: Fix if inside a list. . . . .                                                                                            | 779, 781 |
| <i>pdftricks</i> : Added. . . . .                                                                                                                 | 848 | thumbs: Added. . . . .                                                                                                             | 916      |
| <i>pst-eps</i> : Added. . . . .                                                                                                                   | 856 | thumb: Added. . . . .                                                                                                              | 916      |
| <i>pstricks</i> : Added. . . . .                                                                                                                  | 857 | widows-and-orphans: Added. . . . .                                                                                                 | 959      |
| units: Added support for MathJax. . . . .                                                                                                         | 949 |                                                                                                                                    |          |
| <i>xunicode</i> : Added. . . . .                                                                                                                  | 979 |                                                                                                                                    |          |
| <i>lwarpmk</i> : Added<br><i>lwarpmk epstopdf</i> . . . . .                                                                                       | 295 | v0.61                                                                                                                              |          |
| <i>lwarpmk</i> : Consolidated compiling<br>options into <code>printlatexcmd</code> and<br>HTML <i>latexcmd</i> . . . . .                          | 295 | <code>\DeclareGraphicsExtensions</code> : Fix:<br>EPS for DVI $\LaTeX$ . . . . .                                                   | 731      |
| <i>lwarpmk</i> : Double instead of<br>single-dashed <code>--shell-escape</code><br>option. . . . .                                                | 295 | <code>\LWR@HTMLLatexCmd</code> : Added<br>HTML <i>LatexCmd</i> option. . . . .                                                     | 252      |
| <i>lwarpmk</i> : Error if <i>lwarpmk.conf</i><br>format changed. . . . .                                                                          | 295 | Added <code>PrintLatexCmd</code> option. . . . .                                                                                   | 252      |
| <i>lwarpmk</i> : Warning if operating<br>system changed. . . . .                                                                                  | 295 | <code>\LWR@addcompilecmd</code> : Removed<br>spaces. . . . .                                                                       | 247      |
| Added option <code>dvipdfmx</code> . . . . .                                                                                                      | 220 | <code>\LWR@closetabledatacell</code> : Fix: <i>Par</i><br>tags in <i>tabular</i> . . . . .                                         | 408      |
| Added option <code>dvipdfm</code> . . . . .                                                                                                       | 219 | <code>\LWR@hyperindexrefnullified</code> :<br>Made robust. . . . .                                                                 | 490      |
| Added option <code>dvips</code> . . . . .                                                                                                         | 219 | <code>\LWR@includegraphicsb</code> : Fix: EPS for<br>DVI $\LaTeX$ . . . . .                                                        | 737      |
| Docs: <i>lwarpmk epstopdf</i> . . . . .                                                                                                           | 106 | Set keys before using filename, for<br><i>epsfig</i> . . . . .                                                                     | 737      |
| File: <i>lwarp_mathjax.txt</i> : Fix:<br>Removed chapter number from<br>tagged non-numeric MathJax<br>equations. . . . .                          | 293 | <code>\LWR@opseq</code> : Added spaces. . . . .                                                                                    | 215      |
| File: <i>lwarp_mathjax.txt</i> : Updated<br>to MathJax v2.7.4. . . . .                                                                            | 293 | <code>\RequirePackage</code> : Support up to 20<br>packages. . . . .                                                               | 229      |
| <i>picture</i> : Added an <i>alt</i> tag. . . . .                                                                                                 | 543 | <code>\inlinemathnormal</code> : Changed name<br>from <code>\StopDynamicMath</code> to<br><i>\inlinemathnormal</i> . . . . .       | 317      |
| v0.60                                                                                                                                             |     | <code>\inlinemathother</code> : Changed name<br>from <code>\StartDynamicMath</code> to<br><i>\inlinemathother</i> . . . . .        | 317      |
| <code>\LWR@clearmidrules</code> : <i>tabular</i> : Fix for<br>midrules. . . . .                                                                   | 430 | <code>\listof</code> : Fix: newfloat lists. . . . .                                                                                | 484      |
| <code>\LWR@parsenormalcolumn</code> : <i>tabular</i> :<br>Improved memory management:<br>Not using <i>xstring</i> . . . . .                       | 417 | <code>\lwarpsetup</code> : Added. . . . .                                                                                          | 216      |
|                                                                                                                                                   |     | General: 2018/10/13 . . . . .                                                                                                      | 1        |

|                                                                                          |          |                                                                       |          |
|------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------|----------|
| lwrap.css: Footnotes text align left. . . . .                                            | 253      | \LWR@textcurrentfont: Added print version. . . . .                    | 564      |
| lwrap.css: Minipage table and footnotes: tighter margin. . . . .                         | 253      | Tracks depth to avoid nesting repeated font changes. . . . .          | 561      |
| chkfloat: Added. . . . .                                                                 | 662      | \colorboxBlock: Fix: Horiz white space. . . . .                       | 966      |
| cmdtrack: Added. . . . .                                                                 | 664      | \fcolorbox: Fix: No longer requires xifthen. . . . .                  | 537      |
| copyrightbox: Added. . . . .                                                             | 667      | \fcolorboxBlock: Fix: Horiz white space. . . . .                      | 967, 968 |
| dprogress: Added. . . . .                                                                | 674      | \l@chapter: Don't define if no \chapter. Fix for algorithm2e. . . . . | 488      |
| epsfig: Added. . . . .                                                                   | 683      | \slshape: Added. . . . .                                              | 562      |
| lua-visual-debug: Added. . . . .                                                         | 788      | \textup: Fixed WP span class. . . . .                                 | 556      |
| pdfprivacy: Added. . . . .                                                               | 847      | \theHTMLSection: Added. . . . .                                       | 372      |
| psfrag: Added. . . . .                                                                   | 855      | \theHTMLTitleSection: Added. . . . .                                  | 372      |
| psfrag: Added. . . . .                                                                   | 855      | \theHTMLTitleSeparator: Refactored. . . . .                           | 371      |
| pstool: Added. . . . .                                                                   | 856      | General: 2018/11/19 . . . . .                                         | 1        |
| refcheck: Added. . . . .                                                                 | 861      | \textbf and related: Improved font detection. . . . .                 | 554      |
| srcltx: Added. . . . .                                                                   | 892      | lwrap.css: Added css for xfrac, nicefrac. . . . .                     | 253      |
| srctex: Added. . . . .                                                                   | 892      | lwrap.css: Fixed css for \textup. . . . .                             | 253      |
| supertabular: Fix for caption w/o opt arg. . . . .                                       | 900      | lwrap.css: Reduced margins in titlepage. . . . .                      | 253      |
| thinsp: Added. . . . .                                                                   | 914      | lwrap_formal.css: Fix: Font for verse. . . . .                        | 286      |
| threadcol: Added. . . . .                                                                | 914      | 2in1: Added. . . . .                                                  | 580      |
| uspace: Added. . . . .                                                                   | 952      | CJKutf8: Prevented unless xeCJK. . . . .                              | 663      |
| vpe: Added. . . . .                                                                      | 955      | CJK: Prevented unless xeCJK. . . . .                                  | 663      |
| xbmks: Added. . . . .                                                                    | 960      | asymptote: Improved alt tags. . . . .                                 | 606      |
| xtab: Fix for caption w/o opt arg. . . . .                                               | 978      | bitpattern: Added. . . . .                                            | 621      |
| Added HTMLLatexCmd option. . . . .                                                       | 219      | calc: Fix: Required for print version. . . . .                        | 224      |
| Added PrintLatexCmd option. . . . .                                                      | 219      | chngepage: Fix: Loads lwrap-chngepage. . . . .                        | 662      |
| Docs: \tracinglwrap . . . . .                                                            | 234      | ctexpatch: Added patch. . . . .                                       | 578      |
| Docs: HTML entities. . . . .                                                             | 127      | flippdf: Added. . . . .                                               | 706      |
| Docs: Compiling using custom shell commands. . . . .                                     | 172      | musicography: Added. . . . .                                          | 818      |
| Docs: Fonts. . . . .                                                                     | 109      | nicefrac: Improved font control and css, honors nice, ugly. . . . .   | 824      |
| Docs: HTMLDebugComments . . . . .                                                        | 115, 234 | notespages: Added. . . . .                                            | 827      |
| Docs: Multiple indexes. . . . .                                                          | 193      | octave: Added. . . . .                                                | 839      |
| Don't write configuration files if processing pstool image. . . . .                      | 246      | pdfcomment: Added. . . . .                                            | 844      |
| Spaces redefined                                                                         |          | pdfmarginpar: Added. . . . .                                          | 844      |
| \AtBeginDocument. . . . .                                                                | 565      | register: Updated to v1.8. . . . .                                    | 861      |
| v0.62                                                                                    |          | rviewport: Added. . . . .                                             | 867      |
| \@partcntformat: Added for ctex. . . . .                                                 | 363      | semantic-markup: Added. . . . .                                       | 877      |
| \@partnameformat: Added for ctex. . . . .                                                | 363      | textcomp: Fix conflict with xunicode. . . . .                         | 907      |
| \InlineClass: Added optional word-processing style. Replaces \LWR@HTMLtextstyle. . . . . | 332      | tram: Added. . . . .                                                  | 942      |
| \LWR@PreLoadedPackage: Added. . . . .                                                    | 532      | twoup: Added. . . . .                                                 | 945      |
| \LWR@ProvidesPackagePass: Fix: Unknown option error. . . . .                             | 231      | ulem: Improved compatibility with CJKulem. . . . .                    | 947      |
| \LWR@endofline: Extra space if optional arg. . . . .                                     | 566      |                                                                       |          |
| \LWR@filestart: Refactored. . . . .                                                      | 374      |                                                                       |          |
| \LWR@includegraphicsb: Fix: FormatWP. . . . .                                            | 737      |                                                                       |          |
| Fix: Filename expansion. . . . .                                                         | 738      |                                                                       |          |
| \LWR@isoLate: Added. . . . .                                                             | 213      |                                                                       |          |

|                                     |          |                                    |          |
|-------------------------------------|----------|------------------------------------|----------|
| ulem: Now works in a lateximage.    | 947      | \LWR@subhtmlElementclass: Fix for  |          |
| unitsdef: Added.                    | 950      | xeCJK.                             | 329      |
| units: Improved font control and    |          | \LinkHome: Fix: Print version.     | 321      |
| css, honors loose, tight.           | 949      | \Linkhomename: Added.              | 321      |
| xexchangebar: Added.                | 971      | General: 2018/12/03                | 1        |
| xfrac: Improved css.                | 973      | lwarp.css: Added css for vertical  |          |
| xunicode: Fix conflict with         |          | writing.                           | 253      |
| textcomp.                           | 979      | lwarp.css: Improved css for        |          |
| Added early checks for CJK,         |          | mdframed.                          | 253      |
| CJKutf8.                            | 200      | amsthm, mdframed: Fix for          |          |
| Docs: asymptote.                    | 160      | enforced load order.               | 596      |
| Docs: miktex-poppler-bin-*          | 93       | emumitem: v3.6: Nullify            |          |
| Docs: <i>MiKTeX Console</i>         | 89       | \DrawEnumitemLabel.                | 681      |
| Docs: Improved MiKTeX install       |          | everyhook: Fix for bxjs* classes.  | 225      |
| instructions.                       | 89       | geometry: Fix for bxjs* classes.   | 224      |
| Docs: UTF-8 locale.                 | 175      | mdframed: Avoid thin rules.        | 799      |
| File: lwarp_mathjax.txt: Removed    |          | mdframed: Improved font            |          |
| inoperable siunitx extension.       | 293      | control.                           | 802–804  |
| Fix for \em.                        | 557      | stfloats: Adapted to ltj* classes. | 893      |
| Fix: Horiz white space.             | 968      | xpinyin: Added.                    | 977      |
| Logos: CSS instead of <sup>,</sup>  |          | zhlineskip: Added.                 | 981      |
| <sub>.</sub>.                       | 573      | Added pTeXsupport.                 | 197      |
| Logos: Fix for XeTeX logo if        |          | Docs: \Linkhomename.               | 115      |
| graphics is not loaded.             | 573      | Docs: \sidetocname.                | 117      |
| Logos: Improved CSS.                | 573      | Fix: Default \LWR@mdfive.          | 210      |
| Logos: Made robust.                 | 573      | Improved titles.                   | 801, 802 |
| fcolorminipage: Fix: Horiz white    |          | pTeX: Encoding.                    | 210      |
| space.                              | 968      | pTeX: Load upquote.                | 212      |
| Fix: No longer requires xifthen.    | 538      | pTeX: No newunicodechar.           | 211      |
| fminipage: Fix: Horiz white         |          | LWR@BlockClassWP: Fix for xeCJK.   | 332      |
| space.                              | 553, 554 | v0.64                              |          |
| LWR@blocktextcurrentfont: Added     |          | \LWR@HTMLLatexCmd: utarticle and   |          |
| print version.                      | 564      | related: Added.                    | 252      |
| v0.63                               |          | \LWR@checkloadfilename: Prevented  |          |
| \LWR@HTMLLatexCmd: ujarticle and    |          | bitfield, doublespace, newthm,     |          |
| related: Compile options.           | 252      | rplain, si.                        | 227      |
| \LWR@LwarpStart: Fixes for xeCJK.   | 375      | \LWR@section: Support for          |          |
| \LWR@atbeginverbatim: Fix for       |          | ujarticle and related.             | 366      |
| xeCJK.                              | 392      | \enskip: Made robust.              | 567      |
| \LWR@checkloadbefore: Added.        | 199      | \qqad: Made robust.                | 567      |
| \LWR@checkloadfilename: Added to    |          | \quad: Made robust.                | 567      |
| reduce number of lwarp-* files.     | 227      | \theHTMLTitleSeparator: Added      |          |
| \LWR@checkloadnever: Added.         | 199      | utarticle and related.             | 371      |
| \LWR@compileuplatex: Added.         | 248      | General: 2018/12/08                | 1        |
| \LWR@createautosec: Fix for xeCJK.  | 362      | addlines: Updated to v0.3.         | 588      |
| \LWR@earlyclassloadnever: Added.    | 200      | biblatex: Added patch for CTeX.    | 618      |
| \LWR@filestart: Fix: Break ligature |          | bsheaders: Added.                  | 627      |
| for luatexko.                       | 373      | gmeometric: Added.                 | 731      |
| \LWR@firstoffour: Added.            | 213      | marginal: Added.                   | 794      |
| \LWR@htmlclosecomment: Fix: Break   |          | rmpage: Added.                     | 864      |
| ligature for luatexko.              | 328      | sclayer-scrpage: Fixes.            | 873      |
| \LWR@isolate: Fix for xeCJK.        | 213      | sclayer: Fixes.                    | 872      |
| \LWR@notltjloadafter: Added more    |          | scrpage2: Added.                   | 874      |
| classes.                            | 198      | ujarticle and related: Improved    |          |
| Added.                              | 198      | \today.                            | 577      |



|                                                                                |                    |                                                                                                        |     |
|--------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------|-----|
| Added utarticle and related. . . .                                             | 577                | plext: Added. . . . .                                                                                  | 852 |
| v0.65                                                                          |                    | pxatbegshi: Added. . . . .                                                                             | 857 |
| \LWR@LwarpEnd: Improved css for<br>page layout. . . . .                        | 378                | pxeveryshi: Added. . . . .                                                                             | 857 |
| \LWR@LwarpStart: Improved css for<br>page layout. . . . .                      | 377                | pxftnright: Added. . . . .                                                                             | 857 |
| \LWR@PreLoadedPackage:<br>\AtBeginDocument to avoid<br>option clashes. . . . . | 532                | pxjahyper: Added. . . . .                                                                              | 858 |
| \LWR@hyperindexrefnullified:<br>Added \textsi. . . . .                         | 490                | tascmac: Added. . . . .                                                                                | 903 |
| \LWR@includegraphicsb: graphics:<br>Added \includegraphics alt<br>key. . . . . | 737, 739           | versonotes: Added. . . . .                                                                             | 954 |
| \LWR@newhtmlfile: Error if duplicate<br>file name. . . . .                     | 357                | Added \sishape. . . . .                                                                                | 243 |
| Improved css for page layout. 356, 359                                         |                    | Added early checks for jarticle,<br>tarticle, and related. . . . .                                     | 200 |
| \LWR@nullfonts: Added \sishape. . .                                            | 558                | Fix for \rensuji. . . . .                                                                              | 577 |
| Added \textsi. . . . .                                                         | 558                | Fix space between class and id. .                                                                      | 333 |
| \LWR@restoreorigformatting:<br>Added \sishape. . . . .                         | 493                | tabular: Added support for plect. .                                                                    | 457 |
| Fix: tabular*. . . . .                                                         | 494                | Fix: tabular*. . . . .                                                                                 | 457 |
| \enskip: Changed to Unicode EN<br>SPACE. . . . .                               | 567                | Fix: Rule color. . . . .                                                                               | 458 |
| \quad: Changed to Unicode EM<br>SPACE. . . . .                                 | 567                | minipage: Refactored to later allow<br>Japanese <t/y> argument. . . . .                                | 545 |
| \sishape: Added \sishape. . . . .                                              | 562                | LWR@figcaption: Uses<br><figurecaption> instead of<br><figcaption>. . . . .                            | 478 |
| \textsi: Added. . . . .                                                        | 556                | v0.66                                                                                                  |     |
| General: 2018/12/22 . . . . .                                                  | 1                  | \@mpfootnotetext: Improved HTML<br>formatting. . . . .                                                 | 347 |
| lwarp.css: Added \sishape,<br>\textsi. . . . .                                 | 253                | \IgnoreMinipageWidths: Added, . .                                                                      | 545 |
| lwarp.css: Improved css for page<br>layout. . . . .                            | 253                | \LWR@@footnotetext: Improved HTML<br>formatting. . . . .                                               | 346 |
| lwarp.css: Improved css for<br>quotations. . . . .                             | 253                | \LWR@LwarpStart: Fix: TOC, LOF, LOT<br>links. . . . .                                                  | 377 |
| lwarp.css: Siderocto left for<br>improved \marginpars. . . . .                 | 253                | \LWR@checkloadfilename: Prevented<br>colortab, epsf, hyper, picinpar,<br>picins, sistyle, ucs. . . . . | 227 |
| lwarp_formal.css: Siderocto left<br>for improved \marginpars. . . . .          | 286                | \LWR@closeparagraph: Fix: Combined<br>span, tabular, and lateximage. 337                               |     |
| lwarp_sagebrush.css: Siderocto<br>left for improved \marginpars. . .           | 282                | Improved HTML formatting. . . . .                                                                      | 336 |
| bounddvi: Added. . . . .                                                       | 624                | \LWR@closeparagraph@br: Factored. 336                                                                  |     |
| embrac: Added. . . . .                                                         | 678                | \LWR@fboxstyle: Use current text<br>color. . . . .                                                     | 551 |
| footnoterange: Added. . . . .                                                  | 722                | \LWR@filenamenoblanks: Fix: Section<br>names detokenized. . . . .                                      | 352 |
| gentombow: Added. . . . .                                                      | 727                | Fix: Section names with macros. 353                                                                    |     |
| geometry: Fix for bxjs* classes. .                                             | 224                | Fix: Section names with percent. 353                                                                   |     |
| graphics: Added<br>\includegraphics alt<br>key. . . . .                        | 536, 732, 733, 735 | Improved file name generation. .                                                                       | 352 |
| ltjtext: Added. . . . .                                                        | 782                | Limits filename length. . . . .                                                                        | 354 |
| multicolrule: Added. . . . .                                                   | 814                | \LWR@findcurrenttextcolor: Fix:<br>Color if xcolor not loaded. . . . .                                 | 564 |
| multicol: Added \docolaction. .                                                | 814                | \LWR@htmlfileref: No longer use<br>zref. . . . .                                                       | 464 |
| plarydshln: Added. . . . .                                                     | 852                | \LWR@htmlsectionfilename: Sanitize<br>underscores. . . . .                                             | 319 |
| plexarydshln: Added. . . . .                                                   | 853                | \LWR@includegraphicsb: Improved<br>HTML formatting. . . . .                                            | 736 |
| plexcolortbl: Added. . . . .                                                   | 853                | \LWR@indentHTML: Added. . . . .                                                                        | 326 |
|                                                                                |                    | \LWR@lateximagedepthref: No longer<br>use zref. . . . .                                                | 464 |

|                                                                                   |     |                                                                                                                                                                                         |          |
|-----------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| <code>\LWR@lateximagenumberref</code> : No longer use <code>zref</code> . . . . . | 465 | <code>ed</code> : Added. . . . .                                                                                                                                                        | 677      |
| <code>\LWR@lwarplabel</code> : No longer use <code>zref</code> . . . . .          | 465 | <code>extramarks</code> : Updated to v3.10. . .                                                                                                                                         | 689      |
| <code>\LWR@nameref</code> : No longer use <code>zref</code> . . .                 | 464 | <code>fancyhdr</code> : Updated to v3.10. . . .                                                                                                                                         | 695      |
| <code>\LWR@nullfonts</code> : Logos. . . . .                                      | 560 | <code>kotexutf</code> : Patch for references. . .                                                                                                                                       | 579      |
| <code>\LWR@openparagraph</code> : Improved HTML formatting. . . . .               | 335 | <code>memoir</code> : Docs re: version numbers. . . . .                                                                                                                                 | 167      |
| <code>\LWR@section</code> : Fix: TOC, LOF, LOT links. . . . .                     | 367 | <code>multicolrule</code> : Updated for v1.2. . .                                                                                                                                       | 814      |
| Improved HTML formatting. . . . .                                                 | 367 | <code>nameauth</code> : Added. . . . .                                                                                                                                                  | 820      |
| <code>\LWR@setexpparray</code> : Fix with <code>\par</code> . . .                 | 315 | <code>register</code> : Verified for v1.9. . . . .                                                                                                                                      | 861      |
| <code>\LWR@setref</code> : No longer use <code>zref</code> . . .                  | 464 | <code>subcaption</code> : Added. . . . .                                                                                                                                                | 894      |
| <code>\LWR@simplifname</code> : Added. . . . .                                    | 351 | <code>tocbasic</code> : Updated to v3.26a. . . .                                                                                                                                        | 929      |
| <code>\LWR@startref</code> : No longer use <code>zref</code> . .                  | 466 | <code>truncate</code> : Added. . . . .                                                                                                                                                  | 945      |
| <code>\LWR@stoppars</code> : Improved HTML formatting. . . . .                    | 339 | <code>zref</code> : No longer used. . . . .                                                                                                                                             | 226      |
| <code>\LWR@subhtmlclass</code> : Improved HTML formatting. . . . .                | 329 | <i>lwarpmk</i> : Added ImagesDirectory and ImagesName. . . . .                                                                                                                          | 295      |
| <code>\LWR@subhyperrefclass</code> : Improved HTML formatting. . . . .            | 470 | <i>lwarpmk</i> : Fix for <code>cleanimages</code> . . .                                                                                                                                 | 295      |
| <code>\LWR@subinlineimage</code> : Improved HTML formatting. . . . .              | 471 | Added early checks for <code>colortab</code> , <code>epdf</code> , <code>hyper</code> , <code>picinpar</code> , <code>picins</code> , <code>sistyle</code> , <code>ucs</code> . . . . . | 200      |
| <code>\LWR@writeconf</code> : Added ImagesDirectory and ImagesName. . . . .       | 252 | Added option ImagesDirectory. . . . .                                                                                                                                                   | 217      |
| <code>\LinkHome</code> : Fix: Document cross-references. . . . .                  | 321 | Added option ImagesName. . . . .                                                                                                                                                        | 217      |
| <code>\UseMinipageWidths</code> : Added, . . . . .                                | 545 | Added support for <code>indentfirst</code> . . .                                                                                                                                        | 340      |
| <code>\fbox</code> : Fix: Removed extra space. . .                                | 551 | Docs: Updated Converting an existing document. . . . .                                                                                                                                  | 108      |
| <code>\hyperindexref</code> : Fix: Long index entries. . . . .                    | 491 | Fix: Minipages inside <code>multicols</code> . .                                                                                                                                        | 813      |
| <code>\minipagefullwidth</code> : Made <code>\global</code> . .                   | 545 | Improved HTML formatting. . . . .                                                                                                                                                       | 692, 698 |
| <code>\rotatebox</code> : Improved HTML formatting. . . . .                       | 741 | Package dates added where possible. . . . .                                                                                                                                             | 580      |
| <code>\rule</code> : Improved HTML formatting. . .                                | 571 | Sanitize filenames. . . . .                                                                                                                                                             | 220      |
| <code>\scalebox</code> : Improved HTML formatting. . . . .                        | 742 | <code>tabular</code> : Fix: Minipages inside <code>tabular</code> . . . . .                                                                                                             | 460      |
| <code>\textgreater</code> : Made robust. . . . .                                  | 318 | <code>lateximage</code> : Adds <code>\BaseJobname</code> for multiple projects. . . . .                                                                                                 | 525      |
| <code>\textless</code> : Made robust. . . . .                                     | 318 | Improved HTML formatting. . . . .                                                                                                                                                       | 527      |
| General: 2019/02/08 . . . . .                                                     | 1   | <code>minipage</code> : Honor <code>\LWR@forceminipagefullwidth</code> . .                                                                                                              | 547      |
| <code>\LWR@currentautosec</code> : Fix for LOF, LOFfloat in home page. . . . .    | 363 | v0.67                                                                                                                                                                                   |          |
| <code>lwrap.css</code> : Added <code>niceframe</code> . . . . .                   | 253 | <code>\FilenameNullify</code> : Added. . . . .                                                                                                                                          | 561, 564 |
| <code>lwrap.css</code> : Improved css for definition lists. . . . .               | 253 | <code>\FilenameSimplify</code> : Added. . . . .                                                                                                                                         | 352, 356 |
| <code>lwrap_formal.css</code> : Improved css for table notes. . . . .             | 286 | <code>\LWR@doequation</code> : Added support. . . . .                                                                                                                                   | 513      |
| <code>lwrap_one_limage.txt</code> : Image directory and prefix. . . . .           | 292 | <code>\LWR@doubledollar</code> : Added support. . . . .                                                                                                                                 | 506      |
| <code>acronym</code> : Fix for acronym in caption. . . . .                        | 586 | <code>\LWR@filenamenoblanks</code> : Improved file name generation. . . . .                                                                                                             | 352      |
| <code>acronym</code> : No longer uses <code>zref</code> . . .                     | 586 | <code>\LWR@lookforpackagename</code> : <code>easyReview</code> : Supported. . . . .                                                                                                     | 229      |
| <code>ar</code> : Added. . . . .                                                  | 602 | <code>\LWR@nullfonts</code> : Add'l symbols. . .                                                                                                                                        | 558      |
| <code>caption</code> : Fix for options clash. . .                                 | 231 | <code>\LWR@simplifycustom</code> : Added. . . . .                                                                                                                                       | 351      |
|                                                                                   |     | <code>\LWR@subsingledollar</code> : Added support. . . . .                                                                                                                              | 501, 505 |
|                                                                                   |     | General: 2019/02/23 . . . . .                                                                                                                                                           | 1        |
|                                                                                   |     | <code>academicons</code> : Added. . . . .                                                                                                                                               | 583      |
|                                                                                   |     | <code>bbding</code> : Added. . . . .                                                                                                                                                    | 613      |
|                                                                                   |     | <code>changes</code> : Added. . . . .                                                                                                                                                   | 634      |

|                                    |          |                                              |               |
|------------------------------------|----------|----------------------------------------------|---------------|
| color: Fix for version number. . . | 664      | <i>lwarpmk</i> : Improved error handling     |               |
| dingbat: Added. . . . .            | 674      | if incomplete compile. . . . .               | 295           |
| eurosym: Added. . . . .            | 688      | Prevented alg, algorithmic,                  |               |
| fitbox: Added. . . . .             | 704      | fncylab, pdfcprot. . . . .                   | 200           |
| fontawesome5: Added. . . . .       | 718      | tabular: Fix: \warpprintonly inside          |               |
| fontawesome: Added. . . . .        | 717      | tabular. . . . .                             | 458           |
| foreign: Added. . . . .            | 722      | v0.69                                        |               |
| gloss: Added. . . . .              | 728      | \LWR@maybetocdata: Added support             |               |
| karnaugh-map: Added. . . . .       | 762      | for tocdata. . . . .                         | 485           |
| marvosym: Added. . . . .           | 795      | \framebox: Fix: Handle paren arg. .          | 550           |
| multicap: Added. . . . .           | 812      | \hypertoc: Added support for                 |               |
| nomencl: Added. . . . .            | 825      | tocdata. . . . .                             | 486           |
| notes: Added. . . . .              | 826      | \hypertocfloat: Added support for            |               |
| pifont: Added. . . . .             | 851      | tocdata. . . . .                             | 487           |
| struktex: Added. . . . .           | 893      | \makebox: Fix: Handle paren arg. .           | 550           |
| textcomp: Nullify in filenames. .  | 908      | \multicolumnrow: multirow: Error if          |               |
| typicons: Added. . . . .           | 946      | \multirow without \mrowcell. .               | 817           |
| umoline: Added. . . . .            | 948      | General: 2019/03/21 . . . . .                | 1             |
| xfakebold: Added support. . . .    | 498      | array: Fix for                               |               |
| xfakebold: Added. . . . .          | 972      | \tabularnewline. . . . .                     | 603, 786      |
| xunicode: Nullify in filenames. .  | 979      | ctable: Added. . . . .                       | 667           |
| AMS environments: Added            |          | eqlist: Added. . . . .                       | 685           |
| xfakebold support. . . . .         | 594      | eqparbox: Added. . . . .                     | 685           |
| eqnarray: xfakebold: Added         |          | ftcap: Added. . . . .                        | 725           |
| support. . . . .                   | 518, 519 | graphics: Warning if using scale             |               |
| v0.68                              |          | option. . . . .                              | 733           |
| \LWR@footnotetext: Factored for    |          | keyfloat: Updated for v2.00. . . .           | 765           |
| multiple foot boxes. . . . .       | 345      | listliketab: Added. . . . .                  | 782           |
| \LWR@checkloadfilename: Prevented  |          | minitoc: Added. . . . .                      | 810           |
| alg, algorithmic, fncylab,         |          | multirow: Error if \multirow                 |               |
| pdfcprot. . . . .                  | 227      | without \mrowcell. . . . .                   | 815           |
| \LWR@printpendingfootnotes:        |          | rotfloat: Requires graphicx. . . .           | 865           |
| Factored for multiple footnote     |          | supertabular: Fix: Clear caption             |               |
| boxes. . . . .                     | 348      | after use. . . . .                           | 901           |
| \LWR@tabular@warpprintonly:        |          | tabularx: Require array. . . . .             | 902           |
| Added. . . . .                     | 456      | tabulary: Require array. . . . .             | 903           |
| General: 2019/03/05 . . . . .      | 1        | tocdata: Added. . . . .                      | 932           |
| bigfoot: Added. . . . .            | 620      | topcapt: Added. . . . .                      | 942           |
| fnpara: Added. . . . .             | 716      | xtab: Fix: Clear caption after use.          | 978           |
| footnotebackref: Added. . . . .    | 721      | Error if used a tabular * column.            | 418           |
| hyperref: Fix for options with     |          | tabular: Error if \multirow without          |               |
| braces. . . . .                    | 748      | \mrowcell. . . . .                           | 457, 459, 461 |
| layouts: Added. . . . .            | 771      | \lateximage: Fix for <i>pdftotext</i> errors |               |
| listings: Fix for listings v1.7. . | 781      | from font size change. . . . .               | 529           |
| longtable: Improved error          |          | fminipage: Honors                            |               |
| handling. . . . .                  | 785      | \minipagefullwidth. . . . .                  | 553           |
| manyfoot: Added. . . . .           | 792      | v0.70                                        |               |
| niceframe: Added. . . . .          | 824      | \LWR@closeparagraph: Reduced                 |               |
| perpage: Added. . . . .            | 849      | underfull \hbox warnings. . . . .            | 336           |
| showtags: Added. . . . .           | 880      | \LWR@lookforpackagename: changes:            |               |
| tablefootnote: Added. . . . .      | 902      | Updated to v3.1.2. . . . .                   | 229           |
| threeparttable: Added. . . . .     | 915      | \LWR@mathjaxfilename: Added. . .             | 341           |
| threeparttable: Fix for caption    |          | \LWR@restoreorigformatting: Fix:             |               |
| type. . . . .                      | 914      | \& in a lateximage. . . . .                  | 493           |
|                                    |          | \MathJaxFilename: Added. . . . .             | 341           |

|                                                                                                      |     |                                                                                               |     |
|------------------------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------|-----|
| <code>\enddocument</code> : If labels changed,<br>require recompile before making<br>images. . . . . | 379 | <code>textcomp</code> : Fix for<br><code>\textinterrobang</code> . . . . .                    | 906 |
| <code>\framebox</code> : Fix: Accept long arg. . .                                                   | 550 | <code>textpos</code> : Added optional arg to<br><code>textblock</code> . . . . .              | 909 |
| <code>\makebox</code> : Fix: Accept long arg. . .                                                    | 550 | <code>xunicode</code> : Fix for<br><code>\textinterrobang</code> . . . . .                    | 979 |
| Fix: Ignore width of 0pt. . . . .                                                                    | 550 | AMS environments: Refactored. . .                                                             | 594 |
| Fix: No width given. . . . .                                                                         | 550 | Ensure vector font. . . . .                                                                   | 211 |
| General: 2019/04/03 . . . . .                                                                        | 1   | File: <code>lwarp_mathjax.txt</code> : Loads<br><code>autoload-all.js</code> extension. . . . | 293 |
| <code>autonum</code> : Added. . . . .                                                                | 611 | File: <code>lwarp_mathjax.txt</code> : Updated<br>to MathJax v2.7.5. . . . .                  | 293 |
| <code>caption</code> : Fix: Extra par tags. . . .                                                    | 631 | Logos: Improved for <code>metalogo</code> ,<br><code>lateximages</code> . . . . .             | 573 |
| <code>changelayout</code> : Added. . . . .                                                           | 633 | LWR@nestspan: Improved <code>minipage</code> ,<br><code>\parbox</code> inside a span. . . . . | 327 |
| <code>changes</code> : Updated to v3.1.2. . . .                                                      | 634 |                                                                                               |     |
| <code>inputtrc</code> : Added. . . . .                                                               | 761 |                                                                                               |     |
| <code>mathtools</code> : Added. . . . .                                                              | 796 |                                                                                               |     |
| <code>metalogo</code> : Added. . . . .                                                               | 806 |                                                                                               |     |
| <code>metalogo</code> : Used in print mode. . .                                                      | 806 |                                                                                               |     |

## Index of Objects

This is an index of macros, environments, booleans, counters, lengths, packages, classes, options, keys, files, and various other programming objects. Each is listed by itself, and also by category. In some cases, they are further subdivided by [class].

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition.

| Symbols                           |                           |
|-----------------------------------|---------------------------|
| $\backslash$ \$                   | <i>499</i>                |
| $\backslash$ &                    | <i>318, 7216</i>          |
| $\backslash$ (                    | <u>9682</u>               |
| *-images.txt (file)               | <i>525</i>                |
| *_html.aux (file)                 | <i>355, 462, 464, 525</i> |
| *_html.lof (file)                 | <i>477</i>                |
| *_html.lot (file)                 | <i>477</i>                |
| *_html.tex (file)                 | <i>246</i>                |
| $\backslash$ ,                    | <i>127</i>                |
| --shell-escape (option)           | <i>109</i>                |
| $\backslash$ @@@setcpageref       | <u>10463</u>              |
| $\backslash$ @@@setcref           | <u>10426</u>              |
| $\backslash$ @@@setcrefrange      | <u>10440</u>              |
| $\backslash$ @author              | <i>380</i>                |
| $\backslash$ @begintheorem        | <u>6880</u>               |
| $\backslash$ @biblabel            | <u>9343</u>               |
| $\backslash$ @capttype            | <u>8958</u>               |
| $\backslash$ @chapcntformat       | <u>6066</u>               |
| $\backslash$ @currentHref         | <u>8793</u>               |
| $\backslash$ @currentlabelname    | <u>8652</u>               |
| $\backslash$ @date                | <i>380</i>                |
| $\backslash$ @dlbfloat            | <u>8924</u>               |
| $\backslash$ @donoparitem         | <u>6906</u>               |
| $\backslash$ @endtheorem          | <u>6892</u>               |
| $\backslash$ @ensuredmath         | <u>9692</u>               |
| $\backslash$ @float               | <u>8924</u>               |
| $\backslash$ @fnsymbol            | <u>6669</u>               |
| $\backslash$ @footnotetext        | <u>5642</u>               |
| $\backslash$ @include             | <u>1122</u>               |
| $\backslash$ @item                | <u>6919</u>               |
| $\backslash$ @makecaption         | <u>8979</u>               |
| $\backslash$ @makefnmark          | <u>5609</u>               |
| $\backslash$ @makefntext          | <u>5608</u>               |
| $\backslash$ @maketitle           | <u>56, 6692</u>           |
| $\backslash$ @mklab               | <u>6900</u>               |
| $\backslash$ @mpfootnotetext      | <u>5644</u>               |
| $\backslash$ @nbitem              | <u>6986</u>               |
| $\backslash$ @opargbegintheorem   | <u>6886</u>               |
| $\backslash$ @partcntformat       | <u>6067</u>               |
| $\backslash$ @partnameformat      | <u>6068</u>               |
| $\backslash$ @rowc@lors           | <u>7548</u>               |
| $\backslash$ @rowcolors           | <u>7547</u>               |
| $\backslash$ @secntformat         | <u>6064</u>               |
| $\backslash$ @starttoc            | <u>9092</u>               |
| $\backslash$ @textsubscript       | <u>11154</u>              |
| $\backslash$ @textsuperscript     | <u>11150</u>              |
| $\backslash$ @title               | <i>380</i>                |
| $\backslash$ @wrglossary          | <u>9287</u>               |
| $\backslash$ @wrindex             | <u>9276</u>               |
| $\backslash$ [                    | <u>9682</u>               |
| $\backslash$ \                    | <i>566</i>                |
| \$                                | <i>506</i>                |
| \$\$                              | <i>506</i>                |
| 2in1 (package)                    | <i>580</i>                |
| 2up (package)                     | <i>580</i>                |
| <b>A</b>                          |                           |
| a4 (package)                      | <i>580</i>                |
| a4wide (package)                  | <i>581</i>                |
| a5comb (package)                  | <i>581</i>                |
| abstract (environment)            | <u>6755</u>               |
| abstract (package)                | <i>137, 581</i>           |
| $\backslash$ abstractname         | <i>118, 6754</i>          |
| academicons (package)             | <i>583</i>                |
| accsupp (package)                 | <i>584</i>                |
| acro (package)                    | <i>584</i>                |
| acronym (package)                 | <i>586</i>                |
| $\backslash$ addcontentsline      | <u>9043</u>               |
| addlines (package)                | <i>588</i>                |
| $\backslash$ AddSubtitlePublished | <u>6720</u>               |
| adjmulticol (package)             | <i>587</i>                |
| Adobe (program)                   | <i>85</i>                 |
| $\backslash$ affiliation          | <u>6572</u>               |
| afterpage (package)               | <i>588</i>                |
| algorithm2e (package)             | <i>588</i>                |
| algorithmicx (package)            | <i>166, 592</i>           |
| align (environment)               | <u>65</u>                 |
| align* (environment)              | <u>68</u>                 |
| alignat (environment)             | <u>77</u>                 |
| alignat* (environment)            | <u>80</u>                 |
| alltt (package)                   | <i>593</i>                |
| $\backslash$ AmS                  | <u>11481</u>              |

|                             |               |                            |          |
|-----------------------------|---------------|----------------------------|----------|
| amsmath (package)           | 593           | HTMLDebugComments          | 118, 234 |
| amsthm (package)            | 596           | LWR@amsmultiline           | 515      |
| \and                        | 380           | LWR@copiedsidetoc          | 482      |
| anonchap (package)          | 600           | LWR@doingapar              | 334      |
| anysize (package)           | 601           | LWR@doingcmidrule          | 405      |
| appendix (package)          | 138, 601      | LWR@doingstartpars         | 334      |
| ar (package)                | 602           | LWR@doingtbrule            | 405      |
| arabicfront (package)       | 603           | LWR@dynamicmath            | 317      |
| array (package)             | 603           | LWR@emptyatbang            | 406      |
| \arrayrulecolor             | 7555          | LWR@exitingtabular         | 452      |
| \arrayrulecolornexttoken    | 7555          | LWR@forceminipagefullwidth | 545      |
| arydshln (package)          | 604           | LWR@foundmrowcell          | 406      |
| AsciiDoc (program)          | 85            | LWR@freezethisautoid       | 476      |
| AsciiDoctor (program)       | 85            | LWR@indisplaymathimage     | 498      |
| Asciidoctor-LaTeX (program) | 85            | LWR@infloatrow             | 735      |
| asymptote (package)         | 160, 606      | LWR@intabularmetadata      | 406      |
| atbegshi (package)          | 607           | LWR@isstartingequation     | 523      |
| attachfile (package)        | 607           | LWR@mathmacro              | 316      |
| attachfile2 (package)       | 608           | LWR@minipagefullwidth      | 545      |
| \attrib                     | 168, 390, 952 | LWR@minipagethispar        | 545      |
| \attribution                | 6765          | LWR@opttablecol            | 419      |
| authblk (package)           | 137, 610      | LWR@origmathjax            | 216      |
| \author                     | 125, 380      | LWR@skipatbang             | 406      |
| autonum (package)           | 611           | LWR@skippingmcolrowcell    | 405      |
| autosec                     | 362           | LWR@skippingmrowcell       | 405      |
| axessibility (package)      | 612           | LWR@starredlongtable       | 445      |
| axodraw2 (package)          | 612           | LWR@startedrow             | 405      |
| <b>B</b>                    |               |                            |          |
| babel (package)             | 169           | LWR@tableparcell           | 405      |
| \backmatter                 | 6042          | LWR@tabularcelladded       | 405      |
| backref (package)           | 613           | LWR@tabularmutemods        | 452      |
| balance (package)           | 613           | LWR@tracinglwarp           | 234      |
| \BaseJobname                | 4935          | LWR@usedmultirow           | 405      |
| BaseJobname (option)        | 114, 217      | LWR@validtablecol          | 419      |
| bbding (package)            | 613           | LWR@verbtags               | 391      |
| \bfseries                   | 11133         | LWR@xfakebold              | 498      |
| biblatex (package)          | 618           | mathjax                    | 216      |
| \bibliography               | 9334          | usingOSWindows             | 215      |
| \BibTeX                     | 11474         | warpingHTML                | 216      |
| bibunits (package)          | 619           | warpingprint               | 216      |
| bigdelim (package)          | 165, 619      | WPMarkFloats               | 179, 239 |
| bigfoot (package)           | 620           | WPMarkLOFT                 | 180, 240 |
| bigstrut (package)          | 621           | WPMarkMath                 | 180, 240 |
| bitpattern (package)        | 621           | WPMarkMinipages            | 180, 240 |
| BlockClass (environment)    | 5306          | WPMarkTOC                  | 180, 240 |
| \BlockClassSingle           | 5320          | WPTitleHeading             | 181, 241 |
| blowup (package)            | 621           | bophook (package)          | 624      |
| booklet (package)           | 622           | bounddvi (package)         | 624      |
| bookmark (package)          | 622           | boxedminipage2e (package)  | 625      |
| booktabs (package)          | 623           | \boxframe                  | 190      |
| boolean:                    |               | breakurl (package)         | 625      |
| CombineHigherDepths         | 117, 351      | breqn (package)            | 626      |
| FileSectionNames            | 118, 319      | bsheaders (package)        | 627      |
| FormatEPUB                  | 176, 239      | BVerbatim (environment)    | 222      |
| FormatWP                    | 178, 239      | bxpapersize (package)      | 627      |
|                             |               | bytefield (package)        | 628      |

| <b>C</b>                      |                     |
|-------------------------------|---------------------|
| calc (package)                | 224                 |
| cancel (package)              | 628                 |
| canoniclayout (package)       | 629                 |
| capt-of (package)             | 480                 |
| caption (package)             | 166, 231, 480, 629  |
| \caption@begin                | 9024                |
| \caption@end                  | 9024                |
| \captionlistentry             | 9028                |
| \captionof                    | 9059                |
| \CaptionSeparator             | 8978                |
| cases (package)               | 632                 |
| center (environment)          | 10217               |
| \centering                    | 10241               |
| \centerline                   | 10260               |
| changebar (package)           | 633                 |
| changelayout (package)        | 633                 |
| changepage (package)          | 634                 |
| changes (package)             | 634                 |
| chappg (package)              | 637                 |
| \chapter                      | 6268                |
| chapterbib (package)          | 637                 |
| chemfig (package)             | 637                 |
| chemformula (package)         | 638                 |
| chemgreek (package)           | 643                 |
| chemmacros (package)          | 644                 |
| chemnum (package)             | 661                 |
| chkfloat (package)            | 662                 |
| chngpage (package)            | 662                 |
| cite (package)                | 663                 |
| CJK (package)                 | 663                 |
| CJKutf8 (package)             | 663                 |
| class (key) [Gin]             | 735                 |
| class:                        |                     |
| internet                      | 84                  |
| komascript                    | 167                 |
| memoir                        | 167, 168, 953       |
| \cleardoublepage              | 11314               |
| \clearpage                    | 11314               |
| cleveref (package)            | 134, 540            |
| clrdblpg (package)            | 664                 |
| cm-super (package)            | 109                 |
| cmap (package)                | 110                 |
| cmdtrack (package)            | 664                 |
| color (package)               | 158, 664            |
| \colorbox                     | 73                  |
| \colorboxBlock                | 86, 10323           |
| colortbl (package)            | 165, 664            |
| CombineHigherDepths (boolean) | 117, 351            |
| comment (package)             | 222                 |
| \ConTeXt                      | 11469               |
| continue (package)            | 666                 |
| copyrightbox (package)        | 666                 |
| counter:                      |                     |
| FootnoteDepth                 | 118, 344            |
| footnoteReset                 | 344                 |
| lofdepth                      | 486                 |
| lotdepth                      | 486                 |
| LWR@cellcolordepth            | 437                 |
| LWR@currentautosec            | 363                 |
| LWR@externalfilecnt           | 498                 |
| LWR@hdashedlines              | 405                 |
| LWR@hlines                    | 405                 |
| LWR@htmlfilenumber            | 319                 |
| LWR@latestautopage            | 478                 |
| LWR@lateximagedepth           | 521                 |
| LWR@lateximagenumber          | 520                 |
| LWR@LIPage                    | 521                 |
| LWR@midrulecounter            | 429                 |
| LWR@minipagedepth             | 544                 |
| LWR@nextautoid                | 477                 |
| LWR@nextautopage              | 477                 |
| LWR@nextequation              | 509                 |
| LWR@prevFileDepth             | 362                 |
| LWR@previousautopagelabel     | 355                 |
| LWR@spandepth                 | 334                 |
| LWR@startingequation          | 523                 |
| LWR@tablecolspecindex         | 407                 |
| LWR@tablecolspecwidth         | 407                 |
| LWR@tableLaTeXcolindex        | 407                 |
| LWR@tabletotalLaTeXcols       | 407                 |
| LWR@tabletotalLaTeXcolsnext   | 407                 |
| LWR@tabularDepth              | 406                 |
| LWR@tabularpardepth           | 406                 |
| LWR@thisautoid                | 475                 |
| LWR@thisautoidWP              | 476                 |
| SideTOCDepth                  | 117, 484            |
| tocdepth                      | 117                 |
| \cpagerefFor                  | 10462               |
| crop (package)                | 667                 |
| \CSSFilename                  | 118, 121, 5551      |
| ctable (package)              | 667                 |
| \CustomizeMathJax             | 5886, 5911          |
| cuted (package)               | 670                 |
| cutwin (package)              | 670                 |
| <b>D</b>                      |                     |
| \date                         | 125                 |
| dblfloatfix (package)         | 671                 |
| dblfnote (package)            | 671                 |
| dcolumn (package)             | 672                 |
| \DeclareGraphicsExtensions    | 2                   |
| dejavu (package)              | 109                 |
| description (environment)     | 7061                |
| diagbox (package)             | 672                 |
| dingbat (package)             | 674                 |
| \displaymathnormal            | 155, 497, 514, 9875 |
| \displaymathother             | 155, 498, 514, 9886 |
| ditaa (package)               | 175                 |
| \dotfill                      | 11233               |

|                                           |            |                                       |              |
|-------------------------------------------|------------|---------------------------------------|--------------|
| <code>\doublerulesepcolor</code>          | 7557       | <code>flushleft</code>                | 10233        |
| <code>\doublerulesepcolornexttoken</code> | 7557       | <code>flushright</code>               | 10225        |
| <code>dprogress</code> (package)          | 674        | <code>fminipage</code>                | 10764        |
| <code>draftcopy</code> (package)          | 675        | <code>gather</code>                   | 59           |
| <code>draftfigure</code> (package)        | 675        | <code>gather*</code>                  | 62           |
| <code>draftwatermark</code> (package)     | 676        | <code>itemize</code>                  | 7036         |
| <code>dvipdfm</code> (option)             | 111, 219   | <code>lateximage</code>               | 10085, 10212 |
| <code>dvipdfmx</code> (option)            | 111, 220   | <code>list</code>                     | 7006         |
| <code>dvips</code> (option)               | 111, 219   | <code>longtable</code>                | 4            |
| <b>E</b>                                  |            |                                       |              |
| <code>easy-todo</code> (package)          | 676        | <code>LWR@BlockClassWP</code>         | 5347         |
| <code>ebook</code> (package)              | 677        | <code>LWR@blocktextcurrentfont</code> | 11125, 11182 |
| <code>ed</code> (package)                 | 677        | <code>LWR@displaymathnormal</code>    | 9722         |
| <code>eLLipsis</code> (package)           | 678        | <code>LWR@displaymathother</code>     | 9727         |
| <code>embrac</code> (package)             | 678        | <code>LWR@equationother</code>        | 9741         |
| <code>\emph</code>                        | 10832      | <code>LWR@figcaption</code>           | 8993         |
| <code>emptypage</code> (package)          | 679        | <code>LWR@nestspan</code>             | 5157         |
| <code>\end@dlfloat</code>                 | 8941       | <code>math</code>                     | 9721         |
| <code>\end@float</code>                   | 8941       | <code>minipage</code>                 | 10547        |
| <code>\enddocument</code>                 | 6537       | <code>multline</code>                 | 52           |
| <code>endfloat</code> (package)           | 679        | <code>multline*</code>                | 55           |
| <code>endheads</code> (package)           | 680        | <code>picture</code>                  | 10522        |
| <code>endnotes</code> (package)           | 138, 680   | <code>quote</code>                    | 6781         |
| <code>\enlargethispage</code>             | 11313      | <code>tabbing</code>                  | 6865         |
| <code>\enskip</code>                      | 567, 11259 | <code>tabular</code>                  | 8502         |
| <code>enumerate</code> (environment)      | 7042       | <code>thebibliography</code>          | 9344         |
| <code>enumerate</code> (package)          | 681        | <code>theindex</code>                 | 9252         |
| <code>enumitem</code> (package)           | 681        | <code>titlepage</code>                | 6589         |
| <code>environ</code> (package)            | 226        | <code>titlingpage</code>              | 14           |
| environment:                              |            | <code>verbatim</code>                 | 6855         |
| <code>fminipage</code>                    | 130        | <code>verse</code>                    | 2, 6796      |
| <code>lateximage</code>                   | 519        | <code>warpall</code>                  | 860          |
| <code>picture</code>                      | 543        | <code>warpHTML</code>                 | 861          |
| <code>titlepage</code>                    | 124        | <code>warpprint</code>                | 861          |
| <code>titlingpage</code>                  | 124        | <code>epigraph</code> (package)       | 682          |
| <code>warpall</code>                      | 123        | <code>epsfig</code> (package)         | 683          |
| <code>warpHTML</code>                     | 120, 123   | <code>epstopdf</code> (package)       | 159, 684     |
| <code>warpprint</code>                    | 120, 123   | <code>epstopdf</code> (program)       | 157, 535     |
| environments:                             |            | <code>epstopdf-base</code> (package)  | 684          |
| <code>abstract</code>                     | 6755       | <code>eqlist</code> (package)         | 685          |
| <code>align</code>                        | 65         | <code>eqnarray</code> (environment)   | 9935         |
| <code>align*</code>                       | 68         | <code>eqparbox</code> (package)       | 685          |
| <code>alignat</code>                      | 77         | <code>equation</code> (environment)   | 9853         |
| <code>alignat*</code>                     | 80         | <code>equation*</code> (environment)  | 9861         |
| <code>BlockClass</code>                   | 5306       | <code>errata</code> (package)         | 686          |
| <code>BVerbatim</code>                    | 222        | <code>eso-pic</code> (package)        | 688          |
| <code>center</code>                       | 10217      | <code>\etalchar</code>                | 138          |
| <code>description</code>                  | 7061       | <code>etoolbox</code> (package)       | 197          |
| <code>enumerate</code>                    | 7042       | <code>eurosym</code> (package)        | 688          |
| <code>eqnarray</code>                     | 9935       | <code>everyhook</code> (package)      | 225          |
| <code>equation</code>                     | 9853       | <code>everypage</code> (package)      | 689          |
| <code>equation*</code>                    | 9861       | <code>everyshi</code> (package)       | 689          |
| <code>fcolorminipage</code>               | 166, 10364 | <code>expl3</code> (package)          | 224          |
| <code>flalign</code>                      | 71         | <code>extramarks</code> (package)     | 689          |
| <code>flalign*</code>                     | 74         | <b>F</b>                              |              |
|                                           |            | <code>fancybox</code> (package)       | 131, 690     |



|                              |                    |                           |                    |
|------------------------------|--------------------|---------------------------|--------------------|
| fancyhdr (package)           | 695                | \flushbottom              | 5073               |
| fancyref (package)           | 696                | flushend (package)        | 715                |
| fancytabs (package)          | 697                | flushleft (environment)   | 10233              |
| fancyvrb (package)           | 697                | flushright (environment)  | 10225              |
| \fbox                        | 130, 10737         | fminipage (environment)   | 130, 10764         |
| \fboxBlock                   | 130, 10746         | fnbreak (package)         | 715                |
| \fcolorbox                   | 103, 10325         | fncychap (package)        | 715                |
| \fcolorboxBlock              | 126, 10362         | fnlineno (package)        | 716                |
| fcolorminipage (environment) | 166, 10364         | fnpara (package)          | 716                |
| figcaps (package)            | 703                | fnpos (package)           | 717                |
| figsize (package)            | 703                | fontawesome (package)     | 717                |
| file:                        |                    | fontawesome5 (package)    | 718                |
| *-images.txt                 | 525                | fontenc (package)         | 110, 719           |
| *_html.aux                   | 355, 462, 464, 525 | fontspec (package)        | 110                |
| *_html.lof                   | 477                | footmisc (package)        | 719                |
| *_html.lot                   | 477                | footnote (package)        | 720                |
| *_html.tex                   | 246                | footnotebackref (package) | 721                |
| glyphunicode.tex             | 110                | FootnoteDepth (counter)   | 118, 344           |
| lwrap.css                    | 122, 253           | footnotehyper (package)   | 721                |
| lwrap.ist                    | 149, 291           | footnoterange (package)   | 722                |
| lwrap.xdy                    | 150, 291           | footnoteReset (counter)   | 344                |
| lwrap_baseline_marker.eps    | 499                | footnpag (package)        | 722                |
| lwrap_baseline_marker.png    | 499                | \ForceHTMLPage            | 137, 6017          |
| lwrap_formal.css             | 286                | \ForceHTMLTOC             | 137, 6023          |
| lwrap_mathjax.txt            | 293                | foreign (package)         | 722                |
| lwrap_one_limage.cmd         | 292                | forest (package)          | 723                |
| lwrap_sagebrush.css          | 282                | FormatEpub (boolean)      | 176, 239           |
| lwrap_tutorial.txt           | 94                 | FormatWP (boolean)        | 178, 239           |
| lwrapmk.conf                 | 253                | \framebox                 | 10715              |
| lwrapmk.lua                  | 186                | framed (package)          | 723                |
| project.css                  | 122                | FrameMaker (program)      | 85                 |
| project.lwrapmkconf          | 253                | \frontmatter              | 6039               |
| sample_project.css           | 122, 290           | ftcap (package)           | 725                |
| tutorial.tex                 | 94                 | ftnright (package)        | 726                |
| filecontents (package)       | 225                | fullminipage (package)    | 726                |
| FileDepth (counter)          | 117, 350           | fullpage (package)        | 726                |
| \FilenameLimit               | 118, 5752          | fullwidth (package)       | 726                |
| \FilenameNullify             | 133, 11098, 11183  | \fup                      | 11158              |
| \FilenameSimplify            | 133, 5773, 5912    | \fussy                    | 5075               |
| FileSectionNames (boolean)   | 118, 319           | fwlw (package)            | 727                |
| fitbox (package)             | 704                |                           |                    |
| fix2col (package)            | 704                | <b>G</b>                  |                    |
| fixme (package)              | 170, 704           | gather (environment)      | 59                 |
| fixmetodonotes (package)     | 706                | gather* (environment)     | 62                 |
| flafter (package)            | 706                | GELLMU (program)          | 84                 |
| \flagverse                   | 953                | gentombow (package)       | 727                |
| flalign (environment)        | 71                 | geometry (package)        | 223, 727           |
| flalign* (environment)       | 74                 | getttitlestring (package) | 224                |
| Flare (program)              | 85                 | [Gin]:                    |                    |
| flippdf (package)            | 706                | class (key)               | 735                |
| float (package)              | 166, 707           | GladTeX (program)         | 84                 |
| floatflt (package)           | 708                | gloss (package)           | 139, 728           |
| floatpag (package)           | 709                | glossaries (package)      | 139, 728           |
| floatrow (package)           | 166, 709           | GlossaryCmd (option)      | 114, 139, 219, 728 |
| fltrace (package)            | 714                | glyphunicode.tex (file)   | 110                |
|                              |                    | gmeometric (package)      | 731                |

|                                              |                               |                                            |                    |
|----------------------------------------------|-------------------------------|--------------------------------------------|--------------------|
| graphics (package) . . . . .                 | 156, 731                      | imakeidx (package) . . . . .               | 755                |
| graphicx (package) . . . . .                 | 156, 743                      | \include . . . . .                         | 1122               |
| grffile (package) . . . . .                  | 158, 743                      | \includegraphics . . . . .                 | 291                |
| grid (package) . . . . .                     | 744                           | indentfirst (package) . . . . .            | 340                |
| grid-system (package) . . . . .              | 744                           | InDesign (program) . . . . .               | 85                 |
| gridset (package) . . . . .                  | 744                           | index (package) . . . . .                  | 759                |
| <b>H</b>                                     |                               |                                            |                    |
| hang (package) . . . . .                     | 745                           | \InlineClass . . . . .                     | 5331               |
| hanging (package) . . . . .                  | 746                           | \inlinemathnormal . . . . .                | 155, 497, 4912     |
| Hevea (program) . . . . .                    | 84                            | \inlinemathother . . . . .                 | 155, 497, 4908     |
| \hfill . . . . .                             | 11229                         | inputenc (package) . . . . .               | 110                |
| \HomeHTMLFilename . . . . .                  | 4937                          | inputenx (package) . . . . .               | 110                |
| HomeHTMLFilename (option) . . . . .          | 111, 115, 218                 | inputtrc (package) . . . . .               | 761                |
| \href . . . . .                              | 8821                          | internet (class) . . . . .                 | 84                 |
| \hrulefill . . . . .                         | 11231                         | intopdf (package) . . . . .                | 761                |
| \hskip . . . . .                             | 127                           | itemize (environment) . . . . .            | 7036               |
| \hspace . . . . .                            | 127, 567, 11267, 11297, 11303 | itshape . . . . .                          | 11138              |
| htlatex (program) . . . . .                  | 84                            | <b>K</b>                                   |                    |
| \HTMLAuthor . . . . .                        | 119, 126, 5588                | karnaugh-map (package) . . . . .           | 762                |
| HTMLDebugComments (boolean) . . . . .        | 118, 234                      | \kern . . . . .                            | 127                |
| \HTMLDescription . . . . .                   | 119, 125, 5593                | key:                                       |                    |
| \HTMLentity . . . . .                        | 4919                          | [Gin]:                                     |                    |
| \HTMLFilename . . . . .                      | 4936                          | class . . . . .                            | 735                |
| HTMLFilename (option) . . . . .              | 111, 115, 218                 | keyfloat (package) . . . . .               | 167, 765           |
| \HTMLFirstPageTop . . . . .                  | 119, 5539                     | komascript (class) . . . . .               | 167                |
| htmlglossary (option) [lwarpmk] . . . . .    | 139, 728                      | kotex (package) . . . . .                  | 171                |
| HTMLIndexCmd (option) . . . . .              | 113, 219                      | kvoptions (package) . . . . .              | 216                |
| \HTMLLanguage . . . . .                      | 118, 6338                     | <b>L</b>                                   |                    |
| HTMLLatexCmd (option) . . . . .              | 111, 172, 219                 | \l@chapter . . . . .                       | 9232               |
| \HTMLleftmargini (length) 168, 390, 391, 952 |                               | \l@figure . . . . .                        | 9243               |
| \HTMLPageBottom . . . . .                    | 119, 380, 5545                | \l@paragraph . . . . .                     | 9241               |
| \HTMLPageTop . . . . .                       | 119, 5542                     | \l@part . . . . .                          | 9231               |
| \HTMLTitle . . . . .                         | 118, 125, 5583                | \l@section . . . . .                       | 9238               |
| \HTMLTitleAfterSection . . . . .             | 119, 6361                     | \l@subparagraph . . . . .                  | 9242               |
| \HTMLTitleBeforeSection . . . . .            | 119, 6356                     | \l@subsection . . . . .                    | 9239               |
| \HTMLunicode . . . . .                       | 4927                          | \l@subsubsection . . . . .                 | 9240               |
| \HTMLvleftskip (length) 168, 390, 391, 952   |                               | \l@table . . . . .                         | 9244               |
| hycap (package) . . . . .                    | 747                           | \LaTeX . . . . .                           | 11423              |
| hypdestopt (package) . . . . .               | 747                           | LaTeX2HTML (program) . . . . .             | 84                 |
| \hyperindexref . . . . .                     | 9312                          | \LaTeXe . . . . .                          | 11423              |
| hypernat (package) . . . . .                 | 748                           | lateximage (environment) 519, 10085, 10212 |                    |
| hyperref (package) . . . . .                 | 135, 469, 748                 | \LateximageFontScale . . . . .             | 10007              |
| \hypertoc . . . . .                          | 9189                          | \LateximageFontSizeName . . . . .          | 10006              |
| \hypertocfloat . . . . .                     | 9212                          | latexmk (option) . . . . .                 | 111, 115, 219      |
| hyperxmp (package) . . . . .                 | 753                           | latexmk (program) . . . . .                | 173                |
| hyphenat (package) . . . . .                 | 753                           | LatexmkIndexCmd (option) . . . . .         | 113, 219           |
| <b>I</b>                                     |                               |                                            |                    |
| idxlayout (package) . . . . .                | 754                           | LaTeXML (program) . . . . .                | 84                 |
| \if@titlepage . . . . .                      | 6567                          | layaureo (package) . . . . .               | 770                |
| ifoddpages (package) . . . . .               | 755                           | layout (package) . . . . .                 | 771                |
| ifplatform (package) . . . . .               | 197                           | layouts (package) . . . . .                | 771                |
| \IgnoreMinipageWidths . . . . .              | 129, 544, 10537               | leading (package) . . . . .                | 774                |
| ImagesDirectory (option) . . . . .           | 217                           | \leftline . . . . .                        | 10259              |
| ImagesName (option) . . . . .                | 217                           | length:                                    |                    |
|                                              |                               | \HTMLleftmargini . . . . .                 | 168, 390, 391, 952 |
|                                              |                               | \HTMLvleftskip . . . . .                   | 168, 390, 391, 952 |

|                                               |                    |                                                          |               |
|-----------------------------------------------|--------------------|----------------------------------------------------------|---------------|
| <code>\LWR@cmidrulewidth</code>               | 429                | <code>lwarp_mathjax.txt</code> (file)                    | 293           |
| <code>\LWR@heavyrulewidth</code>              | 429                | <code>lwarp_one_limage.cmd</code> (file)                 | 292           |
| <code>\LWR@lightrulewidth</code>              | 429                | <code>lwarp_sagebrush.css</code> (file)                  | 282           |
| <code>\LWR@minipageheight</code>              | 544                | <code>lwarp_tutorial.txt</code> (file)                   | 94            |
| <code>\LWR@minipagewidth</code>               | 544                | [ <code>lwarpmk</code> ]:                                |               |
| <code>\LWR@tempheight</code>                  | 567                | <code>htmlglossary</code> (option)                       | 139, 728      |
| <code>\LWR@tempraise</code>                   | 567                | <code>printglossary</code> (option)                      | 139, 728      |
| <code>\LWR@tempwidth</code>                   | 567                | <code>lwarpmk</code> (option)                            | 114, 218, 295 |
| <code>\LWR@thiscmidrulewidth</code>           | 429                | <code>lwarpmk</code> (program)                           | 186, 295      |
| <code>\VerbatimHTMLwidth</code>               | 391                | <code>lwarpmk epstopdf</code> (program)                  | 157, 535      |
| <code>\vleftmargini</code>                    | 168, 390, 952      | <code>lwarpmk pdftosvg</code> (program)                  | 157, 535      |
| <code>\vleftskip</code>                       | 168, 390, 952, 953 | <code>lwarpmk.conf</code> (file)                         | 253           |
| <code>letltxmacro</code> (package)            | 197                | <code>lwarpmk.lua</code> (file)                          | 186           |
| <code>letterspace</code> (package)            | 774                | <code>\lwarpsetup</code>                                 | 724           |
| <code>lettrine</code> (package)               | 774                | <code>\LWR@@footnotetext</code>                          | 5612          |
| <code>LibreOffice</code> (program)            | 85                 | <code>\LWR@@makebox@align</code>                         | 10671         |
| <code>\linebreak</code>                       | 11307              | <code>\LWR@@makebox@paren</code>                         | 10656         |
| <code>lineno</code> (package)                 | 775                | <code>\LWR@@printpendingfootnotes</code>                 | 5677          |
| <code>\LinkHome</code>                        | 4995, 5000         | <code>\LWR@addbaselinemarker</code>                      | 9438          |
| <code>\Linkhomename</code>                    | 115, 4992          | <code>\LWR@addcdashline</code>                           | 7826          |
| <code>Linux</code> (program)                  | 122, 213           | <code>\LWR@addcmidruletrim</code>                        | 7792          |
| <code>lips</code> (package)                   | 777                | <code>\LWR@addcmidrulewidth</code>                       | 7823          |
| <code>list</code> (environment)               | 7006               | <code>\LWR@addcompilecmd</code>                          | 1501          |
| <code>listings</code> (package)               | 778                | <code>\LWR@addformatwppalignment</code>                  | 7842          |
| <code>listliketab</code> (package)            | 782                | <code>\LWR@addleftmostbartag</code>                      | 7627          |
| <code>\listof</code>                          | 9146               | <code>\LWR@addmathjax</code>                             | 9790          |
| <code>\listoffigures</code>                   | 9120               | <code>\LWR@addmulticolvertrulecolor</code>               | 8101          |
| <code>\listoftables</code>                    | 9133               | <code>\LWR@addrulewidth</code>                           | 7797          |
| <code>lltjext</code> (package)                | 782                | <code>\LWR@addtabularcellcolor</code>                    | 7970          |
| <code>lmodern</code> (package)                | 109, 110           | <code>\LWR@addtabularhrulecolor</code>                   | 7870          |
| <code>lofdepth</code> (counter)               | 486                | <code>\LWR@addtabulararrowcolor</code>                   | 7855          |
| <code>longtable</code> (environment)          | 4                  | <code>\LWR@addtabularrulecolors</code>                   | 7916          |
| <code>longtable</code> (package)              | 163, 783           | <code>\LWR@afterendverbatim</code>                       | 6838          |
| <code>lotdepth</code> (counter)               | 486                | <code>\LWR@amsmathbody</code>                            | 10072         |
| <code>lscope</code> (package)                 | 786                | <code>\LWR@amsmathbodynumbered</code>                    | 10078         |
| <code>ltablex</code> (package)                | 786                | <code>LWR@amsmultline</code> (boolean)                   | 515           |
| <code>ltxcaption</code> (package)             | 787                | <code>\LWR@applyxfakebold</code>                         | 9430          |
| <code>ltxgrid</code> (package)                | 787                | <code>\LWR@atbeginverbatim</code>                        | 6819          |
| <code>ltxtable</code> (package)               | 788                | <code>\LWR@backgroundcolor</code>                        | 36            |
| <code>lua-check-hyphen</code> (package)       | 788                | <code>\LWR@beginhideamsmath</code>                       | 9920          |
| <code>lua-visual-debug</code> (package)       | 788                | <code>LWR@BlockClassWP</code> (environment)              | 5347          |
| <code>luacolor</code> (package)               | 788                | <code>LWR@blocktextcurrentfont</code> (environ-<br>ment) | 11125, 11182  |
| <code>\LuaLaTeX</code>                        | 11452              | <code>\LWR@botnavigation</code>                          | 5018          |
| <code>LuaLaTeX</code> (program) [requirement] | 88                 | <code>LWR@cdashlines</code>                              | 429           |
| <code>\LuaTeX</code>                          | 11452              | <code>LWR@cellcolordepth</code> (counter)                | 437           |
| <code>luatodonotes</code> (package)           | 170, 789           | <code>\LWR@cellHTMLcolor</code>                          | 7552          |
| <code>lwarp</code> (package)                  | 111                | <code>\LWR@checkloadbefore</code>                        | 64            |
| <code>lwarp-patch-komascript</code> (package) | 982                | <code>\LWR@checkloadfilename</code>                      | 968           |
| <code>lwarp-patch-memoir</code> (package)     | 984                | <code>\LWR@checkloadnever</code>                         | 83            |
| <code>lwarp.css</code> (file)                 | 122, 253           | <code>\LWR@clearmidrules</code>                          | 7707          |
| <code>lwarp.ist</code> (file)                 | 149, 291           | <code>\LWR@closeparagraph</code>                         | 5445          |
| <code>lwarp.xdy</code> (file)                 | 150, 291           | <code>\LWR@closeparagraph@br</code>                      | 5435          |
| <code>lwarp_baseline_marker.eps</code> (file) | 499                | <code>\LWR@closeprevious</code>                          | 5045          |
| <code>lwarp_baseline_marker.png</code> (file) | 499                | <code>\LWR@closetabledatcell</code>                      | 7175          |
| <code>lwarp_formal.css</code> (file)          | 286                |                                                          |               |



|                                                  |             |                                                  |       |
|--------------------------------------------------|-------------|--------------------------------------------------|-------|
| <code>\LWR@includegraphicsb</code> .....         | 140         | <code>\LWR@nameref</code> .....                  | 8668  |
| <code>\LWR@indentHTML</code> .....               | 5144        | <code>LWR@nestspan (environment)</code> .....    | 5157  |
| <code>\LWR@indexitem</code> .....                | 9264        | <code>\LWR@new@label</code> .....                | 8716  |
| <code>\LWR@indexnameref</code> .....             | 9294        | <code>\LWR@newautoidanchor</code> .....          | 8947  |
| <code>\LWR@indexsubitem</code> .....             | 9268        | <code>\LWR@newautopagelabel</code> .....         | 5877  |
| <code>\LWR@indexsubsubitem</code> .....          | 9272        | <code>\LWR@newhtmlfile</code> .....              | 5915  |
| <code>LWR@indisplaymathimage (boolean)</code> .. | 498         | <code>LWR@nextautoid (counter)</code> .....      | 477   |
| <code>LWR@infloatrow (boolean)</code> .....      | 735         | <code>LWR@nextautopage (counter)</code> .....    | 477   |
| <code>\LWR@instertatbangcols</code> .....        | 7167        | <code>LWR@nextequation (counter)</code> .....    | 509   |
| <code>LWR@intabularmetadata (boolean)</code> ... | 406         | <code>\LWR@notltjloadafter</code> .....          | 42    |
| <code>\LWR@isolate</code> .....                  | 669         | <code>\LWR@notmemoirlloadafter</code> .....      | 39    |
| <code>LWR@isstartingequation (boolean)</code> .. | 523         | <code>\LWR@nullfonts</code> .....                | 10957 |
| <code>\LWR@itemizeitem</code> .....              | 7029        | <code>\LWR@nullifycomment</code> .....           | 959   |
| <code>LWR@latestautopage (counter)</code> .....  | 478         | <code>\LWR@nullifyNoAutoSpacing</code> .....     | 8489  |
| <code>LWR@lateximagedepth (counter)</code> ..... | 521         | <code>\LWR@nulllistfills</code> .....            | 6998  |
| <code>\LWR@lateximagedepthref</code> .....       | 8674        | <code>\LWR@opacity</code> .....                  | 120   |
| <code>LWR@lateximagenumber (counter)</code> ...  | 520         | <code>\LWR@openparagraph</code> .....            | 5417  |
| <code>\LWR@lateximagenumberref</code> .....      | 8677        | <code>LWR@opttablecol (boolean)</code> .....     | 419   |
| <code>\LWR@lateximagesfile</code> .....          | 1119        | <code>\LWR@orig@setBold</code> .....             | 9428  |
| <code>\LWR@latexmkcmd</code> .....               | 1516        | <code>\LWR@orig@unsetBold</code> .....           | 9429  |
| <code>\LWR@latexmkdvipdfm</code> .....           | 1521        | <code>\LWR@orig@colspec</code> .....             | 7161  |
| <code>\LWR@latexmkvar</code> .....               | 1510        | <code>\LWR@originname</code> .....               | 305   |
| <code>\LWR@lightrulewidth (length)</code> .....  | 429         | <code>\LWR@originnames</code> .....              | 312   |
| <code>LWR@LIpage (counter)</code> .....          | 521         | <code>LWR@origmathjax (boolean)</code> .....     | 216   |
| <code>\LWR@listitem</code> .....                 | 6991        | <code>\LWR@overline</code> .....                 | 11164 |
| <code>\LWR@loadafter</code> .....                | 23          | <code>\LWR@parseaftercolumn</code> .....         | 7364  |
| <code>\LWR@loadbefore</code> .....               | 55          | <code>\LWR@parseatcolumn</code> .....            | 7304  |
| <code>\LWR@loadnever</code> .....                | 70          | <code>\LWR@parsebangcolumn</code> .....          | 7330  |
| <code>\LWR@longtabledatacaptiontag</code> ...    | 8199        | <code>\LWR@parsebarcolumn</code> .....           | 7375  |
| <code>\LWR@lookforpackagename</code> .....       | 1010        | <code>\LWR@parsebeforecolumn</code> .....        | 7353  |
| <code>\LWR@lwarpcnfversion</code> .....          | 1492        | <code>\LWR@parsecoloncolumn</code> .....         | 7400  |
| <code>\LWR@LwarpEnd</code> .....                 | 6514, 11500 | <code>\LWR@parseDcolumn</code> .....             | 7456  |
| <code>\LWR@LwarpLabel</code> .....               | 8680        | <code>\LWR@parsedrequirepackagenames</code> ...  | 958   |
| <code>\LWR@LwarpStart</code> .....               | 6450, 11500 | <code>\LWR@parsenormalcolumn</code> .....        | 7425  |
| <code>\LWR@maketitlesetup</code> .....           | 33, 6661    | <code>\LWR@parsepcolumn</code> .....             | 7437  |
| <code>\LWR@mathjaxfilename</code> .....          | 5561        | <code>\LWR@parsesemicoloncolumn</code> .....     | 7421  |
| <code>LWR@mathmacro (boolean)</code> .....       | 316         | <code>\LWR@parsestarcolumn</code> .....          | 7446  |
| <code>\LWR@maybenewtablerow</code> .....         | 7559        | <code>\LWR@parsetablecols</code> .....           | 7462  |
| <code>\LWR@maybeprintpendingfootnotes</code> .   | 5696        | <code>\LWR@parsewcolumn</code> .....             | 7441  |
| <code>\LWR@maybetocdata</code> .....             | 9188        | <code>\LWR@patcherror</code> .....               | 664   |
| <code>LWR@midrulecounter (counter)</code> .....  | 429         | <code>\LWR@patchlists</code> .....               | 7067  |
| <code>LWR@midrules</code> .....                  | 429         | <code>\LWR@pdfencoding</code> .....              | 594   |
| <code>LWR@minipagedepth (counter)</code> .....   | 544         | <code>\LWR@PreloadedPackage</code> .....         | 10264 |
| <code>LWR@minipagefullwidth (boolean)</code> ... | 545         | <code>LWR@prevFileDepth (counter)</code> .....   | 362   |
| <code>\LWR@minipageheight (length)</code> .....  | 544         | <code>LWR@previousautopagelabel (counter)</code> | 355   |
| <code>\LWR@minipagestartpars</code> .....        | 11247       | <code>\LWR@printatbang</code> .....              | 7602  |
| <code>\LWR@minipagestoppars</code> .....         | 11250       | <code>\LWR@printbartag</code> .....              | 7592  |
| <code>LWR@minipagethispar (boolean)</code> ..... | 545         | <code>\LWR@printcloselist</code> .....           | 6898  |
| <code>\LWR@minipagewidth (length)</code> .....   | 544         | <code>\LWR@PrintLatexCmd</code> .....            | 1540  |
| <code>\LWR@multicolother</code> .....            | 8042        | <code>\LWR@printlength</code> .....              | 940   |
| <code>\LWR@multicolpartext</code> .....          | 8036        | <code>\LWR@printmccoldata</code> .....           | 8051  |
| <code>\LWR@multicolskip</code> .....             | 8048        | <code>\LWR@printmccoltype</code> .....           | 7994  |
| <code>\LWR@multirowborder</code> .....           | 3           | <code>\LWR@printopenlist</code> .....            | 6899  |
| <code>\LWR@mynexttoken</code> .....              | 7119        | <code>\LWR@printpendingfootnotes</code> .....    | 5693  |
| <code>\LWR@myshorttoc</code> .....               | 9069        | <code>\LWR@printpendingmpfootnotes</code> ...    | 5705  |

|                                                |              |                                                    |                     |
|------------------------------------------------|--------------|----------------------------------------------------|---------------------|
| <code>\LWR@printthetitle</code>                | <u>6613</u>  | <code>\LWR@subhyperref</code>                      | <u>8798</u>         |
| <code>\LWR@providelength</code>                | <u>660</u>   | <code>\LWR@subhyperrefclass</code>                 | <u>8811</u>         |
| <code>\LWR@ProvidesPackageDrop</code>          | <u>1096</u>  | <code>\LWR@subhyperreftext</code>                  | <u>8806</u>         |
| <code>\LWR@ProvidesPackagePass</code>          | <u>1081</u>  | <code>\LWR@subinlineimage</code>                   | <u>8871</u>         |
| <code>\LWR@pushoneclose</code>                 | <u>6054</u>  | <code>\LWR@sublabel</code>                         | <u>8693</u>         |
| <code>\LWR@quickfile</code>                    | <u>1116</u>  | <code>\LWR@subnewref</code>                        | <u>8758</u>         |
| <code>\LWR@ref@ignorestar</code>               | <u>8772</u>  | <code>\LWR@subsingledollar</code>                  | <u>9474</u>         |
| <code>\LWR@remembertag</code>                  | <u>10062</u> | <code>\LWR@subtableofcontents</code>               | <u>9082</u>         |
| <code>\LWR@replaceEPSSVG</code>                | <u>129</u>   | <code>\LWR@subtabularhtmlcolumns</code>            | <u>8271</u>         |
| <code>\LWR@requesttoc</code>                   | <u>6507</u>  | <code>\LWR@syncmathjax</code>                      | <u>9756</u>         |
| <code>\LWR@requirepackagenames</code>          | <u>957</u>   | <code>LWR@tablecolspec</code>                      | <u>406</u>          |
| <code>\LWR@restoreorigaccents</code>           | <u>1449</u>  | <code>LWR@tablecolspecindex (counter)</code>       | <u>407</u>          |
| <code>\LWR@restoreorigformatting</code>        | <u>9363</u>  | <code>LWR@tablecolspecwidth (counter)</code>       | <u>407</u>          |
| <code>\LWR@restoreoriglists</code>             | <u>7095</u>  | <code>\LWR@tabledatacolumntag</code>               | <u>8362</u>         |
| <code>\LWR@rotboxorigin</code>                 | <u>304</u>   | <code>\LWR@tabledatasinglecolumntag</code>         | <u>7641</u>         |
| <code>\LWR@rotstyle</code>                     | <u>112</u>   | <code>LWR@tableLaTeXcolindex (counter)</code>      | <u>407</u>          |
| <code>\LWR@rowHTMLcolor</code>                 | <u>7551</u>  | <code>LWR@tableparcell (boolean)</code>            | <u>405</u>          |
| <code>\LWR@ruleHTMLcolor</code>                | <u>7553</u>  | <code>LWR@tabletotalLaTeXcols (counter)</code>     | <u>407</u>          |
| <code>\LWR@sanitize</code>                     | <u>795</u>   | <code>LWR@tabletotalLaTeXcolsnext (counter)</code> | <u>407</u>          |
| <code>\LWR@sanitized</code>                    | <u>794</u>   | <code>\LWR@tabular@warpprintonly</code>            | <u>8485</u>         |
| <code>\LWR@scalestyle</code>                   | <u>115</u>   | <code>LWR@tabularcelladded (boolean)</code>        | <u>405</u>          |
| <code>\LWR@secondoffour</code>                 | <u>678</u>   | <code>LWR@tabularDepth (counter)</code>            | <u>406</u>          |
| <code>\LWR@section</code>                      | <u>6071</u>  | <code>\LWR@tabularendofline</code>                 | <u>7274</u>         |
| <code>\LWR@sectionnumber</code>                | <u>6045</u>  | <code>\LWR@tabularfinishrow</code>                 | <u>7228</u>         |
| <code>\LWR@select@html@hspace</code>           | <u>11267</u> | <code>\LWR@tabularhtmlcolumns</code>               | <u>8281</u>         |
| <code>\LWR@select@html@nohspace</code>         | <u>11297</u> | <code>\LWR@tabularleftedge</code>                  | <u>7632</u>         |
| <code>\LWR@select@print@hspace</code>          | <u>11300</u> | <code>LWR@tabularmutemods (boolean)</code>         | <u>452</u>          |
| <code>\LWR@setexparray</code>                  | <u>4872</u>  | <code>LWR@tabularpardepth (counter)</code>         | <u>406</u>          |
| <code>\LWR@setlatestname</code>                | <u>8654</u>  | <code>\LWR@tdaddstyle</code>                       | <u>7767</u>         |
| <code>\LWR@setOSWindows</code>                 | <u>712</u>   | <code>\LWR@tdendstyles</code>                      | <u>7773</u>         |
| <code>\LWR@setref</code>                       | <u>8662</u>  | <code>\LWR@tdstartstyles</code>                    | <u>7766</u>         |
| <code>\LWR@shellescapecmd</code>               | <u>1493</u>  | <code>\LWR@tempcolor</code>                        | <u>11170</u>        |
| <code>\LWR@sidetoc</code>                      | <u>9162</u>  | <code>\LWR@tempcolortwo</code>                     | <u>11170</u>        |
| <code>\LWR@simplifycustom</code>               | <u>5772</u>  | <code>\LWR@tempheight (length)</code>              | <u>567</u>          |
| <code>\LWR@simplifyname</code>                 | <u>5761</u>  | <code>\LWR@tempraise (length)</code>               | <u>567</u>          |
| <code>\LWR@singledollar</code>                 | <u>9661</u>  | <code>\LWR@tempwidth (length)</code>               | <u>567</u>          |
| <code>LWR@skipatbang (boolean)</code>          | <u>406</u>   | <code>\LWR@textcurrentcolor</code>                 | <u>19, 11175</u>    |
| <code>LWR@skippingmcolrowcell (boolean)</code> | <u>405</u>   | <code>\LWR@textcurrentfont</code>                  | <u>11104, 11181</u> |
| <code>LWR@skippingmrowcell (boolean)</code>    | <u>405</u>   | <code>\LWR@thirdoffour</code>                      | <u>678</u>          |
| <code>LWR@spandepth (counter)</code>           | <u>334</u>   | <code>LWR@thisautoid (counter)</code>              | <u>475</u>          |
| <code>LWR@starredlongtable (boolean)</code>    | <u>445</u>   | <code>LWR@thisautoidWP (counter)</code>            | <u>476</u>          |
| <code>LWR@startedrow (boolean)</code>          | <u>405</u>   | <code>\LWR@thiscmidrulewidth (length)</code>       | <u>429</u>          |
| <code>LWR@startingequation (counter)</code>    | <u>523</u>   | <code>\LWR@thiscolspec</code>                      | <u>7640</u>         |
| <code>\LWR@startingequationtag</code>          | <u>10057</u> | <code>\LWR@thisfilename</code>                     | <u>5755</u>         |
| <code>\LWR@startnewdepth</code>                | <u>6058</u>  | <code>\LWR@thisnewfilename</code>                  | <u>5760</u>         |
| <code>\LWR@startpars</code>                    | <u>5487</u>  | <code>\LWR@titlingmaketitle</code>                 | <u>83, 6712</u>     |
| <code>\LWR@startref</code>                     | <u>8729</u>  | <code>\LWR@topnavigation</code>                    | <u>5015</u>         |
| <code>\LWR@stoppars</code>                     | <u>5505</u>  | <code>\LWR@traceinfo</code>                        | <u>1185</u>         |
| <code>\LWR@stripperperiod</code>               | <u>8653</u>  | <code>LWR@tracinglwrap (boolean)</code>            | <u>234</u>          |
| <code>\LWR@strresult</code>                    | <u>7159</u>  | <code>LWR@trimrules</code>                         | <u>429</u>          |
| <code>\LWR@subaddcmidruletrim</code>           | <u>7779</u>  | <code>LWR@trimrrules</code>                        | <u>429</u>          |
| <code>\LWR@subaddtabularcellcolor</code>       | <u>7964</u>  | <code>\LWR@unknownengine</code>                    | <u>1505</u>         |
| <code>\LWR@subcdashline</code>                 | <u>7743</u>  | <code>LWR@usedmultirow (boolean)</code>            | <u>405</u>          |
| <code>\LWR@subcmidrule</code>                  | <u>7725</u>  | <code>LWR@validtablecol (boolean)</code>           | <u>419</u>          |
| <code>\LWR@subhtml@elementclass</code>         | <u>5252</u>  | <code>LWR@verbtags (boolean)</code>                | <u>391</u>          |



|                                              |                      |                                       |          |
|----------------------------------------------|----------------------|---------------------------------------|----------|
| <code>\LWR@vspace</code>                     | 11304                | <code>midpage</code> (package)        | 810      |
| <code>\LWR@WpCell</code>                     | 7838                 | <code>\MiKTeX</code>                  | 11494    |
| <code>\LWR@writeconf</code>                  | 1642                 | <code>minipage</code> (environment)   | 10547    |
| <code>\LWR@xcolorrowHTMLcolor</code>         | 7549                 | <code>\minipagefullwidth</code>       | 10535    |
| <code>LWR@xfakebold</code> (boolean)         | 498                  | <code>minitoc</code> (package)        | 810      |
| <code>\LWRopquote</code>                     | 707                  | <code>morefloats</code> (package)     | 811      |
| <code>\LWRopseq</code>                       | 708                  | <code>moreverb</code> (package)       | 811      |
| <code>\LWRPrintStack</code>                  | 5023                 | <code>mparhack</code> (package)       | 812      |
| <code>\LWRsetnextfloat</code>                | 8987                 | <code>\mrowcell</code>                | 8434     |
| <code>\LyX</code>                            | 11496                | <code>MS-Windows</code> (program)     | 122, 213 |
| <b>M</b>                                     |                      |                                       |          |
| <code>Mac OS</code> (program)                | 122, 213             | <code>multicap</code> (package)       | 812      |
| <code>Madcap</code> (program)                | 85                   | <code>multicol</code> (package)       | 813      |
| <code>magaz</code> (package)                 | 791                  | <code>multicolrule</code> (package)   | 814      |
| <code>\mainmatter</code>                     | 6035                 | <code>\multicolumnrow</code>          | 40, 8304 |
| <code>make</code> (program)                  | 175                  | <code>\multirow</code>                | 815      |
| <code>\makebox</code>                        | 10680                | <code>multirow</code> (package)       | 814      |
| <code>makeidx</code> (package)               | 151, 791, 930        | <code>multitoc</code> (package)       | 818      |
| <code>\MakeIndex</code>                      | 11474                | <code>multline</code> (environment)   | 52       |
| <code>makeindex</code> (option)              | 111, 115, 219        | <code>multline*</code> (environment)  | 55       |
| <code>makeindex</code> (program)             | 149                  | <code>musicography</code> (package)   | 818      |
| <code>makeindexStyle</code> (option)         | 111, 149, 217        | <b>N</b>                              |          |
| <code>\makelabel</code>                      | 395                  | <code>nameauth</code> (package)       | 820      |
| <code>\maketitle</code>                      | 47, 124, 6673        | <code>\Nameref</code>                 | 8790     |
| <code>manyfoot</code> (package)              | 792                  | <code>\nameref</code>                 | 8781     |
| <code>marginal</code> (package)              | 794                  | <code>nameref</code> (package)        | 821      |
| <code>marginfit</code> (package)             | 794                  | <code>natbib</code> (package)         | 821      |
| <code>marginfix</code> (package)             | 794                  | <code>nccfancyhdr</code> (package)    | 822      |
| <code>marginnote</code> (package)            | 795                  | <code>needspace</code> (package)      | 823      |
| <code>\marginpar</code>                      | 128, 349, 5717       | <code>newclude</code> (package)       | 169      |
| <code>\marginparBlock</code>                 | 129, 349, 5728, 5745 | <code>\newfloat</code>                | 4        |
| <code>\markboth</code>                       | 5070                 | <code>newfloat</code> (package)       | 225      |
| <code>\markright</code>                      | 5071                 | <code>\newline</code>                 | 11238    |
| <code>marvosym</code> (package)              | 795                  | <code>\newpage</code>                 | 11235    |
| <code>math</code> (environment)              | 9721                 | <code>\newtheorem</code>              | 394      |
| <code>\mathimagename</code>                  | 119, 9420            | <code>newtxmath</code> (package)      | 156      |
| <code>MathJax</code> (program)               | 153, 154, 496        | <code>newunicodechar</code> (package) | 110      |
| <code>MathJax</code> (program) [requirement] | 88                   | <code>nextpage</code> (package)       | 823      |
| <code>mathjax</code> (boolean)               | 216                  | <code>nicefrac</code> (package)       | 156, 824 |
| <code>mathjax</code> (option)                | 111, 115, 217        | <code>niceframe</code> (package)      | 824      |
| <code>\MathJaxFilename</code>                | 118, 5562            | <code>\noalign</code>                 | 8455     |
| <code>mathsvg</code> (option)                | 111, 115, 216        | <code>\nolinebreak</code>             | 11308    |
| <code>\mbox</code>                           | 10653                | <code>\nolinkurl</code>               | 8837     |
| <code>mcaption</code> (package)              | 796                  | <code>nomencl</code> (package)        | 140, 825 |
| <code>\mcolrowcell</code>                    | 8437                 | <code>nonfloat</code> (package)       | 825      |
| <code>mdframed</code> (package)              | 132, 797             | <code>nonumonpart</code> (package)    | 826      |
| <code>\mdseries</code>                       | 11132                | <code>\nopagebreak</code>             | 11312    |
| <code>memhfixc</code> (package)              | 806                  | <code>\nopagecolor</code>             | 72       |
| <code>memoir</code> (class)                  | 167, 168, 953        | <code>nopageno</code> (package)       | 826      |
| <code>metalogo</code> (package)              | 806                  | <code>\normalfont</code>              | 11146    |
| <code>metalogoX</code> (package)             | 806                  | <code>\normalmarginpar</code>         | 5742     |
| <code>mhchem</code> (package)                | 807                  | <code>notes</code> (package)          | 826      |
| <code>microtype</code> (package)             | 223, 809             | <code>notespages</code> (package)     | 827      |
| <code>midfloat</code> (package)              | 810                  | <code>nowidow</code> (package)        | 827      |
|                                              |                      | <code>ntheorem</code> (package)       | 155, 828 |
|                                              |                      | <code>\numberline</code>              | 9183     |

numindex (option) [tocbibind] . . . . 152, 930

**O**

octave (package) . . . . . 839  
OpenOffice (program) . . . . . 85  
option:  
  --shell-escape . . . . . 109  
  [lwarpmk]:  
    htmlglossary . . . . . 139, 728  
    printglossary . . . . . 139, 728  
  [tocbibind]:  
    numindex . . . . . 152, 930  
  [tocloft]:  
    titles . . . . . 138  
BaseJobname . . . . . 114, 217  
dvi<sub>pdfm</sub> . . . . . 111, 219  
dvi<sub>pdfmx</sub> . . . . . 111, 220  
dvips . . . . . 111, 219  
GlossaryCmd . . . . . 114, 139, 219, 728  
HomeHTMLFilename . . . . . 111, 115, 218  
HTMLFilename . . . . . 111, 115, 218  
HTMLIndexCmd . . . . . 113, 219  
HTMLLatexCmd . . . . . 111, 172, 219  
ImagesDirectory . . . . . 217  
ImagesName . . . . . 217  
latexmk . . . . . 111, 115, 219  
LatexmkIndexCmd . . . . . 113, 219  
lwarpmk . . . . . 114, 218, 295  
makeindex . . . . . 111, 115, 219  
makeindexStyle . . . . . 111, 149, 217  
mathjax . . . . . 111, 115, 217  
mathsvg . . . . . 111, 115, 216  
OSWindows . . . . . 114, 122, 213, 218  
pdftotextEnc . . . . . 114, 218  
PrintIndexCmd . . . . . 111, 219  
PrintLatexCmd . . . . . 111, 172, 218  
warpHTML . . . . . 114, 216  
warpprint . . . . . 114, 216  
xindy . . . . . 111, 115, 219  
xindyCodepage . . . . . 111, 218  
xindyLanguage . . . . . 111, 217  
xindyStyle . . . . . 111, 150, 217  
\\OSPathSymbol . . . . . 711  
OSWindows (option) . . . . . 114, 122, 213, 218  
overpic (package) . . . . . 160, 840

**P**

package:  
  2in1 . . . . . 580  
  2up . . . . . 580  
  a4 . . . . . 580  
  a4wide . . . . . 581  
  a5comb . . . . . 581  
  abstract . . . . . 137, 581  
  academicons . . . . . 583  
  accsupp . . . . . 584

acro . . . . . 584  
acronym . . . . . 586  
addlines . . . . . 588  
adjmulticol . . . . . 587  
afterpage . . . . . 588  
algorithm2e . . . . . 588  
algorithmicx . . . . . 166, 592  
alltt . . . . . 593  
amsmath . . . . . 593  
amsthm . . . . . 596  
anonchap . . . . . 600  
anysize . . . . . 601  
appendix . . . . . 138, 601  
ar . . . . . 602  
arabicfront . . . . . 603  
array . . . . . 603  
arydshln . . . . . 604  
asymptote . . . . . 160, 606  
atbegshi . . . . . 607  
attachfile . . . . . 607  
attachfile2 . . . . . 608  
authblk . . . . . 137, 610  
autonum . . . . . 611  
axessibility . . . . . 612  
axodraw2 . . . . . 612  
babel . . . . . 169  
backref . . . . . 613  
balance . . . . . 613  
bbding . . . . . 613  
biblatex . . . . . 618  
bibunits . . . . . 619  
bigdelim . . . . . 165, 619  
bigfoot . . . . . 620  
bigstrut . . . . . 621  
bitpattern . . . . . 621  
blowup . . . . . 621  
booklet . . . . . 622  
bookmark . . . . . 622  
booktabs . . . . . 623  
bophook . . . . . 624  
bounddvi . . . . . 624  
boxedminipage2e . . . . . 625  
breakurl . . . . . 625  
breqn . . . . . 626  
bsheaders . . . . . 627  
bypapersize . . . . . 627  
bytefield . . . . . 628  
calc . . . . . 224  
cancel . . . . . 628  
canoniclayout . . . . . 629  
capt-of . . . . . 480  
caption . . . . . 166, 231, 480, 629  
cases . . . . . 632  
changebar . . . . . 633  
changelayout . . . . . 633



|                |          |                 |          |
|----------------|----------|-----------------|----------|
| change page    | 634      | eqlist          | 685      |
| changes        | 634      | eqparbox        | 685      |
| chappg         | 637      | errata          | 686      |
| chapterbib     | 637      | eso-pic         | 688      |
| chemfig        | 637      | etoolbox        | 197      |
| chemformula    | 638      | eurosym         | 688      |
| chemgreek      | 643      | everyhook       | 225      |
| chemmacros     | 644      | everypage       | 689      |
| chemnum        | 661      | everyshi        | 689      |
| chkfloat       | 662      | expl3           | 224      |
| chnpage        | 662      | extramarks      | 689      |
| cite           | 663      | fancybox        | 131, 690 |
| CJK            | 663      | fancyhdr        | 695      |
| CJKutf8        | 663      | fancyref        | 696      |
| cleveref       | 134, 540 | fancytabs       | 697      |
| clrdblpg       | 664      | fancyvrb        | 697      |
| cm-super       | 109      | figcaps         | 703      |
| cmap           | 110      | figsize         | 703      |
| cmdtrack       | 664      | filecontents    | 225      |
| color          | 158, 664 | fitbox          | 704      |
| colortbl       | 165, 664 | fix2col         | 704      |
| comment        | 222      | fixme           | 170, 704 |
| continue       | 666      | fixmetodonotes  | 706      |
| copyrightbox   | 666      | flafter         | 706      |
| crop           | 667      | flippdf         | 706      |
| ctable         | 667      | float           | 166, 707 |
| cuted          | 670      | floatflt        | 708      |
| cutwin         | 670      | floatpag        | 709      |
| dblfloatfix    | 671      | floatrow        | 166, 709 |
| dblfnote       | 671      | fltrace         | 714      |
| dcolumn        | 672      | flushend        | 715      |
| dejavu         | 109      | fnbreak         | 715      |
| diagbox        | 672      | fncychap        | 715      |
| dingbat        | 674      | fnlineno        | 716      |
| ditaa          | 175      | fnpara          | 716      |
| dprogress      | 674      | fnpos           | 717      |
| draftcopy      | 675      | fontawesome     | 717      |
| draftfigure    | 675      | fontawesome5    | 718      |
| draftwatermark | 676      | fontenc         | 110, 719 |
| easy-todo      | 676      | fontspec        | 110      |
| ebook          | 677      | footmisc        | 719      |
| ed             | 677      | footnote        | 720      |
| ellipsis       | 678      | footnotebackref | 721      |
| embrac         | 678      | footnotehyper   | 721      |
| emptypage      | 679      | footnoterange   | 722      |
| endfloat       | 679      | footnpag        | 722      |
| endheads       | 680      | foreign         | 722      |
| endnotes       | 138, 680 | forest          | 723      |
| enumerate      | 681      | framed          | 723      |
| enumitem       | 681      | ftcap           | 725      |
| environ        | 226      | ftnright        | 726      |
| epigraph       | 682      | fullminipage    | 726      |
| epsfig         | 683      | fullpage        | 726      |
| epstopdf       | 159, 684 | fullwidth       | 726      |
| epstopdf-base  | 684      | fwlw            | 727      |

|                  |               |                        |               |
|------------------|---------------|------------------------|---------------|
| gentombow        | 727           | luacolor               | 788           |
| geometry         | 223, 727      | luatodonotes           | 170, 789      |
| getttitlestring  | 224           | lwarp                  | 111           |
| gloss            | 139, 728      | lwarp-patch-komascript | 982           |
| glossaries       | 139, 728      | lwarp-patch-memoir     | 984           |
| gmeometric       | 731           | magaz                  | 791           |
| graphics         | 156, 731      | makeidx                | 151, 791, 930 |
| graphicx         | 156, 743      | manyfoot               | 792           |
| grffile          | 158, 743      | marginal               | 794           |
| grid             | 744           | marginfit              | 794           |
| grid-system      | 744           | marginfix              | 794           |
| gridset          | 744           | marginnote             | 795           |
| hang             | 745           | marvosym               | 795           |
| hanging          | 746           | mathtools              | 796           |
| hypcap           | 747           | mcaption               | 796           |
| hypdestopt       | 747           | mdframed               | 132, 797      |
| hypernat         | 748           | memhfixc               | 806           |
| hyperref         | 135, 469, 748 | metalogo               | 806           |
| hyperxmp         | 753           | metalogoX              | 806           |
| hyphenat         | 753           | mhchem                 | 807           |
| idxlayout        | 754           | microtype              | 223, 809      |
| ifoddpages       | 755           | midfloat               | 810           |
| ifplatform       | 197           | midpage                | 810           |
| imakeidx         | 755           | minitoc                | 810           |
| indentfirst      | 340           | morefloats             | 811           |
| index            | 759           | moreverb               | 811           |
| inputenc         | 110           | mparhack               | 812           |
| inputenx         | 110           | multicap               | 812           |
| inputtrc         | 761           | multicol               | 813           |
| intopdf          | 761           | multicolrule           | 814           |
| karnaugh-map     | 762           | multirow               | 814           |
| keyfloat         | 167, 765      | multitoc               | 818           |
| kotex            | 171           | musicography           | 818           |
| kvoptions        | 216           | nameauth               | 820           |
| layaureo         | 770           | nameref                | 821           |
| layout           | 771           | natbib                 | 821           |
| layouts          | 771           | nccfancyhdr            | 822           |
| leading          | 774           | needspace              | 823           |
| letltxmacro      | 197           | newclude               | 169           |
| letterspace      | 774           | newfloat               | 225           |
| letrine          | 774           | newtxmath              | 156           |
| lineno           | 775           | newunicodechar         | 110           |
| lips             | 777           | nextpage               | 823           |
| listings         | 778           | nicefrac               | 156, 824      |
| listliketab      | 782           | niceframe              | 824           |
| lltjext          | 782           | nomencl                | 140, 825      |
| lmodern          | 109, 110      | nonfloat               | 825           |
| longtable        | 163, 783      | nonumonpart            | 826           |
| lscap            | 786           | nopageno               | 826           |
| ltablex          | 786           | notes                  | 826           |
| lrcaption        | 787           | notespages             | 827           |
| ltxgrid          | 787           | nowidow                | 827           |
| ltxtable         | 788           | ntheorem               | 155, 828      |
| lua-check-hyphen | 788           | octave                 | 839           |
| lua-visual-debug | 788           | overpic                | 160, 840      |

|                    |          |                     |               |
|--------------------|----------|---------------------|---------------|
| pagegrid           | 841      | rotfloat            | 866           |
| pagenote           | 138, 841 | rterface            | 174           |
| pagesel            | 841      | rviewport           | 867           |
| paralist           | 842      | sagetex             | 174           |
| parnotes           | 842      | savetrees           | 867           |
| parskip            | 843      | scalefnt            | 867           |
| pbox               | 843      | schemata            | 867           |
| pdfcomment         | 844      | scrxtext            | 868           |
| pdflandscape       | 844      | scrhack             | 871           |
| pdfmarginpar       | 844      | scrlayer            | 871           |
| pdfpages           | 845      | scrlayer-notecolumn | 872           |
| pdfprivacy         | 847      | scrlayer-scrpage    | 873           |
| pdfrender          | 847      | scrpage2            | 874           |
| pdfsync            | 848      | section             | 875           |
| pdftricks          | 159, 848 | sectionbreak        | 876           |
| pdfx               | 849      | sectsty             | 876           |
| perltex            | 174      | semantic-markup     | 877           |
| perpage            | 849      | setspace            | 878           |
| pfnote             | 850      | shadow              | 879           |
| phfqit             | 850      | showidx             | 879           |
| pifont             | 851      | showkeys            | 879           |
| placeins           | 852      | showtags            | 880           |
| plarydshln         | 852      | sidecap             | 880           |
| plext              | 852      | sidenotes           | 881           |
| plextarydshln      | 853      | SIunits             | 882           |
| plextcolortbl      | 853      | siunitx             | 156, 533, 883 |
| polyglossia        | 169      | soul                | 888           |
| prelim2e           | 853      | soulpos             | 889           |
| prettyref          | 854      | soulutf8            | 890           |
| preview            | 854      | splitidx            | 890           |
| printlen           | 226      | srcltx              | 892           |
| psfrag             | 159, 854 | srctex              | 892           |
| psfragx            | 855      | stabular            | 892           |
| pst-eps            | 856      | stfloats            | 893           |
| pstool             | 160, 856 | struktex            | 893           |
| pstricks           | 159, 857 | subcaption          | 166, 894      |
| pxatbegshi         | 857      | subfig              | 166, 895      |
| pxeveryshi         | 857      | subfigure           | 899           |
| pxftnright         | 857      | supertabular        | 164, 900      |
| pxjahyper          | 858      | sympytex            | 174           |
| pythontex          | 174      | syntonly            | 901           |
| quotchap           | 858      | tablefootnote       | 902           |
| quoting            | 859      | tabls               | 902           |
| ragged2e           | 859      | tabularx            | 902           |
| realscripts        | 860      | tabulary            | 903           |
| refcheck           | 861      | tascmac             | 903           |
| refcount           | 225      | textarea            | 905           |
| register           | 861      | textcomp            | 110, 128, 905 |
| relsize            | 128, 862 | textfit             | 909           |
| repeatindex        | 863      | textpos             | 909           |
| resizegather       | 864      | theorem             | 910           |
| rmpage             | 864      | thinsp              | 914           |
| romanbar           | 865      | threadcol           | 914           |
| romanbarpagenumber | 865      | threeparttable      | 914           |
| rotating           | 865      | threeparttablex     | 164, 915      |

|                    |                    |                                     |           |
|--------------------|--------------------|-------------------------------------|-----------|
| thumb              | 916                | xifthen                             | 225       |
| thumbs             | 916                | xltabular                           | 975       |
| tikz               | 158, 917           | xltxtra                             | 975       |
| titles             | 918                | xmpinl                              | 976       |
| titleref           | 921                | xparse                              | 171, 224  |
| titlesec           | 921                | xpatch                              | 197       |
| titletoc           | 923                | xpiano                              | 976       |
| titling            | 137, 925           | xpinyin                             | 977       |
| tocbasic           | 929                | xstring                             | 226       |
| tocbind            | 151, 152, 930      | xtab                                | 164, 977  |
| tocdata            | 932                | xunicode                            | 979       |
| tocenter           | 933                | xurl                                | 980       |
| tocloft            | 138, 152, 600, 933 | xy                                  | 980       |
| tocstyle           | 939                | zhlineskip                          | 981       |
| todo               | 939                | zwpagelayout                        | 981       |
| todonotes          | 170, 940           | \packagediagramname                 | 120, 9421 |
| topcapt            | 942                | \pagebreak                          | 11309     |
| tram               | 942                | \pagecolor                          | 71        |
| transparent        | 943                | pagegrid (package)                  | 841       |
| trimclip           | 943                | pagenote (package)                  | 138, 841  |
| trivfloat          | 166, 944           | \pagenumbering                      | 5076      |
| truncate           | 945                | \pageref                            | 8776      |
| turnthepage        | 945                | \pagerefPageFor                     | 8775      |
| twoup              | 945                | pagesel (package)                   | 841       |
| typearea           | 946                | \pagestyle                          | 5068      |
| typicons           | 946                | Pandoc (program)                    | 85        |
| ulem               | 947                | \paragraph                          | 6320      |
| umoline            | 948                | paralist (package)                  | 842       |
| underscore         | 949                | \parbox                             | 10644     |
| units              | 156, 949           | parnotes (package)                  | 842       |
| unitsdef           | 950                | \parsemulticolumnalignment          | 8086      |
| upref              | 951                | parskip (package)                   | 843       |
| url                | 135, 951           | \part                               | 6255      |
| uspace             | 952                | pbox (package)                      | 843       |
| varioref           | 134                | pdfcomment (package)                | 844       |
| varwidth           | 226                | pdfcrop (program) [requirement]     | 88        |
| verbatim           | 225                | pdfLaTeX (program) [requirement]    | 88        |
| verse              | 168, 952, 953      | pdfscape (package)                  | 844       |
| versionotes        | 954                | pdfmarginpar (package)              | 844       |
| vertbars           | 954                | pdfpages (package)                  | 845       |
| vmargin            | 954                | pdfprivacy (package)                | 847       |
| vowel              | 955                | pdfrender (package)                 | 847       |
| vpe                | 955                | pdfseparate (program) [requirement] | 88, 93    |
| vwcol              | 956                | pdfsync (package)                   | 848       |
| wallpaper          | 958                | pdftocairo (program)                | 157, 535  |
| watermark          | 958                | pdftocairo (program) [requirement]  | 88, 93    |
| widows-and-orphans | 959                | pdftotext (program) [requirement]   | 88, 93    |
| wrapfig            | 959                | pdftotextEnc (option)               | 114, 218  |
| xbmks              | 960                | pdftricks (package)                 | 159, 848  |
| xcolor             | 158, 536, 960      | pdfx (package)                      | 849       |
| xexchangebar       | 971                | perl (program) [requirement]        | 93        |
| xellipsis          | 971                | perltex (package)                   | 174       |
| xetexko-vertical   | 972                | perpage (package)                   | 849       |
| xfakebold          | 972                | pfnote (package)                    | 850       |
| xfrac              | 973                | \phantomsection                     | 11372     |











# General Index

This is an index of instructions and concepts. Look here when wondering how to do something, and check the Troubleshooting Index when something goes wrong.

| Symbols                                   |          |     |
|-------------------------------------------|----------|-----|
| $\backslash$ , .....                      | 127      |     |
| $\sim$ .....                              | 127      |     |
| per HTML page .....                       |          | 121 |
| project-specific changes .....            |          | 122 |
| ctable .....                              |          | 165 |
| <b>A</b>                                  |          |     |
| accents                                   |          |     |
| in section & file names .....             | 360      |     |
| adapting                                  |          |     |
| class .....                               | 185      |     |
| document .....                            | 108      |     |
| package .....                             | 184      |     |
| affiliation                               |          |     |
| multiple authors .....                    | 136      |     |
| algorithmicx                              |          |     |
| with newfloat, trivfloat .....            | 944      |     |
| array                                     |          |     |
| mhchem .....                              | 807      |     |
| author                                    |          |     |
| HTML meta tag .....                       | 126, 342 |     |
| multiple .....                            | 136      |     |
| <b>B</b>                                  |          |     |
| baseline                                  |          |     |
| tabular .....                             | 419      |     |
| bibliography                              |          |     |
| HTML page and TOC .....                   | 137      |     |
| bitmapped fonts .....                     | 109      |     |
| bugs .....                                | 188      |     |
| <b>C</b>                                  |          |     |
| <i>Calibre</i> .....                      | 176      |     |
| chemistry                                 |          |     |
| Greek symbols .....                       | 643      |     |
| class                                     |          |     |
| modifying for lwarp .....                 | 185      |     |
| code listings .....                       | 127      |     |
| compiling                                 |          |     |
| custom .....                              | 172      |     |
| Computer Modern .....                     | 109      |     |
| converting                                |          |     |
| class .....                               | 185      |     |
| document .....                            | 108      |     |
| package .....                             | 184      |     |
| CSS                                       |          |     |
| file selection .....                      | 121      |     |
| lwarp.css .....                           | 122      |     |
| <b>D</b>                                  |          |     |
| danger icon .....                         | 196      |     |
| debugging .....                           | 188      |     |
| HTML debug comments .....                 | 234      |     |
| tracing log .....                         | 234      |     |
| Deja Vu .....                             | 109      |     |
| description                               |          |     |
| HTML meta tag .....                       | 125, 343 |     |
| display math                              |          |     |
| complicated objects .....                 | 155      |     |
| document                                  |          |     |
| convert existing .....                    | 108      |     |
| DVI L <sup>A</sup> T <sub>E</sub> X ..... | 104, 109 |     |
| dynamic math .....                        | 155      |     |
| dynamic math expressions .....            | 316      |     |
| <b>E</b>                                  |          |     |
| endnotes                                  |          |     |
| HTML page and TOC .....                   | 137      |     |
| EPS image                                 |          |     |
| converting .....                          | 106      |     |
| using .....                               | 156, 534 |     |
| EPUB                                      |          |     |
| conversion software .....                 | 176      |     |
| HTML conversion settings .....            | 176, 239 |     |
| error messages .....                      | 188      |     |
| export                                    |          |     |
| to word processor .....                   | 178      |     |
| <b>F</b>                                  |          |     |
| FAQ .....                                 | 188      |     |
| filename                                  |          |     |
| accent in .....                           | 360      |     |
| hashed .....                              | 500, 525 |     |
| international languages .....             | 168      |     |
| length .....                              | 118      |     |
| simplify .....                            | 133      |     |
| underscore in .....                       | 115, 128 |     |
| unique .....                              | 118      |     |
| font                                      |          |     |
| Computer Modern .....                     | 109      |     |
| Deja Vu .....                             | 109      |     |







# Troubleshooting Index

This index is a sorted reference of problems and solutions. In order to make it easier to locate a solution, the same issue may be addressed by more than one entry.

Entries with higher page numbers are often duplicates of entries with lower page numbers, as the same warning may occur within the user manual and again within the source code for a given package.

| A                       |                    | C                  |          |
|-------------------------|--------------------|--------------------|----------|
| abstract                |                    | <i>Calibre</i>     |          |
| missing TOC             | 137, 581           | EPUB conversion    | 176      |
| acronym                 |                    | caption            |          |
| multiply-defined labels | 586                | numbering          | 166      |
| \AddSubtitlePublished   | 387                | options            | 166      |
| affiliation             | 381                | cases              |          |
| alt tags                | 155, 189           | MATHJAX            | 632      |
| AMSMath                 |                    | chemfig            | 170      |
| ntheorem                |                    | chemformula        |          |
| numbering               | 156, 828           | MATHJAX            | 170, 638 |
| appendix                |                    | chemgreek          |          |
| incorrect toc link      | 138, 601           | fontspec mapping   | 643      |
| array                   |                    | text-mode symbols  | 643      |
| chemformula             | 170                | chemmacros         |          |
| authblk                 |                    | \makepolymerdelims | 644      |
| \theauthor              | 380, 381           | redox reactions    | 644      |
| titling                 | 137, 379, 610, 925 | colortbl           | 165, 664 |
| author                  |                    | cross reference    |          |
| affiliation             | 381                | incorrect link     | 190      |
| formatting              | 125                | missing            | 189      |
| autonom                 | 611                | CSS                | 191      |
|                         |                    | ctable             | 165      |
| B                       |                    | D                  |          |
| babel                   |                    | ditaa              | 175      |
| French                  | 169                | duplicate filename | 133      |
| backref                 | 613                |                    |          |
| backref                 | 135                | E                  |          |
| bibliography            |                    | \endhead, etc.     | 163      |
| HTML page and TOC       | 137                | endnotes           |          |
| bibtex                  |                    | HTML page and TOC  | 137      |
| \etalchar               | 138                | \ensuremath        | 188      |
| Improper \prevdepth     | 138                | epstopdf           | 159, 684 |
| bigdelim                | 165, 619           | EPUB               |          |
| bigfoot                 | 136, 792           | encoding           | 176      |
| boxes                   | 129                | page order         | 176      |
| breqn                   |                    | search order       | 176      |
| darray                  | 626                | section breaks     | 177      |
| MATHJAX                 | 626                | \etalchar          | 138      |

|                                           |                    |
|-------------------------------------------|--------------------|
| <b>F</b>                                  |                    |
| fancybox                                  |                    |
| \VerbatimFootnotes . . .                  | 136, 691, 697      |
| fancyvrb                                  |                    |
| \VerbatimFootnotes . . .                  | 136, 691, 697      |
| figure                                    |                    |
| macro in name . . . . .                   | 189                |
| file                                      |                    |
| inaccessible . . . . .                    | 117                |
| filename                                  |                    |
| accents . . . . .                         | 360                |
| corrupted . . . . .                       | 133, 168           |
| duplicate . . . . .                       | 133                |
| international, UTF-8 . . . . .            | 168                |
| Korean . . . . .                          | 171                |
| macro in name . . . . .                   | 133                |
| math in . . . . .                         | 108, 134, 152, 494 |
| Missing \$ inserted . . . . .             | 188                |
| fixme . . . . .                           | 170, 704           |
| float                                     |                    |
| alignment . . . . .                       | 127, 165           |
| out of sequence . . . . .                 | 190                |
| floatrow                                  |                    |
| \FBwidth and \FBheight . . . . .          | 166, 710           |
| with subfig . . . . .                     | 166, 709           |
| floatrow                                  |                    |
| \ttbbbox . . . . .                        | 161, 402           |
| font                                      |                    |
| ligatures . . . . .                       | 110                |
| missing symbols . . . . .                 | 128, 905           |
| monospace . . . . .                       | 110                |
| package conflicts . . . . .               | 109                |
| selection . . . . .                       | 109                |
| UTF-8 . . . . .                           | 109                |
| fontspec . . . . .                        | 109                |
| footmisc . . . . .                        | 135, 343           |
| footnote                                  |                    |
| displaymath . . . . .                     | 136, 691, 697      |
| in math . . . . .                         | 136                |
| in sectioning command . . . . .           | 135                |
| memoir . . . . .                          | 135, 343           |
| numbering . . . . .                       | 135                |
| paragraph tags . . . . .                  | 136, 691, 697      |
| sectioning, footmisc . . . . .            | 135, 343           |
| sectioning, verbatim . . . . .            | 136, 691, 697      |
| title . . . . .                           | 380                |
| verbatim . . . . .                        | 136                |
| \VerbatimFootnotes . . . . .              | 136, 691, 697      |
| forest . . . . .                          | 723                |
| formatting                                |                    |
| \bfseries etc. . . . .                    | 127, 554           |
| frames . . . . .                          | 130                |
| <b>G</b>                                  |                    |
| gloss . . . . .                           | 139                |
| <b>H</b>                                  |                    |
| glossaries                                |                    |
| HTML page and TOC . . . . .               | 137                |
| <i>makeglossaries</i> not found . . . . . | 139, 728           |
| page numbers . . . . .                    | 140, 729           |
| style . . . . .                           | 139, 729           |
| graphics                                  |                    |
| \rotatebox, \scalebox, \reflectbox        |                    |
| . . . . .                                 | 158, 536           |
| image format priorities . . . . .         | 157, 535           |
| images out of order . . . . .             | 100, 190           |
| optional arguments . . . . .              | 157, 535           |
| scale option . . . . .                    | 108, 156, 534      |
| scaled . . . . .                          | 732                |
| viewport . . . . .                        | 157, 535           |
| Greek packages . . . . .                  | 643                |
| grffile . . . . .                         | 158, 743           |
| <b>H</b>                                  |                    |
| horizontal spacing . . . . .              | 166, 895           |
| HTML                                      |                    |
| &, <, > . . . . .                         | 127, 554           |
| alt tags . . . . .                        | 155                |
| author . . . . .                          | 343                |
| corrupted . . . . .                       | 125, 129, 188, 191 |
| entities . . . . .                        | 127, 554           |
| image appear as HTML code . . . . .       | 100, 190           |
| inaccessible pages . . . . .              | 117, 119           |
| starred section . . . . .                 | 137                |
| invalid . . . . .                         | 127                |
| missing pages                             |                    |
| filename not unique . . . . .             | 118                |
| recompile . . . . .                       | 191                |
| SideTOCDepth and FileDepth . . . . .      | 117                |
| SideTOCDepth and tocdepth . . . . .       | 117                |
| page did not update . . . . .             | 117, 191           |
| settings                                  |                    |
| changed . . . . .                         | 115                |
| undefined . . . . .                       | 188                |
| validation . . . . .                      | 127                |
| \HTMLAuthor . . . . .                     | 343                |
| HTMLIndexCmd                              |                    |
| filenames . . . . .                       | 113                |
| hyperref                                  |                    |
| backref . . . . .                         | 135                |
| comments between arguments . . . . .      | 135                |
| incorrect link . . . . .                  | 190                |
| <b>I</b>                                  |                    |
| image                                     |                    |
| appears as HTML code . . . . .            | 100, 190           |
| format priorities . . . . .               | 157, 535           |
| incorrect . . . . .                       | 100, 190           |
| viewport . . . . .                        | 157, 535           |
| Improper \prevdepth                       |                    |
| bibtex . . . . .                          | 138                |
| boxes . . . . .                           | 188                |

|                                      |                         |                |  |
|--------------------------------------|-------------------------|----------------|--|
| <code>\includegraphics</code>        |                         |                |  |
| optional arguments                   | 157, 535                |                |  |
| scale                                | 108, 156, 534           |                |  |
| index                                |                         |                |  |
| empty                                | 151                     |                |  |
| empty link                           | 134, 189                |                |  |
| formatting                           | 490                     |                |  |
| HTML page and TOC                    | 137                     |                |  |
| missing entries                      | 140                     |                |  |
| numbers, not links                   | 226                     |                |  |
| reference ranges                     | 150                     |                |  |
| see and seealso                      | 150                     |                |  |
| styling references                   | 150                     |                |  |
| xindy and hyperref                   | 150                     |                |  |
| xstring bug                          | 226                     |                |  |
|                                      |                         |                |  |
|                                      |                         | <b>K</b>       |  |
| keyfloat                             | 167, 765                |                |  |
|                                      |                         |                |  |
|                                      |                         | <b>L</b>       |  |
| label                                |                         |                |  |
| <code>\nameref</code> empty          | 134, 189                |                |  |
| characters                           | 134, 189                |                |  |
| Label(s) may have changed            | 188                     |                |  |
| <code>\LateximageFontSizeName</code> | 521                     |                |  |
| Leaders not followed by proper glue  | 188                     |                |  |
| <i>LibreOffice</i>                   |                         |                |  |
| import                               | 178                     |                |  |
| ligatures                            | 110                     |                |  |
| LINUX                                | 122, 213                |                |  |
| list                                 |                         |                |  |
| empty item                           | 128, 395                |                |  |
| listings                             | 190                     |                |  |
| lists                                |                         |                |  |
| label formatting                     | 395                     |                |  |
| locale                               | 175                     |                |  |
| longtable                            |                         |                |  |
| <code>\endhead</code> , etc.         | 163                     |                |  |
| <code>lrbox</code>                   | 129                     |                |  |
| ltxtable                             |                         |                |  |
| numbering                            | 788                     |                |  |
| luaL <sup>A</sup> T <sub>E</sub> X   | 109                     |                |  |
| <code>\LWRbackslash</code>           | 172                     |                |  |
| <code>\LWRdollar</code>              | 172                     |                |  |
| <code>\LWRhash</code>                | 172                     |                |  |
| <code>\LWRopquote</code>             | 172                     |                |  |
| <code>\LWRopseq</code>               | 172                     |                |  |
| <code>\LWRpercent</code>             | 172                     |                |  |
|                                      |                         |                |  |
|                                      |                         | <b>M</b>       |  |
| MAC OS                               | 122, 213                |                |  |
| <i>makeglossaries</i>                |                         |                |  |
| not found                            | 139, 728                |                |  |
| <code>\makeLabel</code>              | 395                     |                |  |
| manyfoot                             | 136, 792                |                |  |
| <code>\marginpar</code>              | 128, 349                |                |  |
|                                      |                         |                |  |
|                                      |                         | <b>math</b>    |  |
| alt tags                             | 189                     |                |  |
| appears as HTML code                 | 100, 190                |                |  |
| chemformula                          | 170                     |                |  |
| custom macros                        | 189                     |                |  |
| dynamic                              | 316                     |                |  |
| equation numbering                   |                         |                |  |
| ntheorem                             | 156, 828                |                |  |
| file name                            | 108, 134, 152, 494      |                |  |
| footnote                             | 136                     |                |  |
| in T <sub>E</sub> X boxes            | 153, 496                |                |  |
| incorrect                            | 100, 190, 316           |                |  |
| non-math contents                    | 189                     |                |  |
| section name                         | 108, 134, 152, 494      |                |  |
| slow or failed compile               | 189                     |                |  |
| subequations                         | 154, 496                |                |  |
| tabbing                              | 160, 393                |                |  |
| Tikz                                 | 155                     |                |  |
|                                      |                         |                |  |
|                                      |                         | <b>MATHJAX</b> |  |
| breqn                                | 626                     |                |  |
| cases                                | 632                     |                |  |
| chemformula                          | 170, 638                |                |  |
| custom script                        | 293                     |                |  |
| errors                               | 155, 189, 316           |                |  |
| mhchem                               | 807                     |                |  |
| siunitx                              | 154, 156, 497, 533, 883 |                |  |
| subequations                         | 154, 496                |                |  |
| unsupported packages                 | 154, 189, 497           |                |  |
| mathtools                            | 796                     |                |  |
| <code>\mcolrowcell</code>            | 163                     |                |  |
| memoir                               |                         |                |  |
| footmisc                             | 135, 343                |                |  |
| options clash                        | 167, 985                |                |  |
| version clash                        | 167, 985                |                |  |
| mhchem                               |                         |                |  |
| MATHJAX                              | 807                     |                |  |
| nested dollar signs                  | 807                     |                |  |
| minipage                             |                         |                |  |
| alignment                            | 130, 544                |                |  |
| horizontal space between             | 566                     |                |  |
| in a span                            | 129, 544                |                |  |
| inline                               | 129, 543                |                |  |
| multicols, width in                  | 129, 544                |                |  |
| size                                 | 129, 544                |                |  |
| tabular, width in                    | 129, 544                |                |  |
| Misplaced <code>\noalign</code>      | 164, 784                |                |  |
| tabular                              |                         |                |  |
| rules                                | 162, 403                |                |  |
| Misplaced <code>\omit</code>         |                         |                |  |
| tabular                              | 237                     |                |  |
| Misplaced alignment tab character &  |                         |                |  |
| c <sub>t</sub> able                  | 165, 667                |                |  |
| floatrow                             | 166, 709                |                |  |
| frames                               | 131                     |                |  |
| supertabular                         | 164, 900, 977           |                |  |







## Index of Indexes

|                |          |      |                       |          |      |
|----------------|----------|------|-----------------------|----------|------|
|                | <b>C</b> |      |                       | <b>I</b> |      |
| Change History | .....    | 1010 | Index of Objects      | .....    | 1037 |
|                | <b>G</b> |      |                       | <b>T</b> |      |
| General Index  | .....    | 1057 | Troubleshooting Index | .....    | 1061 |