

Hypertext marks in \LaTeX

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<https://github.com/ho-tex/hyperref/issues>

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1 Documentation overview for `hyperref`

The documentation for package `hyperref` consists of several files:

Manual The **USER MANUAL** (also available as HTML).

README The **README** file (also available as text file). Here information is collected that is not yet in the manual: new features, package compatibility, limitations, known problems, ...

ChangeLog This file records the version history (also available as text file).

Options This file provides a short option summary.

Bookmark talk, slides Slides for the talk “PDF information and navigation elements with `hyperref`, `pdfTeX` and `thumbpdf`” at Euro \TeX 1999.

Bookmark talk, paper The paper version of the talk.

Source code documentation:

☞ **`hyperref.dtx`** This is the source code documentation for `hyperref` (this file).

`backref.dtx` “Back referencing from bibliographical citations”

`nameref.dtx` “Section name references in \LaTeX ”

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3 File hyccheck.tex

Many commands of L^AT_EX or other packages cannot be overloaded, but have to be redefined by hyperref directly. If these commands change in newer versions, these changes are not noticed by hyperref. With this test file this situation can be checked. It defines the command `\checkcommand` that is more powerful than L^AT_EX's `\CheckCommand`, because it takes `\DeclareRobustCommand` and optional parameters better into account.

```
1 <*check>
2 \documentclass{article}
3 \makeatletter
```

`\checklatex` Optional argument: release date of L^AT_EX.

```
4 \newcommand*{\checklatex}[1][]{%
5 \typeout{}}%
6 \typeout{* Format: `LaTeX2e' #1}%
7 \typeout{\space\space Loaded: `fmtname' \fmtversion}%
8 }%
```

`\checkpackage` The argument of `\checkpackage` is the package name without extension optionally followed by a release date.

```
9 \newcommand*{\checkpackage}[1]{%
10 \def\HyC@package{#1}%
11 \let\HyC@date\@empty
12 \@ifnextchar[\HyC@getDate\HyC@checkPackage
13 }
```

`\HyC@getDate` The release date is scanned.

```
14 \def\HyC@getDate[#1]{%
15 \def\HyC@date{#1}%
16 \HyC@checkPackage
17 }
```

`\HyC@checkPackage`

```
18 \def\HyC@checkPackage{%
19 \typeout{}}%
20 \begingroup
21 \edef\x{\endgroup
22 \noexpand\RequirePackage{\HyC@package}%
23 \ifx\HyC@date\@empty\relax\else\HyC@date\fi}%
24 }%
25 \x
26 \typeout{}}%
27 \typeout{%
28 * Package ` \HyC@package'%
29 \ifx\HyC@date\@empty
30 \else
31 \space\HyC@date
32 \fi
33 }%
34 \@ifundefined{ver@\HyC@package.sty}{%
35 }{%
36 \typeout{%
37 \space\space Loaded: ` \HyC@package' %
38 \curname ver@\HyC@package.sty\endcurname
39 }%
```

```
40 }%
41 }
```

`\checkcommand` The macro `\checkcommand` parses the next tokens as a L^AT_EX definition and compares this definition with the current meaning of that command.

```
42 \newcommand*{\checkcommand}[1]{%
43 \begingroup
44 \ifx\long#1\relax
45 \expandafter\HyC@checklong
46 \else
47 \def\HyC@defcmd{#1}%
48 \expandafter\let\expandafter\HyC@next
49 \csname HyC@\expandafter@gobble\string#1\endcsname
50 \expandafter\HyC@checkcommand
51 \fi
52 }
```

`\HyC@checklong` The definition command `\def` or `\edef` is read.

```
53 \def\HyC@checklong#1{%
54 \def\HyC@defcmd{\long#1}%
55 \expandafter\let\expandafter\HyC@next
56 \csname HyC@\expandafter@gobble\string#1\endcsname
57 \HyC@checkcommand
58 }
```

`\HyC@checkcommand` The optional star of L^AT_EX's definitions is parsed.

```
59 \def\HyC@checkcommand{%
60 \ifx\HyC@next\relax
61 \PackageError{hycheck}{%
62 Unknown command \expandafter\strip@prefix\meaning\HyC@cmd'%
63 }\@ehd
64 \expandafter\endinput
65 \fi
66 \@ifstar{%
67 \def\HyC@star{*}%
68 \HyC@check
69 }{%
70 \let\HyC@star\@empty
71 \HyC@check
72 }%
73 }
```

`\HyC@check` The macro `\HyC@check` reads the definition command.

```
74 \def\HyC@check#1{%
75 \def\HyC@cmd{#1}%
76 \let\HyC@org@cmd#1%
77 \let#1\relax
78 \let\HyC@param\@empty
79 \HyC@Toks{}%
80 \let\HyC@org@optcmd\HyC@noValue
81 \let\HyC@org@robustcmd\HyC@noValue
82 \let\HyC@org@robustoptcmd\HyC@noValue
83 \HyC@next
84 }
```

`\HyC@noValue`

```
85 \def\HyC@noValue{NoValue}
```


`\HyC@newcommand` The code for `\newcommand`.

```

86 \def\HyC@newcommand{%
87   \let\HyC@@cmd\HyC@cmd
88   \@ifnextchar[\HyC@nc@opt\HyC@nc@noopt
89 }

```

`\HyC@Toks` A register for storing the default value of an optional argument.

```

90 \newtoks\HyC@Toks

```

`\HyC@nc@noopt` This macro `\HyC@nc@noopt` is called, if the parser has reached the definition text.

```

91 \long\def\HyC@nc@noopt#1{%
92   \edef\x{%
93     \expandafter\noexpand\HyC@defcmd
94     \HyC@star
95     \expandafter\noexpand\HyC@cmd
96     \HyC@param\the\HyC@Toks
97   }%
98   \x{#1}%
99   \HyC@doCheck
100 }

```

`\HyC@nc@opt` This macro scans the first optional argument of a \LaTeX definition (number of arguments).

```

101 \def\HyC@nc@opt[#1]{%
102   \def\HyC@param{{#1}}%
103   \@ifnextchar[\HyC@nc@default\HyC@nc@noopt
104 }

```

`\HyC@nc@default` Macro `\HyC@nc@default` scans the default for an optional argument.

```

105 \def\HyC@nc@default[#1]{%
106   \HyC@Toks={{#1}}%
107   \edef\HyC@optcmd{%
108     \expandafter\noexpand
109     \csname\expandafter\string\HyC@@cmd\endcsname
110   }%
111   \expandafter\let\expandafter\HyC@org@optcmd\HyC@optcmd
112   \HyC@nc@noopt
113 }

```

`\HyC@DeclareRobustCommand` `\DeclareRobustCommand{\cmd}` makes the command `\cmd` robust, that then calls `\cmd_` with an space at the end of the command name, defined by `\newcommand`. Therefore the further parsing is done by `\HyC@nc@opt` or `\HyC@nc@noopt` of the `\HyC@newcommand` chain.

```

114 \def\HyC@DeclareRobustCommand{%
115   \edef\HyC@robustcmd{%
116     \expandafter\noexpand
117     \csname\expandafter\expandafter\expandafter\@gobble
118     \expandafter\string\HyC@cmd\space\endcsname
119   }%
120   \expandafter\let\expandafter\HyC@org@robustcmd\HyC@robustcmd
121   \expandafter\let\HyC@robustcmd\relax
122   \let\HyC@@cmd\HyC@robustcmd
123   \@ifnextchar[\HyC@nc@opt\HyC@nc@noopt
124 }

```

`\HyC@def` The parameter text of `\def` or `\edef` is stored in the token register `\HyC@Toks`.

```

\HyC@edef 125 \def\HyC@def#1#1{%
126 \HyC@Toks={#1}%
127 \HyC@nc@noopt
128 }
129 \let\HyC@edef\HyC@def

```

`\HyC@doCheck` This command performs the checks and prints the result.

```

130 \def\HyC@doCheck{%
131 \typeout{* Checking ` \HyC@string\HyC@cmd'.}%
132 \HyC@checkItem{cmd}%
133 \HyC@checkItem{robustcmd}%
134 \HyC@checkItem{optcmd}%
135 \HyC@checkItem{robustoptcmd}%
136 \endgroup
137 }

```

`\HyC@checkItem` A single check.

```

138 \def\HyC@checkItem#1{%
139 \expandafter\ifx\csname HyC@org@#1\endcsname\HyC@noValue
140 \else
141 \expandafter\expandafter\expandafter\ifx
142 \csname HyC@#1\expandafter\endcsname
143 \csname HyC@org@#1\endcsname
144 \expandafter\HyC@checkOk\csname HyC@#1\endcsname
145 \else
146 \expandafter\HyC@checkFailed
147 \csname HyC@#1\expandafter\endcsname
148 \csname HyC@org@#1\endcsname
149 \fi
150 \fi
151 }

```

`\HyC@string` Some shorthands.

```

\HyC@meaning 152 \def\HyC@string#1{\expandafter\string#1}
153 \def\HyC@meaning#1{\expandafter\meaning#1}

```

`\HyC@checkOk` The result, if the check succeeds.

```

154 \def\HyC@checkOk#1{%
155 \typeout{\space\space` \HyC@string#1' ok.}%
156 }

```

`\HyC@checkFailed` The result, if the check fails.

```

157 \def\HyC@checkFailed#1#2{%
158 \typeout{\space\space` \HyC@string#1' failed.}%
159 \typeout{\space\space* original: \meaning#2}%
160 \typeout{\space\space* expected: \HyC@meaning#1}%
161 }

162 % *****
163 (/check)
164 (*package)

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

First we save the original meaning of ` and = in the token register \toks@, because we need the two characters in the macros \Hy@SetCatcodes and \Hy@RestoreCatcodes.

```
165 \begingroup
166 \@makeother`\`%
167 \@makeother\`=%
168 \edef\x{%
169   \edef\noexpand\x{%
170     \endgroup
171     \noexpand\toks@{%
172       \catcode 96=\noexpand\the\catcode`\noexpand`\`%
173       \catcode 61=\noexpand\the\catcode`\noexpand\`=%
174     }%
175   }%
176   \noexpand\x
177 }%
178 \x
179 \@makeother`\`
180 \@makeother\`=
```

\Hy@SetCatcodes

```
181 \def\Hy@SetCatcodes{%
182   \@makeother`\`%
183   \@makeother\`=%
184   \catcode`\$=3 %
185   \catcode`\&=4 %
186   \catcode`\^=7 %
187   \catcode`\_ =8 %
188   \@makeother\| %
189   \@makeother\:%
190   \@makeother\(%
191   \@makeother\)%
192   \@makeother\[ %
193   \@makeother\] %
194   \@makeother\/ %
195   \@makeother\! %
196   \@makeother\< %
197   \@makeother\> %
198   \@makeother\.%
199   \@makeother\;%
200   \@makeother\+ %
201   \@makeother\-%
202   \@makeother\" %
203   \@makeother\' %
204 }
```

\Hy@RestoreCatcodes

```
205 \begingroup
206 \def\x#1{\catcode`\noexpand#1=\the\catcode`#1\relax}%
207 \xdef\Hy@RestoreCatcodes{%
208   \the\toks@
209   \x\$%

```

```

210 \x\&%
211 \x\^%
212 \x\_%
213 \x\|%
214 \x\:%
215 \x\(%
216 \x\) %
217 \x\[%
218 \x\]%
219 \x\/%
220 \x\!%
221 \x\<%
222 \x\>%
223 \x\.%
224 \x\;%
225 \x\+%
226 \x\-%
227 \x\"%
228 \x\'%
229 }%
230 \endgroup

```

```
231 \Hy@SetCatcodes
```

It needs the December 95 release of L^AT_EX, because it uses `\protected@write`, and it defines commands in options; and the page setup internal code changed at that point. It'll probably break with the later releases!

Use package `hobsub-hyperref` for faster package loading.

```

232 \IfFileExists{hobsub-hyperref.sty}{%
233 \RequirePackage{hobsub-hyperref}[2011/01/30]%
234 }{}

235 \RequirePackage{ltxcmds}[2010/11/12]
236 \RequirePackage{ifpdf}[2006/02/20]
237 \RequirePackage{pdftexcmds}[2009/04/10]
238 \@ifpackagelater{pdftexcmds}{2010/11/04}{-}{-%
239 \ltx@ifUndefined{pdfdraftmode}{-%
240 \let\pdf@ifdraftmode\ltx@secondoftwo
241 }{-%
242 \ifpdf
243 \def\pdf@ifdraftmode{%
244 \ifnum\pdfdraftmode=\ltx@one
245 \expandafter\ltx@firstoftwo
246 \else
247 \expandafter\ltx@secondoftwo
248 \fi
249 }%
250 \else
251 \let\pdf@ifdraftmode\ltx@secondoftwo
252 \fi
253 }%
254 }

255 \RequirePackage{infwarerr}[2010/04/08]
256 \RequirePackage{keyval}[1997/11/10]
257 \RequirePackage{kvsetkeys}[2007/09/29]
258 \RequirePackage{kvdefinekeys}[2011/04/07]
259 \RequirePackage{pdfescape}[2007/11/11]
260 \RequirePackage{ifvtex}

```

```

261 \RequirePackage{ifxetex}[2006/08/21]
262 \RequirePackage{hycolor}
263 \RequirePackage{letltxmacro}[2008/06/13]
264 \RequirePackage{auxhook}[2009/12/14]
265 \def\Hy@Error{\@PackageError{hyperref}}
266 \def\Hy@Warning{\@PackageWarning{hyperref}}
267 \def\Hy@WarningNoLine{\@PackageWarningNoLine{hyperref}}
268 \def\Hy@Info{\@PackageInfo{hyperref}}
269 \def\Hy@InfoNoLine{\@PackageInfoNoLine{hyperref}}
270 \def\Hy@Message#1{%
271   \GenericWarning{%
272     (hyperref)\@spaces\@spaces\@spaces\@spaces
273   }{%
274     Package hyperref Message: #1\ltx@gobble
275   }%
276 }

```

4.2 Version check

\Hy@VersionChecked

```
277 \chardef\Hy@VersionChecked=0 %
```

\Hy@VersionCheck

```

278 \def\Hy@VersionCheck#1{%
279   \begingroup
280   \ltx@ifundefined{ver@hyperref.sty}{%
281     \Hy@Error{%
282       This should not happen!\MessageBreak
283       Missing hyperref version%
284     }\@ehd
285   }{%
286     \ltx@ifundefined{ver@#1}{%
287       \Hy@Error{%
288         This should not happen!\MessageBreak
289         Missing version of `#1'%
290       }\@ehd
291     }{%
292       \def\x##1##2##3{%
293         \expandafter\expandafter\expandafter\Hy@@VersionCheck
294         \expandafter\expandafter\expandafter##2%
295         \csname ver@##3\endcsname##1##1\@nil
296       }%
297       \x{ }\y{hyperref.sty}%
298       \x{ }\z{#1}%
299       \ifx\y\z
300       \else
301         \edef\a{#1}%
302         \edef\b{\HyOpt@CustomDriver.def}%
303         \ifx\a\b
304           \Hy@WarningNoLine{%
305             Version mismatch (custom driver)!\MessageBreak
306             * \y: hyperref.sty\MessageBreak
307             * \z: \a
308           }%
309         \else
310           \Hy@Error{%
311             Version mismatch!\MessageBreak

```

```

312     * \y: hyperref.sty\MessageBreak
313     * \z: \a
314     }\@ehd
315     \fi
316     \fi
317     }%
318     }%
319 \endgroup
320 \chardef\Hy@VersionChecked=1 %
321 }

```

\Hy@@VersionCheck

```

322 \def\Hy@@VersionCheck #1#2 #3 #4\@nil{%
323 \def#1{#2 #3}%
324 }

```

4.3 Checks with regular expressions

```

325 \ltx@ifundefined{pdfmatch}{%
326 \def\Hy@Match#1#2#3#4#5{%
327 }{%
328 \def\Hy@Match#1#2#3{%
329 \begingroup
330 \edef\~{\ltx@backslashchar\string^}%
331 \edef\.\{\ltx@backslashchar.}%
332 \edef\[\{\ltx@backslashchar[]}%
333 \edef\$\{\ltx@backslashchar$}%
334 \edef\(\{\ltx@backslashchar(}%
335 \edef\)\{\ltx@backslashchar)}%
336 \edef\|\{\ltx@backslashchar|}%
337 \edef\*\{\ltx@backslashchar*}%
338 \edef\+\{\ltx@backslashchar+}%
339 \edef\?\{\ltx@backslashchar?}%
340 \edef\{\{\ltx@backslashchar\ltx@leftbracechar}%
341 \edef\}\{\ltx@rightbracechar}%
342 \edef\\{\ltx@backslashchar\ltx@backslashchar}%
343 \let\ \ltx@space
344 \ifcase\pdfmatch#2{#3}{#1} %
345 \endgroup
346 \expandafter\ltx@secondoftwo
347 \or
348 \endgroup
349 \expandafter\ltx@firstoftwo
350 \else
351 \Hy@Warning{%
352 Internal error: Wrong pattern!\MessageBreak
353 --> #3 <--\MessageBreak
354 Pattern check ignored%
355 }%
356 \endgroup
357 \expandafter\ltx@firstoftwo
358 \fi
359 }%
360 \ltx@ifpackagelater{ltxcmds}{2010/09/11}{-}{-}{%
361 \begingroup
362 \lccode`0=`\{\relax
363 \lowercase{\endgroup

```

```

364   \def\ltx@leftbracechar{0}%
365   }%
366   \begingroup
367   \lccode`0=`\}\relax
368   \lowercase{\endgroup
369   \def\ltx@rightbracechar{0}%
370   }%
371 }%
372 }

```

4.4 Compatibility with format dumps

`\AfterBeginDocument` For use with pre-compiled formats, created using the `ldump` package, there needs to be 2 hooks for adding material delayed until `\begin{document}`. These are called `\AfterBeginDocument` and `\AtBeginDocument`. If `ldump` is not loaded, then a single hook suffices for normal L^AT_EX processing.

The default definition of `\AfterBeginDocument` cannot be done by `\let` because of problems with `xypic`.

```

373 \@ifundefined{AfterBeginDocument}{%
374   \def\AfterBeginDocument{\AtBeginDocument}%
375 }{}%

```

`\Hy@AtBeginDocument` For the case that package ‘hyperref’ is loaded using `\AtBeginDocument`, we have to wrap the calls of `\AtBeginDocument/\AfterBeginDocument` in `\AtEndOfPackage`. However, packages must be loaded in `\AtEndOfPackage` *before* package ‘kvoptions’ has to perform its option cleanup. Therefore we use a hook.

```

376 \def\Hy@AtBeginDocument{%
377   \ltx@LocalAppendToMacro\Hy@AtBeginDocumentHook
378 }

```

`\Hy@AtEndOfPackage`

```

379 \def\Hy@AtEndOfPackage{%
380   \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
381 }

```

`\Hy@AtBeginDocumentHook`

```

382 \let\Hy@AtBeginDocumentHook\ltx@empty

```

`\Hy@AtEndOfPackageHook`

```

383 \let\Hy@AtEndOfPackageHook\ltx@empty

```

Install the hook, before package ‘kvoptions’ is loaded.

```

384 \AtEndOfPackage{%
385   \Hy@AtEndOfPackageHook
386   \let\Hy@AtEndOfPackageHook\@undefined
387   \AfterBeginDocument{%
388     \Hy@AtBeginDocumentHook{}%
389     \let\Hy@AtBeginDocumentHook\@undefined
390   }%
391 }

```

Package `kvoptions` is used for processing options that are given as key value pairs. The package provides `\ProcessKeyvalOptions`, formerly known as `\ProcessOptionsWithKV`.

```

392 \RequirePackage{kvoptions}[2009/07/21]

```

4.5 Switches

```
393 \newif\ifHy@stoppedearly
394 \newif\ifHy@typexml
395 \newif\ifHy@activeanchor
396 \newif\ifHy@backref
397 \newif\ifHy@bookmarks
398 \newif\ifHy@bookmarksnumbered
399 \newif\ifHy@bookmarksopen
400 \newif\ifHy@breaklinks
401 \newif\ifHy@pdfcenterwindow
402 \newif\ifHy@CJKbookmarks
403 \newif\ifHy@colorlinks
404 \newif\ifHy@destlabel
405 \newif\ifHy@draft
406 \let\Hy@finaltrue\Hy@draftfalse
407 \let\Hy@finalfalse\Hy@drafttrue
408 \newif\ifHy@pdfescapeform
409 \newif\ifHy@hyperfigures
410 \newif\ifHy@pdfitwindow
411 \newif\ifHy@frenchlinks
412 \newif\ifHy@hyperfootnotes
413 \newif\ifHy@hyperindex
414 \newif\ifHy@hypertextnames
415 \newif\ifHy@implicit
416 \newif\ifHy@linktopage
417 \newif\ifHy@localanchorname
418 \newif\ifHy@pdfmenubar
419 \newif\ifHy@naturalnames
420 \newif\ifHy@nesting
421 \newif\ifHy@pdfnewwindowset
422 \newif\ifHy@pdfnewwindow
423 \newif\ifHy@ocgcolorlinks
424 \newif\ifHy@pageanchor
425 \newif\ifHy@pdfpagelabels
426 \newif\ifHy@pdfpagehidden
427 \newif\ifHy@pdfstring
428 \newif\ifHy@plainpages
429 \newif\ifHy@psize
430 \newif\ifHy@raiselinks
431 \newif\ifHy@seminarslides
432 \newif\ifHy@setpagesize
433 \newif\ifHy@texht
434 \newif\ifHy@psdextra
435 \newif\ifHy@pdftoolbar
436 \newif\ifHy@unicode
437 \newif\ifHy@pdfusetitle
438 \newif\ifHy@verbose
439 \let\Hy@debugtrue\Hy@verbosetrue
440 \let\Hy@debugfalse\Hy@verbosefalse
441 \newif\ifHy@pdfwindowui
442 \newif\ifHy@pdfdisplaydoctitle
443 \newif\ifHy@pdfa
```

Defaults for the switches are now set.

```
444 \Hy@backreffalse
445 \Hy@bookmarksnumberedfalse
446 \Hy@bookmarksopenfalse
```



```

447 \Hy@bookmarkstrue
448 \Hy@breaklinksfalse
449 \Hy@pdfcenterwindowfalse
450 \Hy@CJKbookmarksfalse
451 \Hy@destlabelfalse
452 \Hy@pdfescapeformfalse
453 \Hy@hyperfiguresfalse
454 \Hy@pdffitwindowfalse
455 \Hy@hyperfootnotesttrue
456 \Hy@hyperindextrue
457 \Hy@hypertextnamestrue
458 \Hy@implicittrue
459 \Hy@linktocpagefalse
460 \Hy@localanchornamefalse
461 \Hy@pdfmenubartrue
462 \Hy@naturalnamesfalse
463 \Hy@nestingfalse
464 \Hy@pdfnewwindowsetfalse
465 \Hy@pdfnewwindowfalse
466 \Hy@pageanchortrue
467 \Hy@pdfpagelabelstrue
468 \Hy@pdfpagehiddenfalse
469 \Hy@pdfstringfalse
470 \Hy@plainpagesfalse
471 \Hy@raiselinksfalse
472 \Hy@setpagesizetrue
473 \Hy@texhtfalse
474 \Hy@psdextrafalse
475 \Hy@pdftoolbartrue
476 \Hy@typexmlfalse
477 \Hy@unicodefalse
478 \Hy@pdfusetitlefalse
479 \Hy@verbosefalse
480 \Hy@pdfwindowuitrue
481 \Hy@pdfdisplaydoctitlefalse
482 \Hy@pdfafalse

```

5 Common help macros

\Hy@StepCount

```
483 \def\Hy@StepCount#1{\advance#1 by 1 }%
```

\Hy@GlobalStepCount

```
484 \def\Hy@GlobalStepCount#1{\global\advance#1 by 1 }%
```

```

485 \newdimen\@linkdim
486 \let\Hy@driver\ltx@empty
487 \let\MaybeStopEarly\relax
488 \newcount\Hy@linkcounter
489 \newcount\Hy@pagecounter
490 \Hy@linkcounter0
491 \Hy@pagecounter0

```

5.1 Macros for recursions

```

492 \let\Hy@ReturnEnd\@empty
493 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}

```

```
494 \long\def\Hy@ReturnAfterElseFiFiEnd#1\else#2\Hy@ReturnEnd{\fi\fi#1}
```

5.2 Babel's protection of shorthand characters

`\Hy@safe@activestru` Babel's switch setting commands cannot be used directly, because they can be undefined if babel is not loaded.

```
495 \def\Hy@safe@activestru{\csname @safe@activestru\endcsname}
496 \def\Hy@safe@activesfals{\csname @safe@activesfals\endcsname}
```

5.3 Coordinate transformations

At some places numbers in pdf units are expected (eg: FitBH, ...). The following macros perform the transformation from TeX units (pt) to PDF units (bp).

`\hypercalsbp` The user macro `\hypercalsbp` can be used, for example, inside option values:

```
pdfstartview={FitBH \hypercalsbp{\paperheight-\topmargin-1in}}
```

- It cannot be used inside `\usepackage`, because LaTeX expands the options before package `hyperref` is loaded and `\hypercalsbp` is defined.
- With e-TeX extensions an expandable implementation is very easy; `\hypercalsbp` can be used everywhere and is expanded at use.
- Without e-TeX's features `\hypercalsbp` cannot be implemented expandable (practically) and have to be supported by `\hypercalsbpdef`. Limitations:
 - Works only in options that use `\hypercalsbpdef` (currently only `pdfstartview`).
 - For calculations package `calc` has to be loaded.
 - The expansion of the argument is done at definition time.

Example (TeX):

```
\usepackage{calc}
\usepackage[...]{hyperref}
\hypersetup{
  pdfstartview={FitBH \hypercalsbp{\paperheight-\topmargin-1in
    -\headheight-\headsep}
}
```

`\hypercalsbp`

```
497 \begingroup\expandafter\expandafter\expandafter\endgroup
498 \expandafter\ifx\csname dimexpr\endcsname\relax
499   \def\hypercalsbpdef#1#2{%
500     \begingroup
501       \toks@{}%
502       \HyCal@scan#2\hypercalsbp\@nil
503     \expandafter\endgroup
504     \expandafter\def\expandafter#1\expandafter{\the\toks@}%
505   }%
506 \def\HyCal@scan#1\hypercalsbp#2\@nil{%
507   \toks@\expandafter{\the\toks@ #1}%
508   \ifx\#2\%
509     \else
510       \ltx@ReturnAfterFi{%
511         \HyCal@do#2\@nil
512       }%

```

```

513 \fi
514 }%
515 \def\HyCal@do#1#2\@nil{%
516 \@ifpackageloaded{calc}{}{%
517 \Hy@Warning{%
518 For calculations \string\hypercalcbp\space needs\MessageBreak
519 package calc or e-TeX%
520 }%
521 }%
522 \setlength{\dimen@}{#1}%
523 \setlength{\dimen@}{0.99626401\dimen@}%
524 \edef\x{%
525 \toks@{%
526 \the\toks@
527 \strip@pt\dimen@
528 }%
529 }\x
530 \HyCal@scan#2\@nil
531 }%
532 \else
533 \def\hypercalcbp#1{%
534 \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
535 }%
536 \def\hypercalcbpdef{\def}%
537 \fi

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

Naming convention: All internal commands that are only needed by `\pdfstringdef` are prefixed with `\HyPsd@`.

6.1 Description of PDF strings

The PDF specification defines several places to hold text strings (bookmark names, document information, text annotations, etc.). The PDF strings have following properties:

- They are surrounded by parentheses. The hexadecimal form is not supported.
- Like PostScript language strings they use the same escaping mechanism:

<code>\\</code>	the backslash itself
<code>\), \(\</code>	unbalanced parentheses
<code>\n, \r, \t, \b, \f</code>	special white space escape sequences
<code>\ddd</code>	octal character code <code>ddd</code>
- Strings are stored either in `PDFDocEncoding`, which is a superset of `ISO-Latin1` and is compatible with Unicode with character codes below 256, or in Unicode.

6.2 Definition of `\pdfstringdef`

The central macro for dealing with PDF strings is `\pdfstringdef`. It defines a command `#1` to be the result of the conversion from the string in `#2` to a le-

gal PDFDocEncoded string. Currently the definition is global, but this can be changed in the future.

Important: In \TeX 's view PDF strings are written to a file and are expanded only in its mouth. Stomach commands that cannot be expanded further aren't executed, they are written verbatim. But the PDF reader that reads such a string isn't a \TeX interpreter!

The macro `\pdfstringdef` consists of three main parts:

1. Preprocessing. Here the expansion is prepared. The encoding is set and many commands are redefined, so that they work appropriate.
2. Expansion. The \TeX string is expanded the first time to get a PDF string.
3. Postprocessing. The result of the expansion is checked and converted to the final form.

`\pdfstringdef` `\pdfstringdef` works on the tokens in `#2` and converts them to a PDF string as far as possible:

- The result should obey the rules of the PDF specification for strings.
- The string can safely processed by \TeX , because the tokens have only cat-codes 10 until 12.

The result is stored in the command token given in `#1`.

```
538 \def\pdfstringdef#1#2{%
```

Many redefinitions are needed, so all the work is done in a group.

```
539 \begingroup
```

6.2.1 Preprocessing

Octal escape sequences. To avoid problems with eight bit or non printable characters, the octal escape notation is supported. So most glyphs in the encoding definitions for PD1 and PU produce these octal escape sequences. All three octal digits have to be used:

- Wrong results are avoided, if digits follow that are not part of the octal sequence.
- Macros rely on the fact that the octal sequences always consist of three digits (vtex driver, Unicode support).

The escape sequences start with a backslash. By `\string` it will be printed. Therefore it is ensured that the \TeX escape character indeed prints as a normal backslash. Eventually this line can be removed, because this is standard \LaTeX behaviour.

```
540 \escapechar`\\%
```

From the view of \TeX a octal sequence consists of the command tokens `\0` until `\3` and two digits. For saving tokens `\0`, `\1`, `\2`, and `\3` are directly used without a preceding `\string` in the glyph definitions. This is done here locally by defining the `\0` until `\3` commands. So the user can use octal escape sequences directly, the disadvantage is that a previous definition of this short commands does not apply.

```
541 \edef\0{\string\0}%
```

```
542 \edef\1{\string\1}%
```

```
543 \edef\2{\string\2}%
```

```
544 \edef\3{\string\3}%
```

Setting font encoding. The unicode encoding uses `\8` and `\9` as marker for the higher byte. `\8` is an abbreviation for the higher bytes 0 until 7 that can be expressed by one digit. `\8` will be converted to `\00`. However `\9` only marks the next three digits as higher byte and will be removed later.

The encoding is set by `\enc@update` for optimizing reasons.

```

545 \ifHy@unicode
546 \edef\8{\string\8}%
547 \edef\9{\string\9}%
548 \fontencoding{PU}%
549 \HyPsd@UTFviii
550 \def\ifpdfstringunicode###1##2{##1}%
551 \else
552 \fontencoding{PD1}%
553 \def\ifpdfstringunicode###1##2{##2}%
554 \fi
555 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
556 \enc@update

```

Internal encoding commands. `\pdfstringdef` interpretes text strings which are not allowed to contain mathematical stuff. The text glyph commands will produce a warning, if called in math mode. But this warning disturbs while expanding. Therefore we check for math mode here, before `\@inmathwarn` will be disabled (see below).

```

557 \@inmathwarn\pdfstringdef

```

If a glyph is used, that isn't in the PD1/PU encoding there will be an infinite error loop, because the NFSS encoding stuff have to be expanded unprotected (`\edef`), so that the assignments of `\@changed@cmd` don't take place. To patch this behaviour I only found `\@inmathwarn` as a usable hook. While an `\edef` a warning message by `\@inmathwarn` or `\TextSymbolUnavailable` cannot be give out, so `\@inmathwarn` should be disabled. And with the help of it the assignments in `\@changed@cmd` can easily be caught (see below).

```

558 \let\@inmathwarn\HyPsd@inmathwarn

```

Unknown composite characters are built with `\add@accent`, so it is redefined to provide a warning.

```

559 \let\add@accent\HyPsd@add@accent

```

Commands that don't use NFSS directly. There are several commands that prints characters in the printable ASCII area that don't obey the NFSS, so they have to be redefined here. UF 29.09.2017: added a mapping for `\noboundary`, see issue #37 <https://github.com/ho-tex/hyperref/issues/37> No test for PU, if some definition for PD1 is added it will work too.

```

560 \let\{\textbraceleft
561 \let\}\textbraceright
562 \let\\\textbackslash
563 \let#\textnumbersign
564 \let$\textdollar
565 \let%\textpercent
566 \let&\textampersand
567 % \let~\textasciitilde
568 \let_\textunderscore
569 \let\P\textparagraph
570 \let\ldots\textellipsis
571 \let\dots\textellipsis

```

```

572 \ltx@ifundefined{textEncodingNoboundary}%
573 {}{\let\noboundary\textEncodingNoboundary}%

```

Newline `\newline` or `\\` do not work in bookmarks, in text annotations they should expand to `\r`. In pdf strings `\\` stands for a backslash. Therefore the commands are disabled now. The user can redefine them for a result what he want:

backslash: `\pdfstringdefDisableCommands{\let\\\textbackslash}`

new line: `\pdfstringdefDisableCommands{\let\\\textCR}`

disabled: `\pdfstringdefDisableCommands{\let\\\empty}`

At any case, however, the optional argument or the star cannot be scanned in a 100% sure manner.

```

574 \def\\\pdfstringdefWarn\\}%
575 \def\newline{\pdfstringdefWarn\newline}%

```

Logos. Because the box shifting used in the \TeX logo does not work while writing to a file, the standard \TeX logos are redefined.

```

576 \def\TeX{\TeX}%
577 \def\LaTeX{La\TeX}%
578 \def\LaTeXe{%
579   \LaTeX2%
580   \ifHy@unicode\textepsilon\else e\fi
581 }%
582 \def\eTeX{%
583   \ifHy@unicode\textepsilon\else e\fi
584   -\TeX%
585 }%
586 \def\SliTeX{Sli\TeX}%
587 \def\MF{Metafont}%
588 \def\MP{Metapost}%

```

Standard font commands. Because font changes do not work, the standard font switching commands are disabled.

```

589 \let\fontencoding\@gobble
590 \let\fontfamily\@gobble
591 \let\fontseries\@gobble
592 \let\fontshape\@gobble
593 \let\fontsize\@gobbletwo
594 \let\selectfont\@empty
595 \let\usefont\@gobblefour
596 \let\emph\@firstofone
597 \let\textnormal\@firstofone
598 \let\textrm\@firstofone
599 \let\textsf\@firstofone
600 \let\texttt\@firstofone
601 \let\textbf\@firstofone
602 \let\textmd\@firstofone
603 \let\textit\@firstofone
604 \let\textsc\@firstofone
605 \let\textsl\@firstofone
606 \let\textup\@firstofone
607 \let\normalfont\@empty

```

```

608 \let\rmfamily\@empty
609 \let\ssfamilly\@empty
610 \let\ttfamily\@empty
611 \let\bfseries\@empty
612 \let\mdseries\@empty
613 \let\itshape\@empty
614 \let\scshape\@empty
615 \let\slshape\@empty
616 \let\upshape\@empty
617 \let\em\@empty
618 \let\rm\@empty
619 \let\Huge\@empty
620 \let\LARGE\@empty
621 \let\Large\@empty
622 \let\footnotesize\@empty
623 \let\huge\@empty
624 \let\large\@empty
625 \let\normalsize\@empty
626 \let\scriptsize\@empty
627 \let\small\@empty
628 \let\tiny\@empty
629 \let\mathversion\@gobble
630 \let\phantom\@gobble
631 \let\vphantom\@gobble
632 \let\hphantom\@gobble

```

Package pifont.

```

633 \let\ding\HyPsd@ding
634 \let\Cube\HyPsd@DieFace
635 %* \HyPsd@DieFace -> \epsdice (epsdice)
636 %* \HyPsd@DieFace -> \fcdice (hhcount)

```

Environments.

```

637 \def\begin#1{\csname#1\endcsname}%
638 \def\end#1{\csname end#1\endcsname}%

```

Package color.

```

639 \def\textcolor##1##-{\@secondoftwo}%

```

Upper- and lowercase.

```

640 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
641 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

Support of math commands without prefix text. This is controlled by option “psdextra” and only activated with Unicode PDF strings.

```

642 \ifHy@psdextra
643 \ifHy@unicode
644 \csname psdmapshortnames\endcsname
645 \csname psdaliasnames\endcsname
646 \fi
647 \fi

```

Package babel. Wherever “naturalnames” is used, disable `\textlatin` (from Babel 3.6k). Thanks to Felix Neubauer (Email: Felix.Neubauer@gmx.net).

```

648 \let\foreignlanguage\@secondoftwo
649 \let\textlatin\@firstofone
650 \ltx@ifundefined{language@group}{-}{%
651   \let\bbl@info\@gobble
652   \csname HyPsd@babel@\language@group\endcsname
653 }%
654 \HyPsd@GreekPatch
655 \HyPsd@SpanishPatch
656 \HyPsd@RussianPatch
657 \HyPsd@BabelPatch
658 \let\@safe@activetrue\relax
659 \let\@safe@activesfalse\relax

  Disable \cyr, used in russianb.ldf.
660 \let\cyr\relax

  Redefine \es@roman, used in spanish.ldf.
661 \let\es@roman\@Roman

```

Package german.

```

662 \let\glqq\textglqq
663 \let\grqq\textgrqq
664 \let\glq\textglq
665 \let\grq\textgrq
666 \let\flqq\textflqq
667 \let\frqq\textfrqq
668 \let\flq\textflq
669 \let\frq\textfrq

```

Package french. The support is deferred, because it needs `\GenericError` to be disabled (see below).

Package FrenchPro. This package uses:

```

\if@mid@expandable{not fully expandable code}{fully expandable
code}
670 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

671 \HyPsd@AMSclassfix

```

Redefinition of `\hspace` `\hspace` don’t work in bookmarks, the following fix tries to set a space if the argument is a positive length.

```

672 \let\hspace\HyPsd@hspace

```

Commands of referencing and indexing systems. Some \LaTeX commands that are legal in `\section` commands have to be disabled here.

```

673 \let\label\@gobble
674 \let\index\@gobble
675 \let\glossary\@gobble
676 \let\href\HyPsd@href
677 \let\@mkboth\@gobbletwo

```


The `\ref` and `\pageref` is much more complicate because of their star form.

```
678 \let\ref\HyPsd@ref
679 \let\pageref\HyPsd@pageref
680 \let\nameref\HyPsd@nameref
681 \let\autoref\HyPsd@autoref
```

Miscellaneous commands.

```
682 \let\leavevmode\@empty
683 \let\mbox\@empty
\halign causes error messages because of the template character #.
684 \def\halign{\pdfstringdefWarn\halign\@gobble}%
685 \let\ignorespaces\HyPsd@ignorespaces
686 \let\Hy@SectionAnchorHref\@gobble
687 \let\ensuremath\@firstofone
```

Patch for cjk bookmarks.

```
688 \HyPsd@CJKhook
```

User hook. The switch `\Hy@pdfstring` is turned on. So user commands can detect that they are processed not to be typesetted within \TeX 's stomach, but to be expanded by the mouth to give a PDF string. At this place before interpreting the string in `#2` additional redefinitions can be added by the hook `\pdfstringdefPreHook`.

The position in the middle of the redefinitions is a compromise: The user should be able to provide his own (perhaps better) redefinitions, but some commands should have their original meaning, because they can be used in the hook (`\bgroup`, or `\@protected@testopt`, and `\@ifnextchar` for `\renewcommand`).

```
689 \Hy@pdfstringtrue
690 \pdfstringdefPreHook
```

Spaces. For checking the token of the string, spaces must be masked, because they cannot be caught by undelimited arguments.

```
691 \HyPsd@LetUnexpandableSpace\space
692 \HyPsd@LetUnexpandableSpace\%
693 \HyPsd@LetUnexpandableSpace-%
694 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package `xspace`.

```
695 \ltx@ifundefined{@xspace}{%
696 \let\xspace\HyPsd@ITALCORR
697 }{%
698 \let\xspace\HyPsd@XSPACE
699 }%
700 \let\/\HyPsd@ITALCORR
701 \let\bgroup\/%
702 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
703 \let\discretionary\@gobbletwo
```

\@ifstar is defined in L^AT_EX as follows:

```
\def\@ifstar#1{\@ifnextchar *{\@firstoftwo{#1}}}
```

\@ifnextchar doesn't work, because it uses stomach commands like \let and \futurelet. But it doesn't break. Whereas \@firstoftwo{#1} gives an error message because \@firstoftwo misses its second argument.

A mimicry of \@ifnextchar only with expandible commands would be very extensive and the result would be only an approximation. So here a cheaper solution follows in order to get rid of the error message at least:

```
704 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
```

```
705 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
```

```
706 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
```

```
707 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

```
708 \let\@protected@testopt@xargs\HyPsd@protected@testopt
```

6.2.2 Expansion

There are several possibilities to expand tokens within L^AT_EX:

\protected@edef: The weakest form isn't usable, because it does not expand the font encoding commands. They are made robust and protect themselves.

\csname: First the string is expanded within a \csname and \endcsname. Then the command name is converted to characters with catcode 12 by \string and the first escape character removed by \@gobble. This method has the great *advantage* that stomach tokens that aren't allowed in PDF strings are detected by T_EX and reported as errors in order to force the user to write correct things. So he get no wrong results by forgetting the proofreading of his text. But the *disadvantage* is that old wrong code cannot processed without errors. Mainly the error message is very cryptic and for the normal user hard to understand. T_EX provides no way to catch the error caused by \csname or allows to support the user with a descriptive error message. Therefore the experienced user had to enable this behaviour by an option **exactdef** in previous versions less or equal 6.50.

\edef This version uses this standard form for expansion. It is stronger than L^AT_EX's \protected@edef. So the font encoding mechanism works and the glyph commands are converted to the correct tokens for PDF strings with the definitions of the PD1 encoding. Because the protecting mechanism of L^AT_EX doesn't work within an \edef, there are situations thinkable where code can break. For example, assignments and definitions aren't performed and so undefined command errors or argument parsing errors can occur. But this is only a compatibility problem with old texts. Now there are possibilities to write code that gives correct PDF strings (see \texorpdfstring). In the most cases unexpandable commands and tokens (math shift, grouping characters) remains. They don't cause an error like with \csname. However a PDF reader isn't T_EX, so these tokens are viewed verbatim. So this version detects them now, and removes them with an descriptive warning for the user. As additional features xspace support is possible and grouping characters can be used without problems, because they are removed silently.

Generic messages. While expanding via `\xdef` the `\Generic...` messages don't work and causes problems (error messages, invalid `.out` file). So they are disabled while expanding and removed silently, because a user warning would be too expensive (memory and runtime, `\pdfstringdef` is slow enough).

```
709 \begingroup
710 \let\GenericError@gobblefour
711 \let\GenericWarning@gobbletwo
712 \let\GenericInfo@gobbletwo
```

Package french. This fix only works, if `\GenericError` is disabled.

```
713 \ifx\nofrenchguillemets\@undefined
714 \else
715 \nofrenchguillemets
716 \fi
```

Definition commands and expansion. Redefining the defining commands (see sec. 6.5.12). The original meaning of `\xdef` is saved in `\Hy@temp`.

```
717 \let\Hy@temp\xdef
718 \let\def\HyPsd@DefCommand
719 \let\gdef\HyPsd@DefCommand
720 \let\edef\HyPsd@DefCommand
721 \let\xdef\HyPsd@DefCommand
722 \let\futurelet\HyPsd@LetCommand
723 \let\let\HyPsd@LetCommand
724 \Hy@temp#1{#2}%
725 \endgroup
```

6.2.3 Postprocessing

If the string is empty time can be saved by omitting the postprocessing process.

```
726 \ifx#1\@empty
727 \else
```

Protecting spaces and removing grouping characters. In order to check the tokens we must separate them. This will be done with `TEX`'s argument parsing. With this method we must the following item takes into account, that makes makes things a little more complicate:

- `TEX` does not accept a space as an undelimited argument, it cancels space tokens while looking for an undelimited argument. Therefore we must protect the spaces now.
- An argument can be a single token or a group of many tokens. And within curly braces tokens aren't find by `TEX`'s argument scanning process. Third curly braces as grouping characters cannot be expanded further, so they don't vanish by the string expansion above. So these characters with catcode 1 and 2 are removed in the following and replaced by an marker for the xspace support.
- `TEX` silently removes the outmost pair of braces of an argument. To prevent this on unwanted places, in the following the character `|` is appended to the string to make an outer brace to an inner one.

First the top level spaces are protected by replacing. Then the string is scanned to detect token groups. Each token group will now be space protected and again scanned for another token groups.

```

728 \HyPsd@ProtectSpaces#1%
729 \let\HyPsd@String\@empty
730 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
731 \global\let#1\HyPsd@String

```

Check tokens. After removing the spaces and the grouping characters the string now should only consists of the following tokens/catcodes:

- 0 command names with start with an escape character.
- 3 math shift
- 4 alignment tabs
- 6 parameter, but this is unlikely.
- 7 superscript
- 8 subscript
- 11 letter
- 12 other
- 13 commands that are active characters.

After `\HyPsd@CheckCatcodes` the command `\HyPsd@RemoveMask` is reused to remove the group protection character `|`. This character is needed to ensure that the string at least consists of one token if `\HyPsd@CheckCatcodes` is called.

Because of internal local assignments and tabulars group braces are used.

```

732 \let\HyPsd@SPACEOPTI\relax
733 {%
734 \let\HyPsd@String\@empty
735 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
736 \global\let#1\HyPsd@String
737 }%
738 \expandafter\HyPsd@RemoveMask\expandafter
739 |\expandafter\@empty#1\HyPsd@End#1%

```

`\HyPsd@CheckCatcodes` should no have removed the tokens with catcode 3, 4, 7, and 8. Because a parameter token (6) would cause to many errors before, there should now be only tokens with catcodes 11 or 12. So I think there is no need for a safety step like:

```
\xdef#1{\expandafter\strip@prefix\meaning#1}%
```

Looking for wrong glyphs. The case that glyphs aren't defined in the PD1 encoding is caught above in such a way, that the glyph name and a marker is inserted into the string. Now we can safely scan the string for this marker and provide a descriptive warning.

```

740 \expandafter
741 \HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
742 \let\HyPsd@String\@empty
743 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
744 \global\let#1\HyPsd@String

```

Backslash. The double backslash disturbs parsing octal sequences, for example in an string like `abc\\051` the sequence `\051` is detected although the second `\` belongs to the first backslash.

```
745 \HyPsd@StringSubst{\}{\textbackslash}#1%
```

Spaces. All spaces have already the form `\040`. The last postprocessing step will be an optimizing of the spaces, so we already introduce already the necessary command `\HyPsd@SPACEOPTI`. But first it is defined to be `\relax` in order to prevent a too early expansion by an `\edef`. Secondly a `\relax` serves as a marker for a token that is detected by `\xspace`.

The code of `frenchb.lda` can produce an additional space before `\guillemotright`, because `\lastskip` and `\unskip` do not work. Therefore it is removed here.

```

746 \ifHy@unicode
747 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
748 \HyPsd@SPACEOPTI#1%
749 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
750 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
751 {\HyPsd@SPACEOPTI\80\273}#1%
752 \else
753 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
754 \expandafter\HyPsd@Subst\expandafter{%
755 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
756 \string\273}\HyPsd@SPACEOPTI\273}#1%
757 \fi

```

Right parenthesis. Also `\xspace` detects a right parenthesis. For the `\xspace` support and the following parenthesis check the different parenthesis notations `)`, `\)`, and `\051` are converted to one type `\)` and before `\HyPsd@empty` with the meaning of `\relax` is introduced for `\xspace`. By redefining to `\@empty` `\HyPsd@empty` can easily removed later.

```

758 \ifHy@unicode
759 \HyPsd@StringSubst{\}){\80\051}#1%
760 \HyPsd@Subst){\80\051}#1%
761 \let\HyPsd@empty\relax
762 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
763 {\HyPsd@empty\80\051}#1%
764 \else
765 \HyPsd@StringSubst{\}){\051}#1%
766 \HyPsd@Subst){\051}#1%
767 \let\HyPsd@empty\relax
768 \HyPsd@StringSubst{\051}{\HyPsd@empty\string\})}#1%
769 \fi

```

Support for package `xspace`. `\xspace` looks for the next token and decides if it expands to a space or not. Following tokens prevent its transformation to a space: Beginning and end of group, handled above by replacing by an italic correction, several punctuation marks, a closing parentheses, and several spaces.

Without package `xspace` there are tokens with catcode 11 and 12, `\HyPsd@empty` and `\HyPsd@SPACEOPTI`. With package `xspace` marker for the italic correction `\/` and `\xspace` come with. In the package `xspace` case the two markers are replaced by commands and an `\edef` performs the `\xspace` processing.

In the opposite of the original `\xspace` `\HyPsd@xspace` uses an argument instead of a `\futurelet`, so we have to provide such an argument, if `\HyPsd@xspace` comes last. Because `\HyPsd@Subst` with several equal tokens (`--`) needs a safe last token, in both cases the string gets an additional `\HyPsd@empty`.

```

770 \expandafter\HyPsd@Subst\expandafter{\}/\HyPsd@empty#1%
771 \ltx@ifundefined{@xspace}{%
772 }{%

```

```

773     \let\HyPsd@xspace\relax
774     \expandafter\HyPsd@Subst\expandafter
775       {\HyPsd@XSPACE}\HyPsd@xspace#1%
776     \let\HyPsd@xspace\HyPsd@doxspace
777   }%
778   \xdef#1{#1\HyPsd@empty}%

```

Ligatures. T_EX forms ligatures in its stomach, but the PDF strings are treated only by T_EX's mouth. The PDFDocEncoding contains some ligatures, but the current version 3 of the AcrobatReader lacks the fi and fl glyphs, and the Linux version lacks the emdash and endash glyphs. So the necessary code is provided here, but currently disabled, hoping that version 4 of the AcrobatReader is better. To break the ligatures the user can use an empty group, because it leads to an insertion of an \HyPsd@empty. If this ligature code will be enabled some day, then the italic correction should also break the ligatures. Currently this occurs only, if package xspace is loaded.

Since newer AcrobatReader versions now show the en- and emdash in a correct way (AR7/Linux, AR8/Linux), the substitution code for them is enabled starting with version 6.78l.

```

779     \HyPsd@Subst{---}\textemdash#1%
780     \HyPsd@Subst{--}\textendash#1%
781 %     \HyPsd@Subst{fi}\textfi#1%
782 %     \HyPsd@Subst{fl}\textfl#1%
783     \HyPsd@Subst{!}\textexclamdown#1%
784     \HyPsd@Subst{?}\textquestiondown#1%

```

With the next \edef we get rid of the token \HyPsd@empty.

```

785     \let\HyPsd@empty\@empty

```

Left parentheses. Left parentheses are now converted to safe forms to avoid problems with unmatched ones (\(with PDFDocEncoding, the octal sequence with Unicode.

An optimization is possible. Matched parentheses can be replaced by a () pair. But this code is removed to save T_EX memory and time.

```

786     \ifHy@unicode
787       \HyPsd@StringSubst\(\textparenleft#1%
788       \HyPsd@Subst(\textparenleft#1%
789     \else
790       \HyPsd@StringSubst\({\050}#1%
791       \HyPsd@Subst({\050}#1%
792       \HyPsd@StringSubst{\050}{\string\}#1%
793     \fi

```

Optimizing spaces. Spaces are often used, but they have a very long form \040. They are converted back to real spaces, but not all, so that no space follows after another. In the bookmark case several spaces are written to the .out file, but if the entries are read back, several spaces are merged to a single one.

With Unicode the spaces are replaced by their octal sequences.

```

794     \ifHy@unicode
795       \edef\HyPsd@SPACEOPTI{\80\040}%
796     \else
797       \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
798     \fi
799     \xdef#1{#1\@empty}%
800   \fi

```

Converting to Unicode. At last the eight bit letters have to be converted to Unicode, the masks \8 and \9 are removed and the Unicode marker is added.

```

801 \endgroup
802 \begingroup
803 \ifHy@unicode
804 \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

805 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
806 \ltx@ifundefined{StringEncodingConvertTest}{%
807 }{%
808 \EdefUnescapeString\HyPsd@temp#1%
809 \ifxetex
810 \let\HyPsd@UnescapedString\HyPsd@temp
811 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
812 {utf16be}{ascii-print}{%
813 \EdefEscapeString\HyPsd@temp\HyPsd@temp
814 \global\let#1\HyPsd@temp
815 \HyPsd@EscapeTeX#1%
816 \Hy@unicodefalse
817 }{%
818 \HyPsd@ToBigChars#1%
819 \HyPsd@EscapeTeX#1%
820 }%
821 \else
822 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
823 {utf16be}{pdfdoc}{%
824 \EdefEscapeString\HyPsd@temp\HyPsd@temp
825 \global\let#1\HyPsd@temp
826 \HyPsd@EscapeTeX#1%
827 \Hy@unicodefalse
828 }{}}%
829 \fi
830 }%
831 \fi
832 \fi
833 \HyPsd@XeTeXBigCharsfalse

```

User hook. The hook \pdfstringdefPostHook can be used for the purpose to postprocess the string further.

```

834 \pdfstringdefPostHook#1%
835 \endgroup
836 }

```

\Hy@pdfstringdef

```

837 \def\Hy@pdfstringdef#1#2{%
838 \pdfstringdef\Hy@gtemp{#2}%
839 \let#1\Hy@gtemp
840 }

```

6.3 Encodings

6.3.1 XeTeX

```

841 \edef\Hy@temp{\catcode0=\the\catcode0\relax}
842 \catcode\z@=12 %

```

```

843 \ifxetex
844 \expandafter\@firstofone
845 \else
846 \let\HyPsd@XeTeXBigCharstrue\@empty
847 \let\HyPsd@XeTeXBigCharsfalse\@empty
848 \expandafter\@gobble
849 \fi
850 {%
851 \newif\ifHyPsd@XeTeXBigChars
852 \def\HyPsd@XeTeXBigCharsfalse{%
853 \global\let\ifHyPsd@XeTeXBigChars\iffalse
854 }%
855 \def\HyPsd@XeTeXBigCharstrue{%
856 \global\let\ifHyPsd@XeTeXBigChars\ifftrue
857 }%
858 \def\HyPsd@ToBigChars#1{%
859 \ifHyPsd@XeTeXBigChars
860 \EdefEscapeHex\HyPsd@UnescapedString{%
861 \expandafter\@gobbletwo\HyPsd@UnescapedString
862 }%
863 \begingroup
864 \toks@{ }%
865 \escapechar=92\relax
866 \let\x\HyPsd@ToBigChar
867 \expandafter\HyPsd@ToBigChar\HyPsd@UnescapedString
868 \relax\relax\relax\relax\relax\relax\relax\relax
869 \edef\x{%
870 \endgroup
871 \gdef\noexpand#1{\the\toks@}%
872 }%
873 \x
874 \fi
875 }%
876 \def\HyPsd@ToBigChar#1#2#3#4{%
877 \ifx\relax#1\relax
878 \let\x\relax
879 \else
880 \count@=#1#2#3#4\relax
881 \let\y\@empty
882 \lccode\z@=\count@
883 \ifnum\count@=40 % (
884 \let\y\@backslashchar
885 \else
886 \ifnum\count@=41 % )
887 \let\y\@backslashchar
888 \else
889 \ifnum\count@=92 % backslash
890 \let\y\@backslashchar
891 \else
892 \ifnum\count@=10 % newline
893 \edef\y##1{\string\n}%
894 \else
895 \ifnum\count@=13 % carriage return
896 \edef\y##1{\string\r}%
897 \fi
898 \fi
899 \fi

```



```

900   \fi
901   \fi
902   \lowercase{%
903     \toks@\expandafter{%
904       \the\expandafter\toks@
905       \y
906       ^^@%
907     }%
908   }%
909   \fi
910   \x
911 }%
912 }
913 \Hy@temp

```

6.3.2 Workaround for package linguex

```

914 \@ifpackageloaded{linguex}{%
915   \let\HyLinguex@OrgB\b
916   \let\HyLinguex@OrgC\c
917   \let\HyLinguex@OrgD\d
918   \def\HyLinguex@Restore{%
919     \let\b\HyLinguex@OrgB
920     \let\c\HyLinguex@OrgC
921     \let\d\HyLinguex@OrgD
922   }%
923   \Hy@AtEndOfPackage{%
924     \pdfstringdefDisableCommands{%
925       \ltx@ifundefined{oldb}{\let\b\oldb}%
926       \ltx@ifundefined{oldc}{\let\c\oldc}%
927       \ltx@ifundefined{oldd}{\let\d\oldd}%
928     }%
929   }%
930 }{%
931   \let\HyLinguex@Restore\relax
932 }%

```

6.3.3 Catcodes saving and restoring for .def files

\Hy@SaveCatcodeSettings

```

933 \def\Hy@SaveCatcodeSettings#1{%
934   \expandafter\edef\csname Hy@cat@#1\endcsname{%
935     \endlinechar=\the\endlinechar\relax
936     \catcode32 \the\catcode32\relax % (space)
937     \catcode34 \the\catcode34\relax % "
938     \catcode35 \the\catcode35\relax % #
939     \catcode37 \the\catcode37\relax % (percent)
940     \catcode40 \the\catcode40\relax % (
941     \catcode41 \the\catcode41\relax % )
942     \catcode42 \the\catcode42\relax % *
943     \catcode46 \the\catcode46\relax % .
944     \catcode58 \the\catcode58\relax % :
945     \catcode60 \the\catcode60\relax % <
946     \catcode61 \the\catcode61\relax % =
947     \catcode62 \the\catcode62\relax % >
948     \catcode64 \the\catcode64\relax % @
949     \catcode91 \the\catcode91\relax % [
950     \catcode92 \the\catcode92\relax % \
951     \catcode93 \the\catcode93\relax % ]

```

```

952 \catcode123 \the\catcode123\relax % {
953 \catcode124 \the\catcode124\relax % |
954 \catcode125 \the\catcode125\relax % }
955 }%
956 \endlinechar=-1 %
957 \catcode32 10 % (space)
958 \catcode34 12 % "
959 \catcode35 6 % #
960 \catcode37 14 % (percent)
961 \catcode40 12 % (
962 \catcode41 12 % )
963 \catcode42 12 % *
964 \catcode46 12 % .
965 \catcode58 12 % :
966 \catcode60 12 % <
967 \catcode61 12 % =
968 \catcode62 12 % >
969 \catcode91 12 % [
970 \catcode92 0 % \
971 \catcode93 12 % ]
972 \catcode123 1 % {
973 \catcode124 12 % |
974 \catcode125 2 % }
975 \makeatletter
976 }

```

\Hy@RestoreCatcodeSettings

```

977 \def\Hy@RestoreCatcodeSettings#1{%
978 \csname Hy@cat@#1\endcsname
979 \expandafter\let\csname Hy@cat@#1\endcsname\relax
980 }

```

6.3.4 PD1 encoding

The PD1 encoding implements the PDFDocEncoding for use with L^AT_EX 2_ε's NFSS. Because the informational strings are not set by T_EX's typesetting mechanism but for interpreting by the PDF reader, the glyphs of the PD1 encoding are implemented to be safely written to a file (PDF output file, .out file).

The PD1 encoding can be specified as an option of the 'fontenc' package or loaded here. It does not matter what font family is selected, as T_EX does not process it anyway. So use CM.

```

981 \@ifundefined{T@PD1}{%
982 \Hy@SaveCatcodeSettings{pd1}%
983 \input{pd1enc.def}%
984 \Hy@RestoreCatcodeSettings{pd1}%
985 \HyLinguex@Restore
986 }-{}
987 \DeclareFontFamily{PD1}{pdf}{}
988 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
989 \DeclareFontSubstitution{PD1}{pdf}{m}{n}

```

6.3.5 PU encoding

The PU encoding implements the Unicode encoding for use with L^AT_EX's NFSS. Because of large memory requirements the encoding file for Unicode support is only loaded, if option unicode is specified as package option.

`\HyPsd@LoadUnicode` Because the file `puenc.def` takes a lot of memory, the loading is defined in the macro `\HyPsd@LoadUnicode` called by the package option `unicode`.

```

990 \def\HyPsd@LoadUnicode{%
991   \@ifundefined{T@PU}{%
992     \Hy@SaveCatcodeSettings{pu}%
993     \input{puenc.def}%
994     \Hy@RestoreCatcodeSettings{pu}%
995     \HyLinguex@Restore
996   }{}%
997   \DeclareFontFamily{PU}{pdf}{}%
998   \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
999   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
1000 \HyPsd@LoadExtra
1001 \let\HyPsd@LoadUnicode\relax
1002 }

```

`\HyPsd@LoadExtra`

```

1003 \def\HyPsd@LoadExtra{%
1004   \ifHy@psdextra
1005     \ltx@iffileloaded{puenc.def}{%
1006       \Hy@SaveCatcodeSettings{psdextra}%
1007       \input{psdextra.def}%
1008       \Hy@RestoreCatcodeSettings{psdextra}%
1009       \let\HyPsd@LoadExtra\relax
1010     }{}%
1011   \fi
1012 }

```

6.4 Additional user commands

6.4.1 `\texorpdfstring`

`\texorpdfstring` While expanding the string in `\pdfstringdef` the switch `\ifHy@pdfstring` is set. This is used by the full expandible macro `\texorpdfstring`. It expects two arguments, the first contains the string that will be set and processed by \TeX 's stomach, the second contains the replacement for PDF strings.

```

1013 \def\texorpdfstring{%
1014   \ifHy@pdfstring
1015     \expandafter\@secondoftwo
1016   \else
1017     \expandafter\@firstoftwo
1018   \fi
1019 }

```

6.4.2 Hooks for `\pdfstringdef`

`\pdfstringdefPreHook` Default definition of the hooks for `\pdfstringdef`. The construct `\@ifundefined` with `\let` is a little bit faster than `\providecommand`.

```

\pdfstringdefPostHook
1020 \@ifundefined{pdfstringdefPreHook}{%
1021   \let\pdfstringdefPreHook\@empty
1022 }{}
1023 \@ifundefined{pdfstringdefPostHook}{%
1024   \let\pdfstringdefPostHook\@gobble
1025 }{}

```

`\pdfstringdefDisableCommands` In `\pdfstringdefPreHook` the user can add code that is executed before the string, that have to be converted by `\pdfstringdef`, is expanded. So replacements for

problematic macros can be given. The code in `\pdfstringdefPreHook` should not be replaced perhaps by an `\renewcommand`, because a previous meaning gets lost.

Macro `\pdfstringdefDisableCommands` avoids this, because it reuses the old meaning of the hook and appends the new code to `\pdfstringdefPreHook`, e.g.:

```
\pdfstringdefDisableCommands{%
  \let~\textasciitilde
  \def\url{\pdfstringdefWarn\url}%
  \let\textcolor\@gobble
}%
```

In the argument of `\pdfstringdefDisableCommands` the character `@` can be used in command names. So it is easy to use useful L^AT_EX commands like `\@gobble` or `\@firstofone`.

```
1026 \def\pdfstringdefDisableCommands{%
1027   \begingroup
1028     \makeatletter
1029     \HyPsd@DisableCommands
1030 }
```

`\HyPsd@DisableCommands`

```
1031 \long\def\HyPsd@DisableCommands#1{%
1032   \ltx@GlobalAppendToMacro\pdfstringdefPreHook{#1}%
1033   \endgroup
1034 }
```

(Partial) fix for bug in `frenchb.ldf` 2010/08/21 v2.5a that destroys `\pdfstringdefDisableCommands` after usage in `\AtBeginDocument`.

```
1035 \let\HyPsd@pdfstringdefDisableCommands\pdfstringdefDisableCommands
1036 \AtBeginDocument{%
1037   \@ifundefined{pdfstringdefDisableCommands}{%
1038     \let\pdfstringdefDisableCommands\HyPsd@pdfstringdefDisableCommands
1039   }{}%
1040 }
```

`\pdfstringdefWarn` The purpose of `\pdfstringdefWarn` is to produce a warning message, so the user can see, that something can go wrong with the conversion to PDF strings.

The prefix `\<-` is added to the token. `\noexpand` protects the probably undefined one during the first expansion step. Then `\HyPsd@CheckCatcodes` can detect the not allowed token, `\HyPsd@CatcodeWarning` prints a warning message, after `\HyPsd@RemovePrefix` has removed the prefix.

`\pdfstringdefWarn` is intended for document authors or package writers, examples for use can be seen in the definition of `\HyPsd@ifnextchar` or `\HyPsd@protected@testopt`.

```
1041 \def\pdfstringdefWarn#1{%
1042   \expandafter\noexpand\csname<->\string#1\endcsname
1043 }
```

6.5 Help macros for expansion

6.5.1 `\ignorespaces`

`\HyPsd@ignorespaces` With the help of a trick using `\romannumeral` the effect of `\ignorespaces` can be simulated a little, In a special case using an alphabetic constant `\romannumeral` eats an optional space. If the constant is zero, then the `\romannumeral` expression

vanishes. The following macro uses this trick twice, thus `\HyPsd@ignorespaces` eats up to two following spaces.

```

1044 \begingroup
1045 \catcode0=12 %
1046 \def\x{\endgroup
1047 \def\HyPsd@ignorespaces{%
1048 \romannumeral\expandafter`\expandafter^^@%
1049 \romannumeral`^^@%
1050 }%
1051 }%
1052 \x

```

6.5.2 Babel languages

Since version 2008/03/16 v3.8j babel uses inside `\AtBeginDocument`:

```

\pdfstringdefDisableCommands{%
\languageshorthands{system}%
}

```

As consequence the shorthands are shown in the bookmarks, not its result. Therefore `\languageshorthands` is disabled before the user hook. If there is a need to use the command, then `\HyOrg@languageshorthands` can be used inside `\pdfstringdefDisableCommands`.

```

1053 \def\HyPsd@BabelPatch{%
1054 \let\HyOrg@languageshorthands\languageshorthands
1055 \let\languageshorthands\HyPsd@LanguageShorthands
1056 }
1057 \begingroup\expandafter\expandafter\expandafter\endgroup
1058 \expandafter\ifx\csname pdf@strcmp\endcsname\relax
1059 \let\HyPsd@langshort@system\@empty
1060 \def\HyPsd@LanguageShorthands#1{%
1061 \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
1062 \HyPsd@langshort@system
1063 \expandafter\@gobble
1064 \else
1065 \expandafter\@firstofone
1066 \fi
1067 {%
1068 \HyOrg@languageshorthands{#1}%
1069 }%
1070 }%
1071 \else
1072 \def\HyPsd@LanguageShorthands#1{%
1073 \ifnum\pdf@strcmp{#1}{system}=\z@
1074 \expandafter\@gobble
1075 \else
1076 \expandafter\@firstofone
1077 \fi
1078 {%
1079 \HyOrg@languageshorthands{#1}%
1080 }%
1081 }%
1082 \fi
1083 \def\Hy@temp{%
1084 \@ifpackageloaded{babel}{%
1085 \@ifpackagelater{babel}{2008/03/16}{%

```

```

1086 \let\Hy@temp\@empty
1087 }{%
1088 \def\HyPsd@BabelPatch{%
1089 \let\HyOrg@languageshorthands\languageshorthands
1090 }%
1091 }%
1092 }{}%
1093 }
1094 \Hy@temp
1095 \expandafter\Hy@AtBeginDocument\expandafter{\Hy@temp}
1096 \newif\ifHy@next

Nothing to do for english.
1097 \ltx@ifundefined{danish@sh@"@sel}{}{%
1098 \def\HyPsd@babel@danish{%
1099 \declare@shorthand{danish}{"}{|}%
1100 \declare@shorthand{danish}{"}{~}{-}%
1101 }%
1102 }
1103 \ltx@ifundefined{dutch@sh@"@sel}{}{%
1104 \def\HyPsd@babel@dutch{%
1105 \declare@shorthand{dutch}{"}{|}%
1106 \declare@shorthand{dutch}{"}{~}{-}%
1107 }%
1108 }
1109 \ltx@ifundefined{finnish@sh@"@sel}{}{%
1110 \def\HyPsd@babel@finnish{%
1111 \declare@shorthand{finnish}{"}{|}%
1112 }%
1113 }
1114 \ltx@ifundefined{french@sh@:@sel}{}{%
1115 \def\HyPsd@babel@frenchb{%
1116 \def\guill@spacing{ }%
1117 }%
1118 }
1119 \ltx@ifundefined{german@sh@"@sel}{}{%
1120 \def\HyPsd@babel@german{%
1121 \declare@shorthand{german}{"}{f}{f}%
1122 \declare@shorthand{german}{"}{|}%
1123 \declare@shorthand{german}{"}{~}{-}%
1124 }%
1125 }
1126 \ltx@ifundefined{macedonian@sh@"@sel}{}{%
1127 \def\HyPsd@babel@macedonian{%
1128 \declare@shorthand{macedonian}{"}{|}%
1129 \declare@shorthand{macedonian}{"}{~}{-}%
1130 }%
1131 }{}
1132 \ltx@ifundefined{ngerman@sh@"@sel}{}{%
1133 \def\HyPsd@babel@ngerman{%
1134 \declare@shorthand{ngerman}{"}{|}%
1135 \declare@shorthand{ngerman}{"}{~}{-}%
1136 }%
1137 }
1138 \ltx@ifundefined{portuges@sh@"@sel}{}{%
1139 \def\HyPsd@babel@portuges{%
1140 \declare@shorthand{portuges}{"}{|}%

```

```

1141 }%
1142 }
1143 \ltx@ifundefined{russian@sh@"@sel}{-}{-%
1144 \def\HyPsd@babel@russian{%
1145 \declare@shorthand{russian}{"}{|}{-%
1146 \declare@shorthand{russian}{"}{~}{-}{-%
1147 }%
1148 }
1149 \ltx@ifundefined{slovene@sh@"@sel}{-}{-%
1150 \def\HyPsd@babel@slovene{%
1151 \declare@shorthand{slovene}{"}{|}{-%
1152 }%
1153 }
Nested quoting environments are not supported (<<, >>).
1154 \ltx@ifundefined{spanish@sh@>@sel}{-}{-%
1155 \def\HyPsd@babel@spanish{%
1156 \declare@shorthand{spanish}{<<}{\guillemotleft}%
1157 \declare@shorthand{spanish}{>>}{\guillemotright}%
1158 \declare@shorthand{spanish}{=}={-}{-%
1159 \declare@shorthand{spanish}{"}{~}{-}{-%
1160 \declare@shorthand{spanish}{"}{!}{\textexclamdown}%
1161 \declare@shorthand{spanish}{"}{?}{\textquestiondown}%
1162 }%
1163 }
1164 \ltx@ifundefined{swedish@sh@"@sel}{-}{-%
1165 \def\HyPsd@babel@swedish{%
1166 \declare@shorthand{swedish}{"}{|}{-%
1167 \declare@shorthand{swedish}{"}{~}{-}{-%
1168 }%
1169 }
1170 \ltx@ifundefined{ukrainian@sh@"@sel}{-}{-%
1171 \def\HyPsd@babel@ukrainian{%
1172 \declare@shorthand{ukrainian}{"}{|}{-%
1173 \declare@shorthand{ukrainian}{"}{~}{-}{-%
1174 }%
1175 }
1176 \ltx@ifundefined{usorbian@sh@"@sel}{-}{-%
1177 \def\HyPsd@babel@usorbian{%
1178 \declare@shorthand{usorbian}{"}{f}{f}%
1179 \declare@shorthand{usorbian}{"}{|}{-%
1180 }%
1181 }
1182 \ltx@ifundefined{greek@sh@\string~@sel}{-%
1183 \let\HyPsd@GreekPatch@empty
1184 }-%
1185 \def\HyPsd@GreekPatch{%
1186 \let\greeknumeral\HyPsd@greeknumeral
1187 \let\Greeknatural\HyPsd@Greeknatural
1188 }%
1189 }
1190 \def\HyPsd@greeknumeral#1{%
1191 \HyPsd@GreekNum\@firstoftwo{#1}%
1192 }
1193 \def\HyPsd@Greeknatural#1{%
1194 \HyPsd@GreekNum\@secondoftwo{#1}%
1195 }
1196 \def\HyPsd@GreekNum#1#2{%

```

```

1197 \ifHy@unicode
1198 \ifnum#2<\@ne
1199 \@arabic{#2}%
1200 \else
1201 \ifnum#2<1000000 %
1202 \HyPsd@@GreekNum#1{#2}%
1203 \else
1204 \@arabic{#2}%
1205 \fi
1206 \fi
1207 \else
1208 \@arabic{#2}%
1209 \fi
1210 }
1211 \def\HyPsd@@GreekNum#1#2{%
1212 \ifnum#2<\@m
1213 \ifnum#2<10 %
1214 \expandafter\HyPsd@GreekNumI
1215 \expandafter\@gobble\expandafter#1\number#2%
1216 \else
1217 \ifnum#2<100 %
1218 \expandafter\HyPsd@GreekNumII
1219 \expandafter\@gobble\expandafter#1\number#2%
1220 \else
1221 \expandafter\HyPsd@GreekNumIII
1222 \expandafter\@gobble\expandafter#1\number#2%
1223 \fi
1224 \fi
1225 \ifnum#2>\z@
1226 \textnumeralsigngreek
1227 \fi
1228 \else
1229 \ifnum#2<\@M
1230 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
1231 \else
1232 \ifnum#2<100000 %
1233 \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
1234 \else
1235 \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
1236 \fi
1237 \fi
1238 \fi
1239 }
1240 \def\HyPsd@GreekNumI#1#2#3{%
1241 #1{%
1242 \ifnum#3>\z@
1243 \textnumeralsignlowergreek
1244 \fi
1245 }%
1246 \expandafter#2%
1247 \ifcase#3 %
1248 {}{}%
1249 \or\textalpha\textAlpha
1250 \or\textbeta\textBeta
1251 \or\textgamma\textGamma
1252 \or\textdelta\textDelta
1253 \or\textepsilon\textEpsilon

```



```

1254 \or\textstigmagreek\textStigmagreek
1255 \or\textzeta\textZeta
1256 \or\texteta\textEta
1257 \or\texttheta\textTheta
1258 \else
1259  {}{}%
1260 \fi
1261 }
1262 \def\HyPsd@GreekNumII#1#2#3#4{%
1263 #1{%
1264 \ifnum#3>\z@
1265 \textnumeralsignlowergreek
1266 \fi
1267 }%
1268 \expandafter#2%
1269 \ifcase#3 %
1270 {}{}%
1271 \or\textiota\textIota
1272 \or\textkappa\textKappa
1273 \or\textlambda\textLambda
1274 \or\textmu\textMu
1275 \or\textnu\textNu
1276 \or\textxi\textXi
1277 \or\textomicron\textOmicron
1278 \or\textpi\textPi
1279 \or\textkoppagreek\textKoppagreek
1280 \else
1281 {}{}%
1282 \fi
1283 \HyPsd@GreekNumI#1#2#4%
1284 }
1285 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1286 #1{%
1287 \ifnum#3>\z@
1288 \textnumeralsignlowergreek
1289 \fi
1290 }%
1291 \expandafter#2%
1292 \ifcase#3 %
1293 {}{}%
1294 \or\textrho\textRho
1295 \or\textsigma\textSigma
1296 \or\texttau\textTau
1297 \or\textupsilon\textUpsilon
1298 \or\textphi\textPhi
1299 \or\textchi\textChi
1300 \or\textpsi\textPsi
1301 \or\textomega\textOmega
1302 \or\textsampigreek\textSampigreek
1303 \else
1304 {}{}%
1305 \fi
1306 \HyPsd@GreekNumII#1#2#4#5%
1307 }
1308 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1309 \HyPsd@GreekNumI\@firstofone#1#2%
1310 \HyPsd@@@GreekNum#1{#3#4#5}%

```

```

1311 }
1312 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
1313 \HyPsd@GreekNumII\@firstofone#1#2#3%
1314 \HyPsd@@@GreekNum#1{#4#5#6}%
1315 }
1316 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1317 \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1318 \HyPsd@@@GreekNum#1{#5#6#7}%
1319 }

1320 \def\HyPsd@SpanishPatch{%
1321 \ltx@ifundefined{es@save@dot}{%
1322 }{%
1323 \let\.\es@save@dot
1324 }%
1325 }

```

Shorthand "-" of 'russianb.ldf' is not expandable, therefore it is disabled and replaced by -.

```

1326 \def\HyPsd@RussianPatch{%
1327 \ltx@ifundefined{russian@sh@"@-@}{%
1328 }{%
1329 \@namedef{russian@sh@"@-@}{-}%
1330 }%
1331 }

```

6.5.3 CJK patch

```
1332 \RequirePackage{intcalc}[2007/09/27]
```

\HyPsd@CJKhook

```

1333 \def\HyPsd@CJKhook{%
1334 \ltx@ifpackageloaded{CJK}{%
1335 \let\CJK@kern\relax
1336 \let\CJKkern\relax
1337 \let\CJK@CJK\relax
1338 \ifHy@CJKbookmarks
1339 \HyPsd@CJKhook@bookmarks
1340 \fi
1341 \HyPsd@CJKhook@unicode
1342 }{%
1343 }

```

6.5.4 CJK bookmarks

\HyPsd@CJKhook

Some internal commands of package cjk are redefined to avoid error messages. For a rudimental support of CJK bookmarks the active characters are redefined so that they print themselves.

After preprocessing of Big5 encoded data the following string for a double-byte character is emitted:

```
^^7f<arg1>^^7f<arg2>^^7f
```

<arg1> is the first byte in the range (always > 0x80); <arg2> is the second byte in decimal notation ($\geq 0x40$).

```

1344 \begingroup
1345 \catcode"7F=\active
1346 \toks@{%

```

```

1347 \let\CJK@ignorespaces\empty
1348 \def\CJK@char#1{\@gobbletwo}%
1349 \let\CJK@charx\@gobblefour
1350 \let\CJK@punctchar\@gobblefour
1351 \def\CJK@punctcharx#1{\@gobblefour}%
1352 \catcode"7F=\active
1353 \def^^7f#1^^7f#2^^7f{%
1354   \string #1\HyPsd@DecimalToOctal{#2}%
1355 }%
1356 % ... ?
1357 \ifHy@unicode
1358   \def\Hy@cjku{\80}%
1359   \else
1360     \let\Hy@cjku\@empty
1361   \fi
1362   \HyPsd@CJKActiveChars
1363 }%
1364 \count@=127 %
1365 \@whilenum\count@<255 \do{%
1366   \advance\count@ by 1 %
1367   \lccode`~=\count@
1368   \lowercase{%
1369     \toks@\expandafter{\the\toks@ ~}%
1370   }%
1371 }%
1372 \toks@\expandafter{\the\toks@ !}%
1373 \xdef\HyPsd@CJKhook@bookmarks{%
1374   \the\toks@
1375 }%
1376 \endgroup

```

`\HyPsd@CJKActiveChars` The macro `\HyPsd@CJKActiveChars` is only defined to limit the memory consumption of `\HyPsd@CJKhook`.

```

1377 \def\HyPsd@CJKActiveChars#1{%
1378   \ifx#1!%
1379     \let\HyPsd@CJKActiveChars\relax
1380   \else
1381     \edef#1{\noexpand\Hy@cjku\string#1}%
1382   \fi
1383   \HyPsd@CJKActiveChars
1384 }

```

`\HyPsd@DecimalToOctal` A character, given by the decimal number is converted to a PDF character.

```

1385 \def\HyPsd@DecimalToOctal#1{%
1386   \ifcase #1 %
1387     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1388     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1389     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1390     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1391     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1392     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1393     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1394     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1395     \or @\or A\or B\or C\or D\or E\or F\or G%
1396     \or H\or I\or J\or K\or L\or M\or N\or O%
1397     \or P\or Q\or R\or S\or T\or U\or V\or W%
1398     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%

```

```

1399 \or \140\or a\or b\or c\or d\or e\or f\or g%
1400 \or h\or i\or j\or k\or l\or m\or n\or o%
1401 \or p\or q\or r\or s\or t\or u\or v\or w%
1402 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1403 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1404 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1405 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1406 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1407 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1408 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1409 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1410 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1411 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1412 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1413 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1414 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1415 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1416 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1417 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1418 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1419 \fi
1420 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1421 \def\HyPsd@CJKhook@unicode{%
1422 \let\Unicode\HyPsd@CJK@Unicode
1423 \let\CJKnumber\HyPsd@CJKnumber
1424 \let\CJKdigits\HyPsd@CJKdigits
1425 }

```

\HyPsd@CJK@Unicode

```

1426 \def\HyPsd@CJK@Unicode#1#2{%
1427 \ifnum#1<256 %
1428 \HyPsd@DecimalToOctalFirst{#1}%
1429 \HyPsd@DecimalToOctalSecond{#2}%
1430 \else
1431 \933%
1432 \expandafter\expandafter\expandafter\HyPsd@HighA
1433 \intcalcDiv{#1}{4}!%
1434 \933%
1435 \ifcase\intcalcMod{#1}{4} %
1436 4\or 5\or 6\or 7%
1437 \fi
1438 \HyPsd@DecimalToOctalSecond{#2}%
1439 \fi
1440 }

1441 \def\HyPsd@HighA#1!{%
1442 \expandafter\expandafter\expandafter\HyPsd@HighB
1443 \IntCalcDiv#1!64!!%
1444 \expandafter\expandafter\expandafter\HyPsd@HighD
1445 \IntCalcMod#1!64!!%
1446 }
1447 \def\HyPsd@HighB#1!{%
1448 \expandafter\expandafter\expandafter\HyPsd@HighC

```

```

1449 \IntCalcDec#1!%!%
1450 }
1451 \def\HyPsd@HighC#1!{%
1452 \IntCalcDiv#1!4!%
1453 \@backslashchar
1454 \IntCalcMod#1!4!%
1455 }
1456 \def\HyPsd@HighD#1!{%
1457 \ifcase\IntCalcDiv#1!8! %
1458 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1459 \fi
1460 \ifcase\IntCalcMod#1!8! %
1461 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1462 \fi
1463 }
1464 \def\HyPsd@DecimalToOctalFirst#1{%
1465 \9%
1466 \ifcase#1 %
1467 000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1468 \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1469 \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1470 \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1471 \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1472 \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1473 \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1474 \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1475 \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1476 \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1477 \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1478 \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1479 \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1480 \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1481 \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1482 \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1483 \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1484 \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1485 \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1486 \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1487 \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1488 \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1489 \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1490 \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1491 \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1492 \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1493 \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1494 \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1495 \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1496 \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1497 \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1498 \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1499 \fi
1500 }
1501 \def\HyPsd@DecimalToOctalSecond#1{%
1502 \ifcase #1 %
1503 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1504 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1505 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%

```

```

1506 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1507 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1508 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1509 \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1510 \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1511 \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1512 \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1513 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1514 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1515 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1516 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1517 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1518 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1519 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1520 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1521 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1522 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1523 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1524 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1525 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1526 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1527 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1528 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1529 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1530 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1531 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1532 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1533 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1534 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1535 \fi
1536 }

1537 \def\HyPsd@CJKnumber#1{%
1538 \ifnum#1<\z@
1539 \CJK@minus
1540 \expandafter\HyPsd@@CJKnumber\expandafter{\number-\number#1}%
1541 \else
1542 \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1543 \fi
1544 }

1545 \def\HyPsd@@CJKnumber#1{%
1546 \ifcase#1 %
1547 \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1548 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1549 \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1550 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1551 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1552 \CJK@ten\CJK@nine
1553 \else
1554 \ifnum#1<10000 %
1555 \HyPsd@CJKnumberFour#1!\@empty{20}%
1556 \@empty
1557 \else
1558 \ifnum#1<100000000 %
1559 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1560 \IntCalcDiv#1!10000!%
1561 !{ }{20}%
1562 \CJK@tenthousand

```

```

1563     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1564     \IntCalcMod#1!10000!%
1565     !\CJK@zero{10}%
1566     \@empty
1567     \else
1568     \expandafter\HyPsd@CJKnumberLarge
1569     \number\IntCalcDiv#1!100000000!\expandafter!%
1570     \number\IntCalcMod#1!100000000!!%
1571     \fi
1572     \fi
1573     \fi
1574 }
1575 \def\HyPsd@CJKnumberLarge#1!#2!{%
1576   \HyPsd@CJKnumberFour#1!{#20}%
1577   \CJK@hundredmillion
1578   \ifnum#2=\z@
1579   \else
1580     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1581     \IntCalcDiv#2!10000!%
1582     !\CJK@zero{10}%
1583     \CJK@tenthousand
1584     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1585     \IntCalcMod#2!10000!%
1586     !\CJK@zero{10}%
1587     \@empty
1588     \fi
1589 }
1590 \def\HyPsd@CJKnumberFour#1!#2#3{%
1591   \ifnum#1=\z@
1592     \expandafter\@gobble
1593   \else
1594     \ifnum#1<1000 %
1595       #2%
1596       \HyPsd@CJKnumberThree#1!{#3}%
1597     \else
1598       \HyPsd@@CJKnumber{\IntCalcDiv#1!1000!}%
1599       \CJK@thousand
1600       \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1601       \IntCalcMod#1!1000!%
1602       !\CJK@zero{10}%
1603     \fi
1604   \fi
1605 }
1606 \def\HyPsd@CJKnumberThree#1!#2#3{%
1607   \ifnum#1=\z@
1608   \else
1609     \ifnum#1<100 %
1610       #2%
1611       \HyPsd@CJKnumberTwo#1!{#3}%
1612     \else
1613       \HyPsd@@CJKnumber{\IntCalcDiv#1!100!}%
1614       \CJK@hundred
1615       \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1616       \IntCalcMod#1!100!%
1617       !\CJK@zero{10}%
1618     \fi
1619   \fi

```

```

1620 }
1621 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1622 \ifnum#1=\z@
1623 \else
1624 \ifnum#1<#3 %
1625 #2%
1626 \HyPsd@@CJKnumber{#1}%
1627 \else
1628 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1629 \CJK@ten
1630 \ifnum\IntCalcMod#1!10!=\z@
1631 \else
1632 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1633 \fi
1634 \fi
1635 \fi
1636 }

1637 \def\HyPsd@CJKdigits#1{%
1638 \ifx*#1\relax
1639 \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1640 \else
1641 \HyPsd@@CJKdigits\CJK@null{#1}%
1642 \fi
1643 }

1644 \def\HyPsd@@CJKdigits#1#2{%
1645 \ifx\#2\%
1646 \else
1647 \HyPsd@@@CJKdigits#1#2\@nil
1648 \fi
1649 }%

1650 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1651 \HyPsd@CJKdigit#1{#2}%
1652 \ifx\#3\%
1653 \expandafter\@gobble
1654 \else
1655 \expandafter\@firstofone
1656 \fi
1657 }%
1658 \HyPsd@@@CJKdigits#1#3\@nil
1659 }%

1660 }

1661 \def\HyPsd@CJKdigit#1#2{%
1662 \ifcase#2 %
1663 #1\or
1664 \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1665 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1666 \fi
1667 }

```

6.5.6 \@inmathwarn-Patch

`\HyPsd@inmathwarn` The patch of `\@inmathwarn` is needed to get rid of the infinite error loop with glyphs of other encodings (see the explanation above). Potentially the patch is dangerous, if the code in `ltoutenc.dtx` changes. Checked with $\text{\LaTeX} 2_{\epsilon}$ versions [1998/06/01] and [1998/12/01]. I expect that versions below [1995/12/01] don't work.

To understand the patch easier, the original code of `\@current@cmd` and `\@changed@cmd` follows (L^AT_EX 2_ε release [1998/12/01]). In the normal case `\pdfstringdef` is executed in a context where `\protect` has the meaning of `\@typesetprotect (= \relax)`.

```

\def\@current@cmd#1{%
  \ifx\protect\@typeset@protect
    \@inmathwarn#1%
  \else
    \noexpand#1\expandafter\@gobble
  \fi}
\def\@changed@cmd#1#2{%
  \ifx\protect\@typeset@protect
    \@inmathwarn#1%
    \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
      \expandafter\ifx\csname?\string#1\endcsname\relax
        \expandafter\def\csname?\string#1\endcsname{%
          \TextSymbolUnavailable#1%
        }%
      \fi
      \global\expandafter\let
        \csname\cf@encoding\string#1\endcsname
        \csname?\string#1\endcsname
      \fi
      \csname\cf@encoding\string#1%
        \expandafter\endcsname
    \else
      \noexpand#1%
    \fi}
\gdef\TextSymbolUnavailable#1{%
  \@latex@error{%
    Command \protect#1 unavailable in encoding \cf@encoding%
  }\@eha}
\def\@inmathwarn#1{%
  \ifmmode
    \@latex@warning{Command \protect#1 invalid in math mode}%
  \fi}

1668 \def\HyPsd@inmathwarn#1#2{%
1669   \ifx#2\expandafter
1670     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1671       \HyPsd@GLYPHERR
1672       \expandafter\@gobble\string#1%
1673     >%
1674     \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1675   \else
1676     \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1677   \fi
1678 \else
1679   \expandafter#2%
1680 \fi
1681 }
1682 \def\HyPsd@GobbleFiFi#1\fi#2\fi{%
1683 \def\HyPsd@EndWithElse#1\else{ \else}

\HyPsd@add@accent
1684 \def\HyPsd@add@accent#1#2{%
1685   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%

```

```
1686 #2%
1687 }%
```

6.5.7 Unexpandable spaces

`\HyPsd@LetUnexpandableSpace` In `\HyPsd@@ProtectSpaces` the space tokens are replaced by not expandable commands, that work like spaces:

- So they can be caught by undelimited arguments.
- And they work in number, dimension, and skip assignments.

These properties are used in `\HyPsd@CheckCatcodes`.

```
1688 \def\HyPsd@LetUnexpandableSpace#1{%
1689 \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1690 }
```

`\HyPsd@UnexpandableSpace` `\HyPsd@UnexpandableSpace` is used in `\HyPsd@@ProtectSpaces`. In `\yPsd@@ProtectSpaces` the space tokens are replaced by unexpandable commands `\HyPsd@UnexpandableSpace`, but that have the effect of spaces.

```
1691 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace
```

6.5.8 Marker for commands

`\HyPsd@XSPACE` `\HyPsd@ITALCORR` `\HyPsd@GLYPHERR` Some commands and informations cannot be utilized before the string expansion and the checking process. Command names are filtered out, so we need another way to transport the information: An unusual `#` with catcode 12 marks the beginning of the extra information.

```
1692 \edef\HyPsd@XSPACE{\string#\string X}
1693 \edef\HyPsd@ITALCORR{\string#\string I}
1694 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 `\hspace` fix

`\HyPsd@hspace`

```
1695 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

`\HyPsd@@hspace` `\HyPsd@@hspace` checks whether `\hspace` is called in its star form.

```
1696 \def\HyPsd@@hspace#1*#2\END{%
1697 \ifx\#2\%
1698 \HyPsd@hspacetest{#1}%
1699 \else
1700 \expandafter\HyPsd@hspacetest
1701 \fi
1702 }
```

`\HyPsd@hspacetest` `\HyPsd@hspacetest` replaces the `\hspace` by a space, if the length is greater than zero.

```
1703 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1704 \ltx@ifundefined{tocsection}{%
1705   \let\HyPsd@AMSclassfix\relax
1706 }{%
1707   \def\HyPsd@AMSclassfix{%
1708     \let\tocpart\HyPsd@tocsection
1709     \let\tocchapter\HyPsd@tocsection
1710     \let\tocappendix\HyPsd@tocsection
1711     \let\tocsection\HyPsd@tocsection
1712     \let\tocsubsection\HyPsd@tocsection
1713     \let\tocsubsubsection\HyPsd@tocsection
1714     \let\tocparagraph\HyPsd@tocsection
1715   }%
1716   \def\HyPsd@tocsection#1#2#3{%
1717     \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1718     #3%
1719   }%
1720 }
```

6.5.11 Reference commands

`\HyPsd@href`

```
1721 \def\HyPsd@href#1#{\@secondoftwo}
```

`\HyPsd@ref` Macro `\HyPsd@ref` calls the macro `\HyPsd@@ref` for star checking. The same methods like in `\HyPsd@hspace` is used.

```
1722 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%
```

`\HyPsd@@ref` Macro `\HyPsd@@ref` checks if a star is present.

```
1723 \def\HyPsd@@ref#1*#2\END{%
1724   \ifx\#2\%
1725     \HyPsd@@@ref{#1}%
1726   \else
1727     \expandafter\HyPsd@@@ref
1728   \fi
1729 }%
```

`\HyPsd@@@ref` `\HyPsd@@@ref` does the work and extracts the first argument.

```
1730 \def\HyPsd@@@ref#1{%
1731   \expandafter\ifx\csname r@#1\endcsname\relax
1732     ??%
1733   \else
1734     \expandafter\expandafter\expandafter
1735     \@car\csname r@#1\endcsname\@nil
1736   \fi
1737 }
```

`\HyPsd@pageref` Macro `\HyPsd@pageref` calls the macro `\HyPsd@@pageref` for star checking. The same methods like in `\HyPsd@hspace` is used.

```
1738 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}
```

`\HyPsd@@pageref` Macro `\HyPsd@@pageref` checks if a star is present.

```
1739 \def\HyPsd@@pageref#1*#2\END{%
1740   \ifx\#2\%
1741     \HyPsd@@@pageref{#1}%
1742   \else
1743     \expandafter\HyPsd@@@pageref
```

```
1744 \fi
1745 }
```

`\HyPsd@@@pageref` `\HyPsd@@@pageref` does the work and extracts the second argument.

```
1746 \def\HyPsd@@@pageref#1{%
1747 \expandafter\ifx\csname r@#1\endcsname\relax
1748 ??%
1749 \else
1750 \expandafter\expandafter\expandafter\expandafter
1751 \expandafter\expandafter\expandafter\@car
1752 \expandafter\expandafter\expandafter\@gobble
1753 \csname r@#1\endcsname{}\@nil
1754 \fi
1755 }
```

`\HyPsd@nameref` Macro `\HyPsd@nameref` calls the macro `\HyPsd@@nameref` for star checking. The same methods like in `\HyPsd@hspace` is used.

```
1756 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}
```

`\HyPsd@@nameref` Macro `\HyPsd@@nameref` checks if a star is present.

```
1757 \def\HyPsd@@nameref#1*#2\END{%
1758 \ifx\#2\%
1759 \HyPsd@@@nameref{#1}%
1760 \else
1761 \expandafter\HyPsd@@@nameref
1762 \fi
1763 }
```

`\HyPsd@@@nameref` `\HyPsd@@@nameref` does the work and extracts the third argument.

```
1764 \def\HyPsd@@@nameref#1{%
1765 \expandafter\ifx\csname r@#1\endcsname\relax
1766 ??%
1767 \else
1768 \expandafter\expandafter\expandafter\expandafter
1769 \expandafter\expandafter\expandafter\@car
1770 \expandafter\expandafter\expandafter\@gobbletwo
1771 \csname r@#1\endcsname{}\@nil
1772 \fi
1773 }
```

`\HyPsd@autoref` Macro `\HyPsd@autoref` calls the macro `\HyPsd@@autoref` for star checking. The same methods like in `\HyPsd@hspace` is used.

```
1774 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}
```

`\HyPsd@@autoref` Macro `\HyPsd@@autoref` checks if a star is present.

```
1775 \def\HyPsd@@autoref#1*#2\END{%
1776 \ifx\#2\%
1777 \HyPsd@@@autoref{#1}%
1778 \else
1779 \expandafter\HyPsd@@@autoref
1780 \fi
1781 }
```

`\HyPsd@@@autoref` `\HyPsd@@@autoref` does the work and extracts the second argument.

```
1782 \def\HyPsd@@@autoref#1{%
1783 \expandafter\ifx\csname r@#1\endcsname\relax
```

```

1784   ??%
1785   \else
1786   \expandafter\expandafter\expandafter\HyPsd@autorefname
1787     \csname r@#1\endcsname{}{}{}%\@nil
1788   \expandafter\expandafter\expandafter
1789   \@car\csname r@#1\endcsname\@nil
1790   \fi
1791 }

```

`\HyPsd@autorefname` At least a basic definition for getting the `\autorefname` name.

```

1792 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1793   \ifx\\#4\\%
1794   \else
1795     \HyPsd@@autorefname#4.\@nil
1796   \fi
1797 }

```

`\HyPsd@@autorefname`

```

1798 \def\HyPsd@@autorefname#1.#2\@nil{%
1799   \ltx@ifundefined{#1autorefname}{%
1800     \ltx@ifundefined{#1name}{%
1801       }{%
1802         \csname#1name\endcsname\space
1803       }%
1804     }{%
1805       \csname#1autorefname\endcsname\space
1806     }%
1807 }

```

6.5.12 Redefining the defining commands

Definitions aren't allowed, because they aren't executed in an only expanding context. So the command to be defined isn't defined and can perhaps be undefined. This would cause TeX to stop with an error message. With a deep trick it is possible to define commands in such a context: `\csname` does the job, it defines the command to be `\relax`, if it has no meaning.

Active characters cannot be defined with this trick. It is possible to define all undefined active characters (perhaps that they have the meaning of `\relax`). To avoid side effects this should be done in `\pdfstringdef` shortly before the `\xdef` job. But checking and defining all possible active characters of the full range (0 until 255) would take a while. `\pdfstringdef` is slow enough, so this isn't done.

`\HyPsd@DefCommand` and `\HyPsd@LetCommand` expands to the commands `\<def>-command` and `\<let>-command` with the meaning of `\def` and `\let`. So it is detected by `\HyPsd@CheckCatcodes` and the command name `\<def>-command` or `\<let>-command` should indicate a forbidden definition command.

The command to be defined is converted to a string and back to a command name with the help of `\csname`. If the command is already defined, `\noexpand` prevents a further expansion, even though the command would expand to legal stuff. If the command don't have the meaning of `\relax`, `\HyPsd@CheckCatcodes` will produce a warning. (The command itself can be legal, but the warning is legitimate because of the position after a defining command.)

The difference between `\HyPsd@DefCommand` and `\HyPsdLetCommand` is that the first one also cancels this arguments, the parameter and definition text. The right side of the `\let` commands cannot be canceled with an undelimited parameter because of a possible space token after `\futurelet`.

To avoid unmached `\if...` tokens, the cases `\let\if...\iftrue` and `\let\if...\iffalse` are checked and ignored.

```

\HyPsd@DefCommand
\HyPsd@LetCommand 1808 \begingroup
1809 \def\x#1#2{%
1810 \endgroup
1811 \let#1\def
1812 \def\HyPsd@DefCommand##1##2###{%
1813 #1%
1814 \expandafter\noexpand
1815 \csname\expandafter\@gobble\string##1\@empty\endcsname
1816 \@gobble
1817 }%
1818 \let#2\let
1819 \def\HyPsd@@LetCommand##1{%
1820 \expandafter\ifx\csname##1\expandafter\endcsname
1821 \csname iftrue\endcsname
1822 \pdfstringdefWarn\let
1823 \expandafter\@gobble
1824 \else
1825 \expandafter\ifx\csname##1\expandafter\endcsname
1826 \csname iffalse\endcsname
1827 \pdfstringdefWarn\let
1828 \expandafter\expandafter\expandafter\@gobble
1829 \else
1830 #2%
1831 \expandafter\noexpand
1832 \csname##1\expandafter\expandafter\expandafter\endcsname
1833 \fi
1834 \fi
1835 }%
1836 }%
1837 \expandafter\x\csname <def>-command\expandafter\endcsname
1838 \csname <let>-command\endcsname
1839 \def\HyPsd@LetCommand#1{%
1840 \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1841 \expandafter\expandafter\expandafter{%
1842 \expandafter\@gobble\string#1\@empty
1843 }%
1844 }

```

6.5.13 `\ifnextchar`

`\HyPsd@ifnextchar` In `\pdfstringdef \@ifnextchar` is disabled via a `\let` command to save time. First a warning message is given, then the three arguments are canceled. `\@ifnextchar` cannot work in a correct manner, because it uses `\futurelet`, but this is a stomach feature, that doesn't work in an expanding context. There are several variants of `\@ifnextchar`:

- `\@ifnextchar`
- `\kernel@ifnextchar`
- `\new@ifnextchar` from package `amsgen.sty` (bug report `latex/3662`).

```

1845 \def\HyPsd@ifnextchar#1{%
1846 \pdfstringdefWarn#1%

```

```
1847 \expandafter\@gobbletwo\@gobble
1848 }
```

6.5.14 \@protected@testopt@ifnextchar

`\HyPsd@protected@testopt` Macros with optional arguments doesn't work properly, because they call `\@ifnextchar` to detect the optional argument (see the explanation of `\HyPsd@ifnextchar`). But a warning, that `\@ifnextchar` doesn't work, doesn't help the user very much. Therefore `\@protected@testopt` is also disabled, because its first argument is the problematic macro with the optional argument and it is called before `\@ifnextchar`.

```
1849 \def\HyPsd@protected@testopt#1{%
1850   \pdfstringdefWarn#1%
1851   \@gobbletwo
1852 }
```

6.6 Help macros for postprocessing

6.6.1 Generic warning.

`\HyPsd@Warning` For several reasons `\space` is masked and does not have its normal meaning. But it is used in warning messages, so it is redefined locally:

```
1853 \def\HyPsd@Warning#1{%
1854   \begingroup
1855   \let\space\ltx@space
1856   \Hy@Warning{#1}%
1857   \endgroup
1858 }
```

6.6.2 Protecting spaces

```
1859 \RequirePackage{etexcmds}[2007/09/09]
1860 \ifetex@unexpanded
1861   \expandafter\@secondoftwo
1862 \else
1863   \expandafter\@firstoftwo
1864 \fi
1865 {%
```

`\HyPsd@ProtectSpaces` `\HyPsd@ProtectSpaces` calls with the expanded string `\HyPsd@@ProtectSpacesFi`. The expanded string is protected by `|` at the beginning and end of the expanded string. Because of this there can be no group at the beginning or end of the string and grouping characters are not removed by the call of `\HyPsd@@ProtectSpacesFi`.

```
1866 \def\HyPsd@ProtectSpaces#1{%
1867   \iftrue
1868     \expandafter\HyPsd@@ProtectSpacesFi
1869     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1870   \fi
1871 }%
```

`\HyPsd@@ProtectSpacesFi` The string can contain command tokens, so it is better to use an `\def` instead of an `\edef`.

```
1872 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1873   \fi
1874   \ifx\scrollmode#2\scrollmode
```

```

1875 \HyPsd@RemoveMask#1\HyPsd@End#3%
1876 \else
1877 \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1878 \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1879 \fi
1880 }%

```

Remove mask.

`\HyPsd@RemoveMask` `\HyPsd@RemoveMask` removes the protecting |. It is used by `\HyPsd@@ProtectSpacesFi` and by the code in `\pdfstringdef` that removes the grouping characters.

```

1881 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1882 \toks@\expandafter{#1}%
1883 \xdef#2{\the\toks@}%
1884 }%
1885 }{%
1886 \let\HyPsd@fi\fi
1887 \def\HyPsd@ProtectSpaces#1{%
1888 \xdef#1{%
1889 \iftrue
1890 \expandafter\HyPsd@@ProtectSpacesFi
1891 \expandafter|\expandafter\@empty#1| %
1892 \HyPsd@fi
1893 }%
1894 \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1895 }%
1896 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1897 \fi
1898 \etex@unexpanded{#1}%
1899 \ifx\scrollmode#2\scrollmode
1900 \else
1901 \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1902 \HyPsd@fi
1903 }%
1904 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1905 \xdef#2{\etex@unexpanded\expandafter{#1}}%
1906 }%
1907 }

```

6.6.3 Remove grouping braces

`\HyPsd@RemoveBraces` `#1` contains the expanded string, the result will be locally written in command `\HyPsd@String`.

```

1908 \def\HyPsd@RemoveBraces#1{%
1909 \ifx\scrollmode#1\scrollmode
1910 \else
1911 \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1912 \fi
1913 }

```

`\HyPsd@@RemoveBraces` `\HyPsd@@RemoveBraces` is called with the expanded string, the end marked by `\HyPsd@End`, the expanded string again, but enclosed in braces and the string command. The first expanded string is scanned by the parameter text `#1#2`. By a comparison with the original form in `#3` we can decide whether `#1` is a single

token or a group. To avoid the case that #2 is a group, the string is extended by a | before.

While removing the grouping braces an italic correction marker is inserted for supporting package `xspace` and letting ligatures broken.

Because the string is already expanded, the `\if` commands should disappeared. So we can move some parts out of the argument of `\ltx@ReturnAfterFi`.

```

1914 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1915   \fi
1916   \def\Hy@temp@A{#1#2}%
1917   \def\Hy@temp@B{#3}%
1918   \ifx\Hy@temp@A\Hy@temp@B
1919     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1920       \HyPsd@String#1%
1921     }%
1922     \ifx\scrollmode#2\scrollmode
1923     \else
1924       \Hy@ReturnAfterFiFiEnd{%
1925         \HyPsd@RemoveBraces{#2}%
1926       }%
1927     \fi
1928   \else
1929     \def\Hy@temp@A{#1}%
1930     \HyPsd@AppendItalcorr\HyPsd@String
1931     \ifx\Hy@temp@A\@empty
1932       \Hy@ReturnAfterElseFiFiEnd{%
1933         \HyPsd@RemoveBraces{#2}%
1934       }%
1935     \else
1936       \HyPsd@ProtectSpaces\Hy@temp@A
1937       \HyPsd@AppendItalcorr\Hy@temp@A
1938       \Hy@ReturnAfterFiFiEnd{%
1939         \expandafter\HyPsd@RemoveBraces\expandafter
1940         {\Hy@temp@A#2}%
1941       }%
1942     \fi
1943   \fi
1944   \Hy@ReturnEnd
1945 }

```

`\HyPsd@AppendItalcorr` The string can contain commands yet, so it is better to use `\def` instead of a shorter `\edef`. The two help macros limit the count of `\expandafter`.

```

1946 \def\HyPsd@AppendItalcorr#1{%
1947   \expandafter\HyPsd@@AppendItalcorr\expandafter{\/#}#1%
1948 }
1949 \def\HyPsd@@AppendItalcorr#1#2{%
1950   \expandafter\def\expandafter#2\expandafter{#2#1}%
1951 }

```

6.6.4 Catcode check

Workaround for LuaTeX. `\HyPsd@CheckCatcodes` might trigger a bug of LuaTeX (0.60.2, 0.70.1, 0.70.2, ...) in the comparison with `\ifcat`, see <http://tracker.luatex.org/view.php?id=773>.

```

1952 \ltx@ifundefined{directlua}{%
1953 }{%
1954   \expandafter\ifx\csname\endcsname\relax\fi

```

Check catcodes.

`\HyPsd@CheckCatcodes` Because `\ifcat` expands its arguments, this is prevented by `\noexpand`. In case of command tokens and active characters `\ifcat` now sees a `\relax`. After protecting spaces and removing braces `#1` should be a single token, no group of several tokens, nor an empty group. (So the `\expandafter\relax` between `\ifcat` and `\noexpand` is only for safety and it should be possible to remove it.)

`\protect` and `\relax` should be removed silently. But it is too dangerous and breaks some code giving them the meaning of `\@empty`. So commands with the meaning of `\protect` are removed here. (`\protect` should have the meaning of `\@typeset@protect` that is equal to `\relax`).

For the comparison with active characters, `~` cannot be used because it has the meaning of a blank space here. And active characters need to be checked, if they have been defined using `\protected`.

```

1956 \begingroup
1957 \catcode`\Q=\active
1958 \let Q\ltx@empty
1959 \gdef\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1960 \global\let\HyPsd@Rest\relax
1961 \ifcat\relax\noexpand#1\relax
1962 \ifx#1\protect
1963 \else
1964 \ifx#1\penalty
1965 \setbox\z@=\hbox{%
1966 \afterassignment\HyPsd@AfterCountRemove
1967 \count@=#2\HyPsd@End
1968 }%
1969 \else
1970 \ifx#1\kern
1971 \setbox\z@=\hbox{%
1972 \afterassignment\HyPsd@AfterDimenRemove
1973 \dimen@=#2\HyPsd@End
1974 }%
1975 \else
1976 \ifx#1\hskip
1977 \setbox\z@=\hbox{%
1978 \afterassignment\HyPsd@AfterSkipRemove
1979 \skip@=#2\HyPsd@End
1980 }%
1981 \else
1982 \HyPsd@CatcodeWarning{#1}%
1983 \fi
1984 \fi
1985 \fi
1986 \fi
1987 \else
1988 \ifcat\noexpand#1\noexpandQ% active character
1989 \expandafter\expandafter\expandafter\def
1990 \expandafter\expandafter\expandafter\HyPsd@String
1991 \expandafter\expandafter\expandafter{%
1992 \expandafter\HyPsd@String\string#1%
1993 }%
1994 \else
1995 \ifcat#1A% letter

```

```

1996     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1997         \HyPsd@String#1%
1998     }%
1999     \else
2000     \ifcat#1 % SPACE
2001     \expandafter\def\expandafter\HyPsd@String\expandafter{%
2002         \HyPsd@String\HyPsd@SPACEOPTI
2003     }%
2004     \else
2005     \ifcat$#1%
2006     \HyPsd@CatcodeWarning{math shift}%
2007     \else
2008     \ifcat&#1%
2009     \HyPsd@CatcodeWarning{alignment tab}%
2010     \else
2011     \ifcat^#1%
2012     \HyPsd@CatcodeWarning{superscript}%
2013     \else
2014     \ifcat_#1%
2015     \HyPsd@CatcodeWarning{subscript}%
2016     \else
2017     \expandafter\def\expandafter\HyPsd@String\expandafter{%
2018         \HyPsd@String#1%
2019     }%
2020     \fi
2021     \fi
2022     \fi
2023     \fi
2024     \fi
2025     \fi
2026     \fi
2027     \fi
2028     \ifx\HyPsd@Rest\relax
2029     \ifx\scrollmode#2\scrollmode
2030     \else
2031     \Hy@ReturnAfterFiFiEnd{%
2032         \HyPsd@CheckCatcodes#2\HyPsd@End
2033     }%
2034     \fi
2035     \else
2036     \ifx\HyPsd@Rest\@empty
2037     \else
2038     \Hy@ReturnAfterFiFiEnd{%
2039         \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
2040     }%
2041     \fi
2042     \fi
2043     \Hy@ReturnEnd
2044 }%
2045 \endgroup

```

Remove counts, dimens, skips.

\HyPsd@AfterCountRemove Counts like \penalty are removed silently.

```

2046 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
2047     \gdef\HyPsd@Rest{#1}%
2048 }

```

`\HyPsd@AfterDimenRemove` If the value of the `dimen` (`\kern`) is zero, it can be removed silently. All other values are difficult to interpret. Negative values do not work in bookmarks. Should positive values be removed or should they be replaced by `space(s)`? The following code replaces positive values greater than `1ex` with a space and removes them else.

```

2049 \def\HyPsd@AfterDimenRemove#1\HyPsd@end{%
2050 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
2051 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
2052 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2053 \else
2054 \ifdim\dimen@=\z@
2055 \else
2056 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
2057 \fi
2058 \gdef\HyPsd@Rest{#1}%
2059 \fi
2060 }

```

`\HyPsd@AfterSkipRemove` The glue part of skips do not work in PDF strings and are ignored. Skips (`\hskip`), that are not zero, have the same interpreting problems like `dimens` (see above).

```

2061 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
2062 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>1ex %
2063 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
2064 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2065 \else
2066 \ifdim\skip@=\z@
2067 \else
2068 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
2069 \fi
2070 \gdef\HyPsd@Rest{#1}%
2071 \fi
2072 }

```

Catcode warnings.

`\HyPsd@CatcodeWarning` `\HyPsd@CatcodeWarning` produces a warning for the user.

```

2073 \def\HyPsd@CatcodeWarning#1{%
2074 \HyPsd@Warning{%
2075 Token not allowed in a PDF string (%
2076 \ifHy@unicode
2077 Unicode%
2078 \else
2079 PDFDocEncoding%
2080 \fi
2081 ):%
2082 \MessageBreak removing `~\HyPsd@RemoveCmdPrefix#1'%
2083 }%
2084 }
2085 \begingroup
2086 \catcode`|=0 %
2087 \catcode`|=12 %
2088 |gdef|HyPsd@RemoveCmdPrefix#1{%
2089 |expandafter|HyPsd@@RemoveCmdPrefix
2090 |string#1|@empty\<>-|@empty|@empty
2091 }%
2092 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
2093 |endgroup

```

\HyPsd@RemoveSpaceWarning

```
2094 \def\HyPsd@RemoveSpaceWarning#1{%
2095 \HyPsd@Warning{%
2096   Token not allowed in a PDF string (%
2097   \ifHy@unicode
2098     Unicode%
2099   \else
2100     PDFDocEncoding%
2101   \fi
2102   ):%
2103   \MessageBreak #1\MessageBreak
2104   removed%
2105 }%
2106 }
```

\HyPsd@ReplaceSpaceWarning

```
2107 \def\HyPsd@ReplaceSpaceWarning#1{%
2108 \HyPsd@Warning{%
2109   Token not allowed in a PDF string (%
2110   \ifHy@unicode
2111     Unicode%
2112   \else
2113     PDFDocEncoding%
2114   \fi
2115   ):%
2116   \MessageBreak #1\MessageBreak
2117   replaced by space%
2118 }%
2119 }
```

6.6.5 Check for wrong glyphs

A wrong glyph is marked with `\relax`, the glyph name follows, delimited by `>`. `\@empty` ends the string.

```
2120 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
2121 \expandafter\def\expandafter\HyPsd@String\expandafter{%
2122 \HyPsd@String#1%
2123 }%
2124 \ifx\#2\%
2125 \else
2126 \ltx@ReturnAfterFi{%
2127 \HyPsd@GlyphProcessWarning#2\@empty
2128 }%
2129 \fi
2130 }
2131 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
2132 \HyPsd@@@GlyphProcessWarning#1++>%
2133 \HyPsd@GlyphProcess#2\@empty
2134 }
2135 \def\HyPsd@@@GlyphProcessWarning#1+#2+#3>{%
2136 \ifx\#2\%
2137 \HyPsd@Warning{%
2138   Glyph not defined in %
2139   P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
2140   removing ` \@backslashchar#1'%
2141 }%
2142 \else
```

```

2143 \HyPsd@Warning{%
2144   Composite letter ` \@backslashchar#1+#2'\MessageBreak
2145   not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
2146   \MessageBreak
2147   removing ` \@backslashchar#1'%
2148 }%
2149 \fi
2150 }

```

Spaces.

`\HyPsd@spaceopti` In the string the spaces are represented by `\HyPsd@spaceopti` tokens. Within an `\edef` it prints itself as a simple space and looks for its next argument. If another space follows, so it replaces the next `\HyPsd@spaceopti` by an protected space `\040`.

```

2151 \def\HyPsd@spaceopti#1{ % first space
2152 \ifx\HyPsd@spaceopti#1%
2153 \040%
2154 \else
2155 #1%
2156 \fi
2157 }%

```

6.6.6 Replacing tokens

`\HyPsd@Subst` To save tokens `\HyPsd@StringSubst` is a wrapper for the command `\HyPsd@Subst` that does all the work: In string stored in command `#3` it replaces the tokens `#1` with `#2`.

```

#1 Exact the tokens that should be replaced.
#2 The replacement (don't need to be expanded).
#3 Command with the string.
2158 \def\HyPsd@Subst#1#2#3{%
2159 \def\HyPsd@@ReplaceFi##1##2\END\fi{%
2160 \fi
2161 ##1%
2162 \ifx\scrollmode##2\scrollmode
2163 \else
2164 #2%
2165 \HyPsd@@ReplaceFi##2\END
2166 \fi
2167 }%
2168 \xdef#3{%
2169 \iftrue
2170 \expandafter\HyPsd@@ReplaceFi#3#1\END
2171 \fi
2172 }%
2173 }

```

`\HyPsd@StringSubst` To save tokens in `\pdfstringdef` `\HyPsd@StringSubst` is a wrapper, that expands argument `#1` before calling `\HyPsd@Subst`.

```

2174 \def\HyPsd@StringSubst#1{%
2175 \expandafter\HyPsd@Subst\expandafter{\string#1}%
2176 }

```

`\HyPsd@EscapeTeX`

```

2177 \begingroup

```

```

2178 \lccode`!=`\\%%
2179 \lccode`|=`\\%%
2180 \lccode`\(<=`\{%
2181 \lccode`\)=`\\}%
2182 \lccode`0=\ltx@zero
2183 \lccode`1=\ltx@zero
2184 \lccode`3=\ltx@zero
2185 \lccode`4=\ltx@zero
2186 \lccode`5=\ltx@zero
2187 \lccode`7=\ltx@zero
2188 \lowercase{\endgroup
2189 \def\HyPsd@EscapeTeX#1{%
2190 \HyPsd@Subst{|045}#1%
2191 \HyPsd@Subst{|173}#1%
2192 \HyPsd@Subst{|175}#1%
2193 }%
2194 }

```

6.6.7 Support for package `xspace`

`\HyPsd@doxspace` `\xspace` does not work, because it uses a `\futurelet` that cannot be executed in \TeX 's mouth. So this implementation uses an argument to examine the next token. In a previous version I reused `\@xspace`, but this version is shorter and easier to understand.

```

2195 \def\HyPsd@doxspace#1{%
2196 \ifx#1\relax\else
2197 \ifx#1.\else
2198 \ifx#1:\else
2199 \ifx#1,\else
2200 \ifx#1;\else
2201 \ifx#1!\else
2202 \ifx#1?\else
2203 \ifx#1/\else
2204 \ifx#1-\else
2205 \ifx#1'\else
2206 \HyPsd@SPACEOPTI
2207 \fi
2208 \fi
2209 \fi
2210 \fi
2211 \fi
2212 \fi
2213 \fi
2214 \fi
2215 \fi
2216 \fi
2217 #1%
2218 }%

```

6.6.8 Converting to Unicode

Eight bit characters are converted to the sixteen bit ones, `\8` is replaced by `\00`, and `\9` is removed. The result should be a valid Unicode PDF string without the Unicode marker at the beginning.

```

2219 \begingroup
2220 \catcode`\|=0 %
2221 \catcode`\|=12 %

```

\HyPsd@ConvertToUnicode

```
2222 |gdef|HyPsd@ConvertToUnicode#1{%
2223 |xdef#1{%
2224 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
2225 }%
2226 |ifx#1|@empty
2227 |else
2228 |xdef#1{%
2229 \376\377%
2230 #1%
2231 }%
2232 |fi
2233 }%
```

\HyPsd@DoConvert

```
2234 |gdef|HyPsd@DoConvert#1{%
2235 |ifx#1|@empty
2236 |else
2237 |ltx@ReturnAfterFi{%
2238 |ifx#1\%%
2239 \%%
2240 |expandafter|HyPsd@DoEscape
2241 |else
2242 |HyPsd@Char{#1}%
2243 |expandafter|HyPsd@DoConvert
2244 |fi
2245 }%
2246 |fi
2247 }%
```

\HyPsd@DoEscape

```
2248 |gdef|HyPsd@DoEscape#1{%
2249 |ifx#19%
2250 |expandafter|HyPsd@GetTwoBytes
2251 |else
2252 |ltx@ReturnAfterFi{%
2253 |ifx#18%
2254 00%
2255 |expandafter|HyPsd@GetTwoBytes
2256 |else
2257 #1%
2258 |expandafter|HyPsd@GetOneByte
2259 |fi
2260 }%
2261 |fi
2262 }%
```

\HyPsd@GetTwoBytes

```
2263 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2264 #1\#2#3#4%
2265 |HyPsd@DoConvert
2266 }%
```

\HyPsd@GetOneByte

```
2267 |gdef|HyPsd@GetOneByte#1#2{%
2268 #1#2%
2269 |HyPsd@DoConvert
```



```
2270 }%
2271 |endgroup
```

`\HyPsd@@GetNextTwoTokens` T_EX does only allow nine parameters, so we need another macro to get more arguments.

```
2272 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
2273 \xdef#4{#4#1#2}%
2274 \HyPsd@@ConvertToUnicode#3\END#4%
2275 }
```

`\HyPsd@Char`

```
2276 \begingroup
2277 \catcode0=9 %
2278 \catcode`\^=7 %
2279 \catcode`\^^=12 %
2280 \def\x{^^^0000}%
2281 \expandafter\endgroup
2282 \ifx\x\@empty
2283 \def\HyPsd@Char#1{%
2284 \ifnum`#1<128 %
2285 \@backslashchar 000#1%
2286 \else
2287 \ifnum`#1<65536 %
2288 \expandafter\HyPsd@CharTwoByte\number`#1!%
2289 \else
2290 \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2291 \intcalcSub{`#1}{65536}!%
2292 \fi
2293 \fi
2294 }%
2295 \def\HyPsd@CharTwoByte#1!{%
2296 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2297 \IntCalcDiv#1!256!%
2298 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2299 \IntCalcMod#1!256!%
2300 }%
2301 \def\HyPsd@CharOctByte#1!{%
2302 \@backslashchar
2303 \IntCalcDiv#1!64!%
2304 \intcalcDiv{\IntCalcMod#1!64!}{8}%
2305 \IntCalcMod#1!8!%
2306 }%
2307 \def\HyPsd@CharSurrogate#1!{%
2308 \@backslashchar 33%
2309 \IntCalcDiv#1!262144!%
2310 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2311 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2312 \@backslashchar 33%
2313 \expandafter\expandafter\expandafter\IntCalcAdd
2314 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2315 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2316 \IntCalcMod#1!256!%
2317 }%
2318 \else
2319 \def\HyPsd@Char#1{%
2320 \@backslashchar 000#1%
2321 }%
2322 \fi
```

6.6.9 Support for UTF-8 input encoding

After `\usepackage[utf8]{inputenc}` there are macros that expect the UTF-8 octets as arguments. Therefore we can calculate the PDF octal sequences directly. Because the PDF format is limited to UCS-2, conversion macros are needed for UTF-8 sequences with two and three octets only.

This calculation must be done in an expandable context, so we use `eTeX` here for performance reasons. Unhappily the results of divisions are rounded. Thus a circumvention via `\dimexpr` is used, e.g.:

```

\numexpr 123/4\relax is replaced by
\number\dimexpr.25\dimexpr 123sp\relax\relax

2323 \begingroup\expandafter\expandafter\expandafter\endgroup
2324 \expandafter\ifx\csname numexpr\endcsname\relax
2325   \let\HyPsd@UTFviii\relax
2326 \else
2327   \begingroup
2328     \lccode\~=\^^f4\relax
2329   \lowercase{\endgroup
2330     \def\HyPsd@UTFviii{%
2331       \let\UTFviii@two@octets\HyPsd@UTFviii@two
2332       \let\UTFviii@three@octets\HyPsd@UTFviii@three
2333       \let\UTFviii@four@octets\HyPsd@UTFviii@four
2334       \ifx~\HyPsd@UTFviii@cccxiv@undef
2335         \let~\HyPsd@UTFviii@cccxiv@def
2336       \fi
2337       \let\unichar\HyPsd@unichar
2338     }%
2339   }%
2340   \def\HyPsd@UTFviii@cccxiv@undef{\@inpenc@undefined@{utf8}}%
2341   \edef\HyPsd@UTFviii@cccxiv@def{%
2342     \noexpand\UTFviii@four@octets\string ^f4%
2343   }%

```

The two octet form of UTF-8 110aaaabb (A) and 10cccd (B) must be converted into octal numbers 00a and bcd. The result is `\8a\bcd` (with a, b, c, d as octal numbers). The conversion equations.

$$a := A/4 - 48 \tag{1}$$

$$b := A - 4 * (A/4) \tag{2}$$

$$c := B/8 - 8 * ((8 * (B/8))/8) \tag{3}$$

$$d := B - 8 * (B/8) \tag{4}$$

$$\tag{5}$$

```

2344 \def\HyPsd@UTFviii@two#1#2{%
2345   \expandafter\HyPsd@UTFviii@two
2346   \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter| %
2347   \number`#1\expandafter| %
2348   \number\dimexpr.125\dimexpr`#2sp\expandafter\relax\expandafter| %
2349   \number`#2 \@nil
2350 }%
2351 \def\HyPsd@UTFviii@two#1|#2|#3|#4@\@nil{%
2352   \expandafter\8%
2353   \number\numexpr #1-48\expandafter\relax
2354   \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
2355   \number\numexpr #3-8*%

```

```

2356     \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
2357     \number\dimexpr #4-8*#3\relax
2358 }%

```

Three octet form: 1110aabb (A), 10bccdd (B), and 10eeefff (C). The result is `\9abc\def` (with a, ..., f as octal numbers). The conversion equations:

$$a := A/4 - 56 \tag{6}$$

$$b := 2 * (A - 4 * (A/4)) + ((B - 128 < 32)?0 : 1) \tag{7}$$

$$c := B/4 - 32 - ((B - 128 < 32)?0 : 8) \tag{8}$$

$$d := B - 4 * (B/4) \tag{9}$$

$$e := C/8 - 16 \tag{10}$$

$$f := C - 8 * (C/8) \tag{11}$$

$$\tag{12}$$

```

2359 \def\HyPsd@UTFviii@three#1#2#3{%
2360   \expandafter\HyPsd@UTFviii@@three
2361   \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter|
2362   \number`#1\expandafter|
2363   \number\ifnum\dimexpr`#2-128\relax <32 0\else 1\fi\expandafter|
2364   \number\dimexpr.25\dimexpr`#2sp\expandafter\relax\expandafter|
2365   \number`#2\expandafter|
2366   \number\dimexpr.125\dimexpr`#3sp\expandafter\relax\expandafter|
2367   \number`#3 \@nil
2368 }%
2369 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2370   \expandafter\9%
2371   \number\dimexpr #1-56\expandafter\relax
2372   \number\dimexpr 2*(#2-4*#1)+#3\expandafter\relax
2373   \number\dimexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2374   \csname\number\dimexpr #5-4*#4\relax\expandafter\endcsname
2375   \number\dimexpr #6-16\expandafter\relax
2376   \number\dimexpr #7-8*#6\relax
2377 }%

```

Surrogates: 4 octets in UTF-8, a surrogate pair in UTF-16. High surrogate range: U+D800-U+DBFF, low surrogate range: U+DC00-U+DFFF.

```

UTF-8: 11110uuu  10uuzzzz  10yyyyyy  10xxxxxx
www = uuuu - 1
UTF-16: 110110ww  wwzzzzyy  110111yy  yyxxxxxx
octal: 011 011 0ww  0ww zzz zyy  011 011 1yy  0yy xxx xxx

```

```

2378 \def\HyPsd@UTFviii@four#1#2{%
2379   \expandafter\HyPsd@@UTFviii@four\number
2380   \dimexpr-1+(`#1-240)*4+\dimexpr.0625\dimexpr`#2sp-128sp%
2381   \expandafter|\number
2382   \dimexpr`#2-16*\dimexpr.0625\dimexpr`#2sp|
2383 }%
2384 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2385   \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2386   \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2387   \ifodd#2 %
2388     \number\dimexpr(#2-1)/2\relax
2389   \else
2390     \number\dimexpr#2/2\relax
2391   \fi

```

```

2392 \number\numexpr\ifodd#2 4+\fi
2393 \dimexpr.0625\dimexpr`#3sp-128sp\relax\relax\relax
2394 \933%
2395 \expandafter\HyPsd@@@UTFviii@four\number
2396 \numexpr`#3-16*\dimexpr.0625\dimexpr`#3sp| %
2397 }%
2398 \def\HyPsd@@@UTFviii@four#1|#2{%
2399 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2400 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2401 \number\dimexpr.125\dimexpr`#2sp-128sp\relax\relax
2402 \number\numexpr`#2-8*\dimexpr.125\dimexpr`#2sp\relax\relax\relax
2403 }%

```

Input encoding utf8x of package ucs uses macro \unicar. Values greater than "FFFF are not supported.

```

2404 \def\HyPsd@unicar#1{%
2405 \ifHy@unicode
2406 \ifnum#1>"10FFFF %
2407 \HyPsd@UnicodeReplacementCharacter % illegal
2408 \else
2409 \ifnum#1>"FFFF %

```

High-surrogate code point. ("D800 = 55296, \p@ = 1pt = 65536sp)

```

2410 \expandafter\HyPsd@unicar\expandafter{%
2411 \number\numexpr 55296+%
2412 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2413 \relax\relax\relax
2414 }%

```

Low-surrogate code point. ("DC00 = 56320, "DC00 - 65536 = -9216)

```

2415 \expandafter\HyPsd@unicar\expandafter{%
2416 \number\numexpr#1-9216%
2417 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2418 \relax\relax\relax
2419 }%
2420 \else
2421 \ifnum#1>"7FF %
2422 \9%
2423 \expandafter\HyPsd@unicar@first@byte\expandafter{%
2424 \number
2425 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2426 }%
2427 \else
2428 \8%
2429 \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2430 \fi
2431 \expandafter\HyPsd@unicar@second@byte\expandafter{%
2432 \number
2433 \numexpr#1-256*\number
2434 \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2435 }%
2436 \fi
2437 \fi
2438 \else
2439 .% unsupported (Unicode -> PDF Doc Encoding)
2440 \fi
2441 }%
2442 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%

```

```

2443 \def\HyPsd@unichar@first@byte#1{%
2444   \number\dimexpr.015625\dimexpr#1sp\relax\relax
2445   \expandafter\HyPsd@unichar@octtwo\expandafter{%
2446     \number
2447     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2448     \relax\relax\relax
2449   }%
2450 }%
2451 \def\HyPsd@unichar@second@byte#1{%
2452   \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2453   \expandafter\HyPsd@unichar@octtwo\expandafter{%
2454     \number
2455     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2456     \relax\relax\relax
2457   }%
2458 }%
2459 \def\HyPsd@unichar@octtwo#1{%
2460   \number\dimexpr.125\dimexpr#1sp\relax\relax
2461   \number\dimexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2462   \relax\relax\relax
2463 }%
2464 \fi

```

`\HyPsd@utf@viii@undeferr` `\utf@viii@undeferr` comes from file `utf8x.def` from package `ucs`.

```

2465 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2466   \ifx\@gobble#1%
2467   \else
2468     [Please insert \textbackslash PrerenderUnicode%
2469     \textbraceleft#1\textbraceright\space
2470     into preamble]%
2471   \fi
2472 }%

```

6.6.10 Support for die faces (`ifsym` et. al.)

`\HyPsd@DieFace` Die faces are provided by

Package	Macro
<code>ifsym</code>	<code>\Cube</code>
<code>epsdice</code>	<code>\epsdice</code>
<code>hhcount</code>	<code>\fcdice</code>

`\Cube` and `\epsdice` restrict the range to the numbers one to six. `\fcdice` generates for larger numbers several dice faces with the sum matching the number. The implementation for the PDF strings follows `\fcdice`.

```

2473 \def\HyPsd@DieFace#1{%
2474   \ifHy@unicode
2475   \ifnum#1<1 %
2476     \HyPsd@UnicodeReplacementCharacter
2477   \else
2478     \ifnum#1>6 %
2479       \9046\205%
2480       \expandafter\expandafter\expandafter
2481       \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2482     \else
2483       \9046\20\intcalcDec{#1}%
2484     \fi

```

```

2485 \fi
2486 \else
2487 .% Die faces are not part of PDFDocEncoding
2488 \fi
2489 }

```

\HyPsd@DieFaceLarge

```

2490 \def\HyPsd@DieFaceLarge#1{%
2491 \ifnum#1>6 %
2492 \expandafter\ltx@firstoftwo
2493 \else
2494 \expandafter\ltx@secondoftwo
2495 \fi
2496 {%
2497 \9046\205%
2498 \expandafter\expandafter\expandafter
2499 \HyPsd@DieFaceLarge\IntCalcSub#1!6!!%
2500 }{%
2501 \9046\20\IntCalcDec#1!%
2502 }%
2503 }

```

6.6.11 Support for moon phases of package china2e

```

2504 \def\HyPsd@MoonPha#1{%
2505 \ifcase\intcalcNum{#1} %
2506 \HyPsd@UnicodeReplacementCharacter
2507 \or % 1
2508 % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2509 \9330\074\9337\032%
2510 \or % 2
2511 \HyPsd@UnicodeReplacementCharacter
2512 \or % 3
2513 % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2514 \9330\074\9337\035%
2515 \or % 4
2516 % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2517 \9330\074\9337\034%
2518 \else
2519 \HyPsd@UnicodeReplacementCharacter
2520 \fi
2521 }
2522 %* \HyPsd@MoonPha -> \MoonPha

```

6.6.12 Support for package pifont

\HyPsd@ding

```

2523 \def\HyPsd@ding#1{%
2524 \ifHy@unicode
2525 \ifnum#1<32 %
2526 \HyPsd@UnicodeReplacementCharacter
2527 \else
2528 \ifnum#1>254 %
2529 \HyPsd@UnicodeReplacementCharacter
2530 \else
2531 \ifnum#1<127 %
2532 \expandafter\expandafter\expandafter
2533 \HyPsd@@@ding\intcalcNum{#1}!%

```

```

2534     \else
2535     \ifnum#1>160 %
2536     \expandafter\expandafter\expandafter
2537     \HyPsd@@ding\intcalcNum{#1}!%
2538     \else
2539     \HyPsd@UnicodeReplacementCharacter
2540     \fi
2541     \fi
2542     \fi
2543     \fi
2544     \else
2545     .% Dingbats are not part of PDFDocEncoding
2546     \fi
2547 }

```

\HyPsd@@ding

```

2548 \def\HyPsd@@ding#1!{%
2549 \ltx@ifundefined{HyPsd@ding@#1}{%
2550 \ifnum#1<127 %
2551 \9047%
2552 \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2553 \else
2554 \ifnum#1<168 %
2555 \9047\14\IntCalcSub#1!160!%
2556 \else
2557 \ifnum#1>181 %
2558 \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%
2559 \else
2560 % 172..181 -> U+2460..U+2469
2561 \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2562 \fi
2563 \fi
2564 \fi
2565 }{%
2566 \csname HyPsd@ding@#1\endcsname
2567 }%
2568 }

2569 \@namedef{HyPsd@ding@32}{\space}
2570 % U+260E BLACK TELEPHONE
2571 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2572 % U+261B BLACK RIGHT POINTING INDEX
2573 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B
2574 % U+261E WHITE RIGHT POINTING INDEX
2575 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2576 % U+2605 BLACK STAR
2577 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2578 % U+25CF BLACK CIRCLE
2579 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2580 % U+25A0 BLACK SQUARE
2581 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0
2582 % U+25B2 BLACK UP-POINTING TRIANGLE
2583 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2
2584 % U+25BC BLACK DOWN-POINTING TRIANGLE
2585 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2586 % U+25C6 BLACK DIAMOND
2587 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2588 % U+25D7 RIGHT HALF BLACK CIRCLE

```

```

2589 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2590 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2591 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2592 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2593 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2594 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2595 \@namedef{HyPsd@ding@214}{\textleftarrow}%
2596 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2597 \@namedef{HyPsd@ding@240}{\HyPsd@UnicodeReplacementCharacter}

```

7 Support of other packages

7.1 Class memoir

```

2598 \@ifclassloaded{memoir}{%
2599 \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}%
2600 }{}

```

7.2 Package subfigure

Added fix for version 2.1. Here `\sub@label` is defined.

```

2601 \@ifpackageloaded{subfigure}{%
2602 \ltx@ifundefined{sub@label}{%
2603 \Hy@hypertexnamesfalse
2604 }{%
2605 \renewcommand*{\sub@label}[1]{%
2606 \@bsphack
2607 \subfig@oldlabel{#1}%
2608 \if@filesw
2609 \begingroup
2610 \edef\@currentlabstr{%
2611 \expandafter\strip@prefix\meaning\@currentlabelname
2612 }%
2613 \protected@write\@auxout{}{%
2614 \string\newlabel{sub@#1}{%
2615 {\@nameuse{@thesub\@capytype}}%
2616 {\thepage}%
2617 }%
2618 \expandafter\strip@period\@currentlabstr
2619 \relax.\relax\@@@%
2620 }%
2621 {\@currentHref}%
2622 }%
2623 }%
2624 }%
2625 \endgroup
2626 \fi
2627 \@esphack
2628 }%
2629 \@ifpackagelater{subfigure}{2002/03/26}{%
2630 \providecommand*\toclevel@subfigure{1}%
2631 \providecommand*\toclevel@subtable{1}%
2632 }%
2633 }%
2634 }{}

```


7.3 Package xr and xr-hyper

The beta version of xr that supports `\XR@addURL` is called `xr-hyper`. Therefore we test for the macro itself and not for the package name:

```
2635 \ltx@ifundefined{XR@addURL}{%
2636 }{%
```

If reading external aux files check whether they have a non zero fourth field in `\newlabel` and if so, add the URL as the fifth field.

```
2637 \def\xR@addURL#1{\xR@dURL#1{}{}{}\\}%
2638 \def\xR@dURL#1#2#3#4#5\\{%
2639   {#1}{#2}%
2640   \if!#4!%
2641   \else
2642     {#3}{#4}{\xR@URL}%
2643   \fi
2644 }%
2645 }
```

```
2646 \def\Hy@true{true}
2647 \def\Hy@false{false}
```

Providing dummy definitions.

```
2648 \let\literalps@out\@gobble
2649 \newcommand\pdfbookmark[3]{}
2650 \def\Acrobatmenu#1#2{\leavevmode#2}
2651 \def\Hy@writebookmark#1#2#3#4#5{}%
```

8 Help macros for links

anchors get created on the baseline of where they occur. If an XYZ PDF view is set, this means that the link places the top of the screen *on the baseline* of the target. If this is an equation, for instance, it means that you cannot see anything. Some links, of course, are created at the start of environments, and so it works. To allow for this, anchors are raised, where possible, by some small amount. This defaults to `\baselineskip`, but users can set it to something else in two ways (thanks to Heiko Oberdiek for suggesting this):

1. Redefine `\HyperRaiseLinkDefault` to be eg the height of a `\strut`
2. Redefine `\HyperRaiseLinkHook` to do something complicated; it must give a value to `\HyperRaiseLinkLength`, which is what actually gets used

```
2652 \let\HyperRaiseLinkHook\@empty
2653 \def\HyperRaiseLinkDefault{\baselineskip}
```

`\HyperRaiseLinkHook` allows the user to reassign `\HyperRaiseLinkLength`.

```
2654 \newcount\Hy@SavedSpaceFactor
2655 \def\Hy@SaveSpaceFactor{%
2656   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@\fi
2657 }
2658 \def\Hy@RestoreSpaceFactor{%
2659   \relax
2660   \ifhmode
2661     \ifnum\Hy@SavedSpaceFactor>\z@
2662       \spacefactor=\Hy@SavedSpaceFactor
2663     \fi
2664   \fi
```

```

2665 }
2666 \def\Hy@SaveSavedSpaceFactor{%
2667 \edef\Hy@RestoreSavedSpaceFactor{%
2668   \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2669 }%
2670 }
2671 \def\Hy@raisedlink#1{%
2672 \ifvmode
2673   #1%
2674 \else
2675   \Hy@SaveSpaceFactor
2676   \penalty\@M
2677   \smash{%
2678     \begingroup
2679     \let\HyperRaiseLinkLength\@tempdima
2680     \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2681     \HyperRaiseLinkHook
2682     \expandafter\endgroup
2683     \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2684       \Hy@RestoreSpaceFactor
2685       #1%
2686       \Hy@SaveSpaceFactor
2687     }%
2688   }%
2689   \Hy@RestoreSpaceFactor
2690 \fi
2691 }

```

\Hy@SaveLastskip Inserting a \special command to set a destination destroys the \lastskip value.
 \Hy@RestoreLastskip

```

2692 \def\Hy@SaveLastskip{%
2693 \let\Hy@RestoreLastskip\relax
2694 \ifvmode
2695 \ifdim\lastskip=\z@
2696 \let\Hy@RestoreLastskip\nobreak
2697 \else
2698 \begingroup
2699 \skip@=-\lastskip
2700 \edef\x{%
2701 \endgroup
2702 \def\noexpand\Hy@RestoreLastskip{%
2703 \noexpand\ifvmode
2704 \noexpand\nobreak
2705 \vskip\the\skip@
2706 \vskip\the\lastskip\relax
2707 \noexpand\fi
2708 }%
2709 }%
2710 \x
2711 \fi
2712 \else
2713 \ifhmode
2714 \ifdim\lastskip=\z@
2715 \let\Hy@RestoreLastskip\nobreak
2716 \else
2717 \begingroup
2718 \skip@=-\lastskip
2719 \edef\x{%

```

```

2720     \endgroup
2721     \def\noexpand\Hy@RestoreLastskip{%
2722     \noexpand\ifhmode
2723     \noexpand\nobreak
2724     \hskip\the\skip@
2725     \hskip\the\lastskip\relax
2726     \noexpand\fi
2727     }%
2728     }%
2729     \x
2730     \fi
2731     \fi
2732     \fi
2733 }%

```

9 Options

```

2734 \SetupKeyvalOptions{%
2735 family=Hyp,%
2736 prefix=HyOpt%
2737 }

```

9.1 Help macros

`\IfHyperBooleanExists`

```

2738 \def\IfHyperBooleanExists#1{%
2739 \ltx@ifundefined{Hy@#1false}\ltx@secondoftwo{%
2740 \ltx@ifundefined{KV@Hyp@#1@default}\ltx@secondoftwo\ltx@firstoftwo
2741 }%
2742 }

2743 \@namedef{KV@Hyp@stoppeardearly@default}{ }

```

`\IfHyperBoolean`

```

2744 \def\IfHyperBoolean#1{%
2745 \IfHyperBooleanExists{#1}{%
2746 \csname ifHy@#1\endcsname
2747 \expandafter\ltx@firstoftwo
2748 \else
2749 \expandafter\ltx@secondoftwo
2750 \fi
2751 }\ltx@secondoftwo
2752 }

```

`\Hy@boolkey`

```

2753 \def\Hy@boolkey#1#2{%
2754 \edef\Hy@tempa{#2}%
2755 \lowercase\expandafter{%
2756 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2757 }%
2758 \ifx\Hy@tempa\@empty
2759 \let\Hy@tempa\Hy@true
2760 \fi
2761 \ifx\Hy@tempa\Hy@true
2762 \else
2763 \ifx\Hy@tempa\Hy@false
2764 \else

```

```

2765   \let\Hy@tempa\relax
2766   \fi
2767 \fi
2768 \ifx\Hy@tempa\relax
2769   \Hy@WarnOptionValue{#2}{#1}{`true' or `false'}%
2770 \else
2771   \Hy@Info{Option `#1' set ``\Hy@tempa'}%
2772   \csname Hy@#1\Hy@tempa\endcsname
2773 \fi
2774 }

```

\Hy@WarnOptionValue

```

2775 \def\Hy@WarnOptionValue#1#2#3{%
2776   \Hy@Warning{%
2777     Unexpected value `#1'\MessageBreak
2778     of option `#2' instead of\MessageBreak
2779     #3%
2780   }%
2781 }

```

\Hy@DisableOption

```

2782 \def\Hy@DisableOption#1{%
2783   \ltx@ifundefined{KV@Hyp@#1@default}{%
2784     \define@key{Hyp}{#1}%
2785   }{%
2786     \define@key{Hyp}{#1}[]%
2787   }%
2788   {\Hy@WarnOptionDisabled{#1}}%
2789 }

```

\Hy@WarnOptionDisabled

```

2790 \def\Hy@WarnOptionDisabled#1{%
2791   \Hy@Warning{%
2792     Option `#1' has already been used,\MessageBreak
2793     setting the option has no effect%
2794   }%
2795 }

```

\Hy@CheckOptionValue Some options take a string value out of a limited set of values. Macro \Hy@CheckOptionValue checks whether the given value #1 for option #2 is a member of the value list #3.

```

2796 \def\Hy@CheckOptionValue#1#2#3{%
2797   \begingroup
2798   \edef\x{#1}%
2799   \@onelevel@sanitize\x
2800   \let\y=y%
2801   \def\do##1##2{%
2802     \def\z{##1}%
2803     \@onelevel@sanitize\z
2804     \ifx\x\z
2805       \let\y=n%
2806     \let\do\@gobbletwo
2807   \fi
2808   }%
2809   #3%
2810   \ifx\y y%
2811   \def\do##1##2{%

```

```

2812     * `##1'%
2813     \ifx\##2\\\else\space(##2)\fi
2814     \MessageBreak
2815   }%
2816   \Hy@Warning{%
2817     Values of option `#2':\MessageBreak
2818     #3%
2819     * An empty value disables the option.\MessageBreak
2820     Unknown value `x'%
2821   }%
2822   \fi
2823   \endgroup
2824 }

```

`\Hy@DefNameKey` #1: option name
#2: \do list with known values, first argument of \do is value, second argument is a comment.

```

2825 \def\Hy@DefNameKey#1{%
2826   \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2827 }

```

`\Hy@@DefNameKey` #1: macro for value storage
#2: option name
#3: \do list with known values.

```

2828 \def\Hy@@DefNameKey#1#2#3{%
2829   \define@key{Hyp}{#2}{%
2830     \edef#1{##1}%
2831     \ifx#1\@empty
2832     \else
2833       \Hy@CheckOptionValue{##1}{#2}{#3}%
2834     \fi
2835   }%
2836   \let#1\@empty
2837 }

```

`\Hy@UseNameKey`

```

2838 \def\Hy@UseNameKey#1#2{%
2839   \ifx#2\@empty
2840   \else
2841     /#1/#2%
2842   \fi
2843 }

```

9.2 Defining the options

```

2844 \define@key{Hyp}{implicit}[true]{%
2845   \Hy@boolkey{implicit}{#1}%
2846 }
2847 \define@key{Hyp}{draft}[true]{%
2848   \Hy@boolkey{draft}{#1}%
2849 }
2850 \define@key{Hyp}{final}[true]{%
2851   \Hy@boolkey{final}{#1}%
2852 }
2853 \let\KV@Hyp@nolinks\KV@Hyp@draft
2854 \def\Hy@ObsoletePaperOption#1{%

```

```

2855 \Hy@WarningNoLine{%
2856   Option `#1' is no longer used%
2857 }%
2858 \define@key{Hyp}{#1}[true]{}%
2859 }
2860 \def\Hy@temp#1{%
2861   \define@key{Hyp}{#1}[true]{}%
2862   \Hy@ObsoletePaperOption{#1}%
2863 }%
2864 }
2865 \Hy@temp{a4paper}
2866 \Hy@temp{a5paper}
2867 \Hy@temp{b5paper}
2868 \Hy@temp{letterpaper}
2869 \Hy@temp{legalpaper}
2870 \Hy@temp{executivepaper}

2871 \define@key{Hyp}{setpagesize}[true]{}%
2872 \Hy@boolkey{setpagesize}{#1}%
2873 }
2874 \define@key{Hyp}{debug}[true]{}%
2875 \Hy@boolkey{debug}{#1}%
2876 }
2877 \define@key{Hyp}{linktocpage}[true]{}%
2878 \Hy@boolkey{linktocpage}{#1}%
2879 \ifHy@linktocpage
2880   \let\Hy@linktoc\Hy@linktoc@page
2881 \else
2882   \let\Hy@linktoc\Hy@linktoc@section
2883 \fi
2884 }
2885 \chardef\Hy@linktoc@none=0 %
2886 \chardef\Hy@linktoc@section=1 %
2887 \chardef\Hy@linktoc@page=2 %
2888 \chardef\Hy@linktoc@all=3 %
2889 \ifHy@linktocpage
2890   \let\Hy@linktoc\Hy@linktoc@page
2891 \else
2892   \let\Hy@linktoc\Hy@linktoc@section
2893 \fi
2894 \define@key{Hyp}{linktoc}{}%
2895 \@ifundefined{Hy@linktoc@#1}{}%
2896   \Hy@Warning{%
2897     Unexpected value `#1' of\MessageBreak
2898     option `linktoc' instead of `none',\MessageBreak
2899     `section', `page' or `all'%
2900   }%
2901 }{}%
2902   \expandafter\let\expandafter\Hy@linktoc
2903   \csname Hy@linktoc@#1\endcsname
2904 }%
2905 }
2906 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2907 \let\XR@ext\relax
2908 \define@key{Hyp}{verbose}[true]{}%
2909 \Hy@boolkey{verbose}{#1}%
2910 }
2911 \define@key{Hyp}{typexml}[true]{}%

```

```

2912 \Hy@boolkey{typexml}{#1}%
2913 }

```

If we are going to PDF via HyperTeX `\special` commands, the `dvips` (`-z` option) processor does not know the *height* of a link, as it works solely on the position of the closing `\special`. If we use this option, the `\special` is raised up by the right amount, to fool the dvi processor.

```

2914 \define@key{Hyp}{raiselinks}[true]{%
2915 \Hy@boolkey{raiselinks}{#1}%
2916 }

```

Most PDF-creating drivers do not allow links to be broken

```

2917 \def\Hy@setbreaklinks#1{%
2918 \csname breaklinks#1\endcsname
2919 }

2920 \def\Hy@breaklinks@unsupported{%
2921 \ifx\Hy@setbreaklinks@gobble
2922 \ifHy@breaklinks
2923 \Hy@WarningNoLine{%
2924 You have enabled option `breaklinks'.\MessageBreak
2925 But driver ``\Hy@driver.def' does not support this.\MessageBreak
2926 Expect trouble with the link areas of broken links%
2927 }%
2928 \fi
2929 \fi
2930 }

```

```

2931 \define@key{Hyp}{breaklinks}[true]{%
2932 \Hy@boolkey{breaklinks}{#1}%
2933 \let\Hy@setbreaklinks@gobble
2934 }

```

```

2935 \define@key{Hyp}{localanchorname}[true]{%
2936 \Hy@boolkey{localanchorname}{#1}%
2937 }

```

Determines whether an automatic anchor is put on each page

```

2938 \define@key{Hyp}{pageanchor}[true]{%
2939 \Hy@boolkey{pageanchor}{#1}%
2940 }

```

Are the page links done as plain arabic numbers, or do they follow the formatting of the package? The latter loses if you put in typesetting like `\textbf` or the like.

```

2941 \define@key{Hyp}{plainpages}[true]{%
2942 \Hy@boolkey{plainpages}{#1}%
2943 }

```

Are the names for anchors made as per the HyperTeX system, or do they simply use what \LaTeX provides?

```

2944 \define@key{Hyp}{naturalnames}[true]{%
2945 \Hy@boolkey{naturalnames}{#1}%
2946 }

```

Completely ignore the names as per the HyperTeX system, and use unique counters.

```

2947 \define@key{Hyp}{hypertexnames}[true]{%
2948 \Hy@boolkey{hypertexnames}{#1}%
2949 }

```

Currently, `dvips` doesn't allow anchors nested within targets, so this option tries to stop that happening. Other processors may be able to cope.

```

2950 \define@key{Hyp}{nesting}[true]{%

```

```

2951 \Hy@boolkey{nesting}{#1}%
2952 }
2953 \define@key{Hyp}{destlabel}[true]{%
2954 \Hy@boolkey{destlabel}{#1}%
2955 }
2956 \define@key{Hyp}{unicode}[true]{%
2957 \Hy@boolkey{unicode}{#1}%
2958 \ifHy@unicode
2959 \def\HyPsd@pdfencoding{unicode}%
2960 \HyPsd@LoadUnicode
2961 \else
2962 \def\HyPsd@pdfencoding{pdfdoc}%
2963 \fi
2964 }
2965 \Hy@AtBeginDocument{%
2966 \ifx\HyPsd@LoadUnicode\relax
2967 \else
2968 \def\HyPsd@LoadUnicode{%
2969 \Hy@Error{%
2970 Unicode support for bookmarks is not available.\MessageBreak
2971 Activate unicode support by using one of the options\MessageBreak
2972 `unicode', `pdfencoding=unicode', `pdfencoding=auto'\MessageBreak
2973 in the preamble%
2974 } \@ehc
2975 \global\let\HyPsd@LoadUnicode\relax
2976 \global\Hy@unicodedefalse
2977 \global\let\Hy@unicodetrue\Hy@unicodedefalse
2978 }%
2979 \fi
2980 }
2981 \define@key{Hyp}{pdfencoding}{%
2982 \edef\HyPsd@temp{#1}%
2983 \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2984 \let\HyPsd@pdfencoding\HyPsd@temp
2985 \Hy@unicodedefalse
2986 \else
2987 \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2988 \z@
2989 \else
2990 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2991 \z@
2992 \else
2993 \@ne
2994 \fi
2995 \fi
2996 \let\HyPsd@pdfencoding\HyPsd@temp
2997 \hypersetup{unicode}%
2998 \ifHy@unicode
2999 \def\HyPsd@pdfencoding{#1}%
3000 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
3001 \HyPsd@LoadStringEncoding
3002 \fi
3003 \else
3004 \Hy@Warning{Cannot switch to unicode bookmarks}%
3005 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
3006 \fi
3007 \else

```



```

3008 \@onelevel@sanitize\HyPsd@temp
3009 \Hy@Warning{%
3010   Values of option `pdfencoding':\MessageBreak
3011   `pdfdoc', `unicode', `auto'.\MessageBreak
3012   Ignoring unknown value `\'HyPsd@temp'%
3013   }%
3014 \fi
3015 \fi
3016 }
3017 \def\HyPsd@pdfencoding@auto{auto}
3018 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
3019 \def\HyPsd@pdfencoding@unicode{unicode}
3020 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
3021 \def\HyPsd@LoadStringEnc{%
3022   \RequirePackage{stringenc}[2009/12/15]%
3023   \let\HyPsd@LoadStringEnc\relax
3024 }
3025 \Hy@AtBeginDocument{%
3026   \ifpackageloaded{stringenc}{%
3027     \let\HyPsd@LoadStringEnc\relax
3028   }{%
3029     \def\HyPsd@LoadStringEnc{%
3030       \Hy@WarningNoLine{%
3031         Missing package `stringenc'. Use `pdfencoding=auto'\MessageBreak
3032         in the preamble or load the package there%
3033       }%
3034     }%
3035   }%
3036 }

3037 \define@key{Hyp}{psdextra}[true]{%
3038   \Hy@boolkey{psdextra}{#1}%
3039   \HyPsd@LoadExtra
3040 }

3041 \def\hypersetup{\kvsetkeys{Hyp}}

3042 \newif\ifHy@setpdfversion
3043 \define@key{Hyp}{pdfversion}{%
3044   \@ifundefined{Hy@pdfversion@#1}{%
3045     \PackageWarning{hyperref}{%
3046       Unsupported PDF version `#1'.\MessageBreak
3047       Valid values: 1.2 until 1.9%
3048     }%
3049   }{%
3050     \Hy@setpdfversiontrue
3051     \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
3052   }%
3053 }
3054 \@namedef{Hy@pdfversion@1.2}{2}%
3055 \@namedef{Hy@pdfversion@1.3}{3}%
3056 \@namedef{Hy@pdfversion@1.4}{4}%
3057 \@namedef{Hy@pdfversion@1.5}{5}%
3058 \@namedef{Hy@pdfversion@1.6}{6}%
3059 \@namedef{Hy@pdfversion@1.7}{7}%
3060 \@namedef{Hy@pdfversion@1.8}{8}%
3061 \@namedef{Hy@pdfversion@1.9}{9}%
3062 \def\Hy@pdfversion{5}

```

10 Options for different drivers

```
3063 \newif\ifHy@DviMode
3064 \let\Hy@DviErrMsg\ltx@empty
3065 \ifpdf
3066 \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
3067 \else
3068 \ifxetex
3069 \def\Hy@DviErrMsg{XeTeX is running}%
3070 \else
3071 \ifvtex
3072 \ifvtexdvi
3073 \Hy@DviModetrue
3074 \else
3075 \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
3076 \fi
3077 \else
3078 \Hy@DviModetrue
3079 \fi
3080 \fi
3081 \fi
3082 \def\HyOpt@CheckDvi#1{%
3083 \ifHy@DviMode
3084 \expandafter\ltx@firstofone
3085 \else
3086 \Hy@Error{%
3087 Wrong DVI mode driver option `#1',\MessageBreak
3088 because \Hy@DviErrMsg
3089 }\@ehc
3090 \expandafter\ltx@gobble
3091 \fi
3092 }

3093 \DeclareVoidOption{tex4ht}{%
3094 \Hy@texhttrue
3095 \kvsetkeys{Hyp}{colorlinks=true}%
3096 \def\BeforeTeXIVht{\RequirePackage{color}}%
3097 \def\Hy@driver{htex4ht}%
3098 \def\MaybeStopEarly{%
3099 \Hy@Message{Stopped early}%
3100 \Hy@AtBeginDocument{%
3101 \PDF@FinishDoc
3102 \gdef\PDF@FinishDoc{}}%
3103 }%
3104 \endinput
3105 }%
3106 }

3107 \DeclareVoidOption{pdftex}{%
3108 \ifpdf
3109 \def\Hy@driver{hpdftex}%
3110 \PassOptionsToPackage{pdftex}{color}%
3111 \else
3112 \Hy@Error{%
3113 Wrong driver option `pdftex',\MessageBreak
3114 because pdfTeX in PDF mode is not detected%
3115 }\@ehc
3116 \fi
3117 }
```

```

3118 \DeclareVoidOption{luatex}{%
3119   \ifpdf
3120     \ifx\pdfextension\@undefined
3121       \def\Hy@driver{hpdftex}%
3122       \PassOptionsToPackage{pdftex}{color}%
3123     \else
3124       \def\Hy@driver{hluatex}%
3125       \PassOptionsToPackage{luatex}{color}%
3126     \fi
3127   \else
3128     \Hy@Error{%
3129       Wrong driver option `luatex',\MessageBreak
3130       because luaTeX in PDF mode is not detected%
3131     }\@ehc
3132   \fi
3133 }
3134 \DeclareVoidOption{nativepdf}{%
3135   \HyOpt@CheckDvi{nativepdf}{%
3136     \def\Hy@driver{hdvips}%
3137     \PassOptionsToPackage{dvips}{color}%
3138   }%
3139 }
3140 \DeclareVoidOption{dvipdfm}{%
3141   \HyOpt@CheckDvi{dvipdfm}{%
3142     \def\Hy@driver{hdvipdfm}%
3143   }%
3144 }
3145 \DeclareVoidOption{dvipdfmx}{%
3146   \HyOpt@CheckDvi{dvipdfmx}{%
3147     \def\Hy@driver{hdvipdfm}%
3148     \PassOptionsToPackage{dvipdfmx}{color}%
3149   }%
3150 }
3151 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
3152   \expandafter\ifx\csname if#1\expandafter\endcsname
3153     \csname iftrue\endcsname
3154     \chardef\SpecialDvipdfmxOutlineOpen\@ne
3155   \else
3156     \chardef\SpecialDvipdfmxOutlineOpen\@
3157   \fi
3158 }
3159 \DeclareVoidOption{xetex}{%
3160   \ifxetex
3161     \def\Hy@driver{hxetex}%
3162   \else
3163     \Hy@Error{%
3164       Wrong driver option `xetex',\MessageBreak
3165       because XeTeX is not detected%
3166     }\@ehc
3167   \fi
3168 }
3169 \DeclareVoidOption{pdfmark}{%
3170   \HyOpt@CheckDvi{pdfmark}{%
3171     \def\Hy@driver{hdvips}%
3172   }%
3173 }
3174 \DeclareVoidOption{dvips}{%

```

```

3175 \HyOpt@CheckDvi{dvips}{%
3176   \def\Hy@driver{hdvips}%
3177   \PassOptionsToPackage{dvips}{color}%
3178 }%
3179 }
3180 \DeclareVoidOption{hypertex}{%
3181   \HyOpt@CheckDvi{hypertex}{%
3182     \def\Hy@driver{hypertex}%
3183   }%
3184 }
3185 \let\Hy@MaybeStopNow\relax
3186 \DeclareVoidOption{vtex}{%
3187   \ifvtex
3188     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3189     \def\Hy@driver{hvtex}%
3190   \else
3191     \ifnum\OpMode=10\relax
3192     \def\Hy@driver{hvtexhtm}%
3193     \def\MaybeStopEarly{%
3194       \Hy@Message{Stopped early}%
3195       \Hy@AtBeginDocument{%
3196         \PDF@FinishDoc
3197         \gdef\PDF@FinishDoc{}}%
3198     }%
3199     \endinput
3200   }%
3201   \else
3202     \Hy@Error{%
3203       Wrong driver option `vtex',\MessageBreak
3204       because of wrong OpMode (\the\OpMode)%
3205     }\@ehc
3206   \fi
3207   \fi
3208   \else
3209     \Hy@Error{%
3210       Wrong driver option `vtex',\MessageBreak
3211       because VTeX is not running%
3212     }\@ehc
3213   \fi
3214 }
3215 \DeclareVoidOption{vtexpdfmark}{%
3216   \ifvtex
3217     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3218     \def\Hy@driver{hvtexmrk}%
3219   \else
3220     \Hy@Error{%
3221       Wrong driver option `vtexpdfmark',\MessageBreak
3222       because of wrong OpMode (\the\OpMode)%
3223     }\@ehc
3224   \fi
3225   \else
3226     \Hy@Error{%
3227       Wrong driver option `vtexpdfmark',\MessageBreak
3228       because VTeX is not running%
3229     }\@ehc
3230   \fi
3231 }

```

```

3232 \DeclareVoidOption{dviwindo}{%
3233 \HyOpt@CheckDvi{dviwindo}{%
3234 \def\Hy@driver{hdviwind}%
3235 \kvsetkeys{Hyp}{colorlinks}%
3236 \PassOptionsToPackage{dviwindo}{color}%
3237 }%
3238 }
3239 \DeclareVoidOption{dvipsone}{%
3240 \HyOpt@CheckDvi{dvipsone}{%
3241 \def\Hy@driver{hdvipson}%
3242 \PassOptionsToPackage{dvipsone}{color}%
3243 }%
3244 }
3245 \DeclareVoidOption{textures}{%
3246 \HyOpt@CheckDvi{textures}{%
3247 \def\Hy@driver{htexture}%
3248 }%
3249 }
3250 \DeclareVoidOption{latex2html}{%
3251 \HyOpt@CheckDvi{latex2html}{%
3252 \Hy@AtBeginDocument{\@@@latex2htmlX}%
3253 }%
3254 }

```

No more special treatment for ps2pdf. Let it sink or swim.

```

3255 \DeclareVoidOption{ps2pdf}{%
3256 \HyOpt@CheckDvi{ps2pdf}{%
3257 \def\Hy@driver{hdvips}%
3258 \PassOptionsToPackage{dvips}{color}%
3259 }%
3260 }
3261 \let\HyOpt@DriverFallback\ltx@empty
3262 \define@key{Hyp}{driverfallback}{%
3263 \ifHy@DviMode
3264 \def\HyOpt@DriverFallback{#1}%
3265 \Hy@Match\HyOpt@DriverFallback{}{%
3266 ~(|dviPDFm|dviPDFmx|dvips|dvipsone|dviwindo|hypertext|ps2pdf|
3267 latex2html|tex4ht)$%
3268 }-}{%
3269 \Hy@Warning{%
3270 Invalid driver `#1' for option\MessageBreak
3271 `driverfallback'%
3272 }%
3273 \let\HyOpt@DriverFallback\ltx@empty
3274 }%
3275 \fi
3276 }
3277 \let\HyOpt@CustomDriver\ltx@empty
3278 \define@key{Hyp}{customdriver}{%
3279 \IfFileExists{#1.def}{%
3280 \def\HyOpt@CustomDriver{#1}%
3281 }-}{%
3282 \Hy@Warning{%
3283 Missing driver file `#1.def',\MessageBreak
3284 ignoring custom driver%
3285 }%
3286 }%

```

3287 }

11 Options to add extra features

Make included figures (assuming they use the standard graphics package) be hypertext links. Off by default. Needs more work.

```
3288 \define@key{Hyp}{hyperfigures}[true]{%
3289 \Hy@boolkey{hyperfigures}{#1}%
3290 }
```

The automatic footnote linking can be disabled by option hyperfootnotes.

```
3291 \define@key{Hyp}{hyperfootnotes}[true]{%
3292 \Hy@boolkey{hyperfootnotes}{#1}%
3293 }
```

Set up back-referencing to be hyper links, by page, slide or section number,

```
3294 \def\back@none{none}
3295 \def\back@section{section}
3296 \def\back@page{page}
3297 \def\back@slide{slide}
3298 \define@key{Hyp}{backref}[section]{%
3299 \lowercase{\def\Hy@tempa{#1}}%
3300 \ifx\Hy@tempa\@empty
3301 \let\Hy@tempa\back@section
3302 \fi
3303 \ifx\Hy@tempa\Hy@false
3304 \let\Hy@tempa\back@none
3305 \fi
3306 \ifx\Hy@tempa\back@slide
3307 \let\Hy@tempa\back@section
3308 \fi
3309 \ifx\Hy@tempa\back@page
3310 \PassOptionsToPackage{hyperpageref}{backref}%
3311 \Hy@backreftrue
3312 \else
3313 \ifx\Hy@tempa\back@section
3314 \PassOptionsToPackage{hyperref}{backref}%
3315 \Hy@backreftrue
3316 \else
3317 \ifx\Hy@tempa\back@none
3318 \Hy@backreffalse
3319 \else
3320 \Hy@WarnOptionValue{#1}{backref}{%
3321 `section', `slide', `page', `none',\MessageBreak
3322 or `false'}%
3323 \fi
3324 \fi
3325 \fi
3326 }
3327 \define@key{Hyp}{pagebackref}[true]{%
3328 \edef\Hy@tempa{#1}%
3329 \lowercase\expandafter{%
3330 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
3331 }%
3332 \ifx\Hy@tempa\@empty
3333 \let\Hy@tempa\Hy@true
3334 \fi
3335 \ifx\Hy@tempa\Hy@true
```

```

3336 \PassOptionsToPackage{hyperpageref}{backref}%
3337 \Hy@backreftrue
3338 \else
3339 \ifx\Hy@tempa\Hy@false
3340 \Hy@backreffalse
3341 \else
3342 \Hy@WarnOptionValue{#1}{pagebackref}{`true' or `false'}%
3343 \fi
3344 \fi
3345 }

```

Make index entries be links back to the relevant pages. By default this is turned on, but may be stopped.

```

3346 \define@key{Hyp}{hyperindex}[true]{%
3347 \Hy@boolkey{hyperindex}{#1}%
3348 }

```

Configuration of encap char.

```

3349 \define@key{Hyp}{encap}[\|]{%
3350 \def\HyInd@EncapChar{#1}%
3351 }

```

12 Language options

The `\autoref` feature depends on the language.

```

3352 \def\HyLang@afrikaans{%
3353 \def\equationautorefname{Vergelyking}%
3354 \def\footnoteautorefname{Voetnota}%
3355 \def\itemautorefname{Item}%
3356 \def\figureautorefname{Figuur}%
3357 \def\tableautorefname{Tabel}%
3358 \def\partautorefname{Deel}%
3359 \def\appendixautorefname{Bylae}%
3360 \def\chapterautorefname{Hoofstuk}%
3361 \def\sectionautorefname{Afdeling}%
3362 \def\subsectionautorefname{Subafdeling}%
3363 \def\subsubsectionautorefname{Subsubafdeling}%
3364 \def\paragraphautorefname{Paragraaf}%
3365 \def\subparagraphautorefname{Subparagraaf}%
3366 \def\FancyVerbLineautorefname{Lyn}%
3367 \def\theoremautorefname{Teorema}%
3368 \def\pageautorefname{Bladsy}%
3369 }
3370 \def\HyLang@english{%
3371 \def\equationautorefname{Equation}%
3372 \def\footnoteautorefname{footnote}%
3373 \def\itemautorefname{item}%
3374 \def\figureautorefname{Figure}%
3375 \def\tableautorefname{Table}%
3376 \def\partautorefname{Part}%
3377 \def\appendixautorefname{Appendix}%
3378 \def\chapterautorefname{chapter}%
3379 \def\sectionautorefname{section}%
3380 \def\subsectionautorefname{subsection}%
3381 \def\subsubsectionautorefname{subsubsection}%
3382 \def\paragraphautorefname{paragraph}%
3383 \def\subparagraphautorefname{subparagraph}%

```

```

3384 \def\FancyVerbLineautorefname{line}%
3385 \def\theoremautorefname{Theorem}%
3386 \def\pageautorefname{page}%
3387 }
3388 \def\HyLang@french{%
3389 \def\equationautorefname{'Equation}%
3390 \def\footnoteautorefname{note}%
3391 \def\itemautorefname{item}%
3392 \def\figureautorefname{Figure}%
3393 \def\tableautorefname{Tableau}%
3394 \def\partautorefname{Partie}%
3395 \def\appendixautorefname{Appendice}%
3396 \def\chapterautorefname{chapitre}%
3397 \def\sectionautorefname{section}%
3398 \def\subsectionautorefname{sous-section}%
3399 \def\subsubsectionautorefname{sous-sous-section}%
3400 \def\paragraphautorefname{paragraphe}%
3401 \def\subparagraphautorefname{sous-paragraphe}%
3402 \def\FancyVerbLineautorefname{ligne}%
3403 \def\theoremautorefname{Th\'eor\`eme}%
3404 \def\pageautorefname{page}%
3405 }
3406 \def\HyLang@german{%
3407 \def\equationautorefname{Gleichung}%
3408 \def\footnoteautorefname{Fu\ss note}%
3409 \def\itemautorefname{Punkt}%
3410 \def\figureautorefname{Abbildung}%
3411 \def\tableautorefname{Tabelle}%
3412 \def\partautorefname{Teil}%
3413 \def\appendixautorefname{Anhang}%
3414 \def\chapterautorefname{Kapitel}%
3415 \def\sectionautorefname{Abschnitt}%
3416 \def\subsectionautorefname{Unterabschnitt}%
3417 \def\subsubsectionautorefname{Unterunterabschnitt}%
3418 \def\paragraphautorefname{Absatz}%
3419 \def\subparagraphautorefname{Unterabsatz}%
3420 \def\FancyVerbLineautorefname{Zeile}%
3421 \def\theoremautorefname{Theorem}%
3422 \def\pageautorefname{Seite}%
3423 }
3424 \def\HyLang@italian{%
3425 \def\equationautorefname{Equazione}%
3426 \def\footnoteautorefname{nota}%
3427 \def\itemautorefname{punto}%
3428 \def\figureautorefname{Figura}%
3429 \def\tableautorefname{Tabella}%
3430 \def\partautorefname{Parte}%
3431 \def\appendixautorefname{Appendice}%
3432 \def\chapterautorefname{Capitolo}%
3433 \def\sectionautorefname{sezione}%
3434 \def\subsectionautorefname{sottosezione}%
3435 \def\subsubsectionautorefname{sottosottosezione}%
3436 \def\paragraphautorefname{paragrafo}%
3437 \def\subparagraphautorefname{sottoparagrafo}%
3438 \def\FancyVerbLineautorefname{linea}%
3439 \def\theoremautorefname{Teorema}%
3440 \def\pageautorefname{Pag.\@}%

```



```

3441 }
3442 \def\HyLang@magyar{%
3443 \def\equationautorefname{Egyenlet}%
3444 \def\footnoteautorefname{1'abjegyzet}%
3445 \def\itemautorefname{Elem}%
3446 \def\figureautorefname{'Abra}%
3447 \def\tableautorefname{T'abl'azat}%
3448 \def\partautorefname{R'esz}%
3449 \def\appendixautorefname{F"uggel'ek}%
3450 \def\chapterautorefname{fejezet}%
3451 \def\sectionautorefname{szakasz}%
3452 \def\subsectionautorefname{alszakasz}%
3453 \def\subsubsectionautorefname{alalszakasz}%
3454 \def\paragraphautorefname{bekezd'es}%
3455 \def\subparagraphautorefname{albekezd'es}%
3456 \def\FancyVerbLineautorefname{sor}%
3457 \def\theoremautorefname{T'etel}%
3458 \def\pageautorefname{oldal}%
3459 }
3460 \def\HyLang@portuges{%
3461 \def\equationautorefname{Equa\c c\~ao}%
3462 \def\footnoteautorefname{Nota de rodap'e}%
3463 \def\itemautorefname{Item}%
3464 \def\figureautorefname{Figura}%
3465 \def\tableautorefname{Tabela}%
3466 \def\partautorefname{Parte}%
3467 \def\appendixautorefname{Ap\~endice}%
3468 \def\chapterautorefname{Cap'itulo}%
3469 \def\sectionautorefname{Se\c c\~ao}%
3470 \def\subsectionautorefname{Subse\c c\~ao}%
3471 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3472 \def\paragraphautorefname{par'agrafo}%
3473 \def\subparagraphautorefname{subpar'agrafo}%
3474 \def\FancyVerbLineautorefname{linha}%
3475 \def\theoremautorefname{Teorema}%
3476 \def\pageautorefname{P'agina}%
3477 }

```

Next commented section for Russian is provided by Olga Lapko.

Next follow the checked reference names with commented variants and explanations. All they are abbreviated and they won't create a grammatical problems in the *middle* of sentences.

The most weak points in these abbreviations are the `\equationautorefname`, `\theoremautorefname` and the `\FancyVerbLineautorefname`. But those three, and also the `\footnoteautorefname` are not *too* often referenced. Another rather weak point is the `\appendixautorefname`.

```
3478 \def\HyLang@russian{%
```

The abbreviated reference to the equation: it is not for “the good face of the book”, but maybe it will be better to get the company for the `\theoremautorefname`?

```
3479 \def\equationautorefname{\cyr\cyrv\cyry\cyrr.}%
```

The name of the equation reference has common form for both nominative and accusative but changes in other forms, like “of `\auto{auto}`” etc. The full name must follow full name of the `\theoremautorefname`.

```
3480 % \def\equationautorefname{%
```

```
3481 % \cyr\cyrv\cyry\cyrr\cyra\cyrz\cyre\cyrn\cyri\cyre
```

```
3482 % }%
```

The variant of footnote has abbreviation form of the synonym of the word “footnote”. This variant of abbreviated synonym has alternative status (maybe obsolete?).

```
3483 \def\footnoteautorefname{%
3484 \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
3485 }%
```

Commented form of the full synonym for “footnote”. It has common form for both nominative and accusative but changes in other forms, like “of \autoref{auto}”

```
3486 % \def\footnoteautorefname{%
3487 % \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
3488 % \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
3489 % }%
```

Commented forms of the “footnote”: have different forms, the same is for the nominative and accusative. (The others needed?)

```
3490 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
3491 % \def\Accfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyru}%
```

Name of the list item, can be confused with the paragraph reference name, but reader could understand meaning from context(?). Commented variant has common form for both nominative and accusative but changes in other forms, like “of \autoref{auto}” etc.

```
3492 \def\itemautorefname{\cyr\cyrp.}%
3493 % \def\itemautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
```

Names of the figure and table have stable (standard) abbreviation forms. No problem in the middle of sentence.

```
3494 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
3495 \def\tableautorefname{\cyr\cyrt\cyra\cyrb\cyrl.}%
```

Names of the part, chapter, section(s) have stable (standard) abbreviation forms. No problem in the middle of sentence.

```
3496 \def\partautorefname{\cyr\cyrch.}%
3497 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
3498 \def\sectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
```

Name of the appendix can use this abbreviation, but it is not standard for books, i.e, not for “the good face of the book”. Commented variant has common form for both nominative and accusative but changes in other forms, like “of \autoref{auto}” etc.

```
3499 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
3500 % \def\appendixautorefname{%
3501 % \cyr\cyrp\cyrr\cyri\cyri\cyro\cyrz\cyre\cyrn\cyri\cyre
3502 % }%
```

The sectioning command have stable (almost standard) and common abbreviation form for all levels (the meaning of these references visible from the section number). No problem.

```
3503 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3504 \def\subsubsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
```

The names of references to paragraphs also have stable (almost standard) and common abbreviation form for all levels (the meaning of these references is visible from the section number). No problem in the middle of sentence.

```
3505 \def\paragraphautorefname{\cyr\cyrp.}%
3506 \def\subparagraphautorefname{\cyr\cyrp.}%
```

Commented variant can be used in books but since it has common form for both nominative and accusative but it changes in other forms, like “of \autoref{auto}” etc.

```
3507 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3508 % \def\subparagraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
```

The name of verbatim line. Here could be a standard of the abbreviation (used very rare). But the author preprint publications (which have not any editor or corrector) can use this abbreviation for the page reference. So the meaning of the line reference can be read as reference to the page.

```
3509 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

Commented names of the “verbatim line”: have different forms, also the nominative and accusative.

```
3510 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
3511 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

The alternative, ve-e-e-ery professional abbreviation, was used in typography markup for typesetters.

```
3512 % \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyrk.}%
```

The names of theorem: if we want have “the good face of the book”, so the theorem reference must have the full name (like equation reference). But ...

```
3513 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

Commented forms of the “theorem”: have different forms, also the nominative and accusative.

```
3514 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
3515 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

Name of the page stable (standard) abbreviation form. No problem.

```
3516 \def\pageautorefname{\cyr\cyrs.}%
3517 }
```

```
3518 \def\HyLang@spanish{%
3519 \def\equationautorefname{Ecuaci'on}%
3520 \def\footnoteautorefname{Nota a pie de p'agina}%
3521 \def\itemautorefname{Elemento}%
3522 \def\figureautorefname{Figura}%
3523 \def\tableautorefname{Tabla}%
3524 \def\partautorefname{Parte}%
3525 \def\appendixautorefname{Ap'endice}%
3526 \def\chapterautorefname{Cap'itulo}%
3527 \def\sectionautorefname{Secci'on}%
3528 \def\subsectionautorefname{Subsecci'on}%
3529 \def\subsubsectionautorefname{Subsubsecci'on}%
3530 \def\paragraphautorefname{P'arrafo}%
3531 \def\subparagraphautorefname{Subp'arrafo}%
3532 \def\FancyVerbLineautorefname{L'inea}%
3533 \def\theoremautorefname{Teorema}%
3534 \def\pageautorefname{P'agina}%
3535 }
```

```
3536 \def\HyLang@catalan{%
3537 \def\equationautorefname{Equaci'o}%
3538 \def\footnoteautorefname{Nota al peu de p'agina}%
3539 \def\itemautorefname{Element}%
3540 \def\figureautorefname{Figura}%
3541 \def\tableautorefname{Taula}%
3542 \def\partautorefname{Part}%
```

```

3543 \def\appendixautorefname{Ap\`endix}%
3544 \def\chapterautorefname{Cap\`itol}%
3545 \def\sectionautorefname{Secci\`o}%
3546 \def\subsectionautorefname{Subsecci\`o}%
3547 \def\subsubsectionautorefname{Subsubsecci\`o}%
3548 \def\paragraphautorefname{Par\`agraf}%
3549 \def\subparagraphautorefname{Subpar\`agraf}%
3550 \def\FancyVerbLineautorefname{L\`inia}%
3551 \def\theoremautorefname{Teorema}%
3552 \def\pageautorefname{P\`agina}%
3553 }

3554 \def\HyLang@vietnamese{%
3555 \def\equationautorefname{Ph\`uhorn{}}\ohorn{}ng tr\`inh}%
3556 \def\footnoteautorefname{Ch\`u th\`ich}%
3557 \def\itemautorefname{m\`d{u}c}%
3558 \def\figureautorefname{H\`inh}%
3559 \def\tableautorefname{B\`h{a}ng}%
3560 \def\partautorefname{Ph\`acircumflex{}n}%
3561 \def\appendixautorefname{Ph\`d{u} l\`d{u}c}%
3562 \def\chapterautorefname{ch\`uhorn{}}\ohorn{}ng}%
3563 \def\sectionautorefname{m\`d{u}c}%
3564 \def\subsectionautorefname{m\`d{u}c}%
3565 \def\subsubsectionautorefname{m\`d{u}c}%
3566 \def\paragraphautorefname{\dj{}}o\`d{a}n}%
3567 \def\subparagraphautorefname{\dj{}}o\`d{a}n}%
3568 \def\FancyVerbLineautorefname{d\`ong}%
3569 \def\theoremautorefname{\DJ{}}d\`i\`nh l\`y}%
3570 \def\pageautorefname{Trang}%
3571 }

```

Greek, see github issue 52

```

3572 \def\HyLang@greek{%
3573 \def\equationautorefname{\textEpsilon\textxi\acctonos\textiota\textsigma\text-
tomega\textsigma\texteta}%
3574 \def\footnoteautorefname{\textupsilon\textpi\textomicron\textsigma\text-
teta\textmu\textepsilon\acctonos\textiota\textomega\textsigma\texteta}%
3575 \def\itemautorefname{\textalpha\textnu\texttau\textiota\textkappa\textep-
silon\acctonos\textiota\textmu\textepsilon\textnu\textomicron}%
3576 \def\figureautorefname{\textSigma\textchi\acctonos\texteta\textmu\textal-
pha}%
3577 \def\tableautorefname{\textPi\acctonos\textiota\textnu\textalpha\textkappa\text-
alpha}%
3578 \def\partautorefname{\textMu\acctonos\textepsilon\textrho\textomicron\textvar-
sigma}%
3579 \def\appendixautorefname{\textPi\textalpha\textrho\acctonos\textalpha\text-
rho\texttau\texteta\textmu\textalpha}%
3580 \def\chapterautorefname{\textkappa\textepsilon\textphi\acctonos\textal-
pha\textlambda\textalpha\textiota\textomicron}%
3581 \def\sectionautorefname{\textepsilon\textnu\acctonos\textomicron\texttau\text-
eta\texttau\textalpha}%
3582 \def\subsectionautorefname{\textupsilon\textpi\textomicron\textepsilon\textnu\ac-
ctonos\textomicron\texttau\texteta\texttau\textalpha}%
3583 \def\subsubsectionautorefname{\textupsilon\textpi\textomicron-\textupsilon\textpi\textomicron\text-
3584 \def\paragraphautorefname{\textpi\textalpha\textrho\acctonos\textalpha\textgamma\text-
rho\textalpha\textphi\textomicron\textvarsigma}%
3585 \def\subparagraphautorefname{\textupsilon\textpi\textomicron\textpi\text-
alpha\textrho\acctonos\textalpha\textgamma\textrho\textalpha\textphi\textomi-
cron\textvarsigma}%

```

```

3586 \def\FancyVerbLineautorefname{\textgamma\textrho\textalpha\textmu\textmu\ac-
      ctonos\texteta}%
3587 \def\theoremautorefname{\textTheta\textepsilon\acctonos\textomega\text-
      rho\texteta\textmu\textalpha}%
3588 \def\pageautorefname{\textsigma\textepsilon\textlambda\acctonos\textiota\textdelta\text-
      alpha}%
3589 }

```

Instead of package babel's definition of `\addto` the implementation of package `varioref` is used. Additionally argument `#1` is checked for `\relax`.

```

3590 \def\HyLang@addto#1#2{%
3591   #2%
3592   \@temptokena{#2}%
3593   \ifx#1\relax
3594     \let#1\@empty
3595   \fi
3596   \ifx#1\@undefined
3597     \edef#1{\the\@temptokena}%
3598   \else
3599     \toks@\expandafter{#1}%
3600     \edef#1{\the\toks@\the\@temptokena}%
3601   \fi
3602   \@temptokena{}\toks@\@temptokena
3603 }

3604 \def\HyLang@DeclareLang#1#2#3{%
3605   \ifpackagewith{babel}{#1}{%
3606     \expandafter\HyLang@addto
3607       \csname extras#1\expandafter\endcsname
3608       \csname HyLang@#2\endcsname
3609     \begingroup
3610     \edef\x{\endgroup
3611       #3%
3612     }%
3613     \x
3614     \@namedef{HyLang@#1@done}{}%
3615   }{%
3616     \begingroup
3617     \edef\x##1##2{%
3618       \noexpand\ifx##2\relax
3619         \errmessage{No definitions for language #2' found!}%
3620       \noexpand\fi
3621     \endgroup
3622     \noexpand\define@key{Hyp}{#1}[]{%
3623       \noexpand\@ifundefined{HyLang@#1@done}{%
3624         \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3625         #3%
3626         \noexpand\@namedef{HyLang@#1@done}{}%
3627       }{}%
3628     }%
3629   }%
3630   \expandafter\x\csname extras#1\expandafter\endcsname
3631     \csname HyLang@#2\endcsname
3632 }

3633 \HyLang@DeclareLang{english}{english}{}
3634 \HyLang@DeclareLang{UKenglish}{english}{}
3635 \HyLang@DeclareLang{british}{english}{}
3636 \HyLang@DeclareLang{USenglish}{english}{}

```

```

3637 \HyLang@DeclareLang{american}{english}{}
3638 \HyLang@DeclareLang{german}{german}{}
3639 \HyLang@DeclareLang{austrian}{german}{}
3640 \HyLang@DeclareLang{ngerman}{german}{}
3641 \HyLang@DeclareLang{naustrian}{german}{}
3642 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3643 \HyLang@DeclareLang{brazil}{portuges}{}
3644 \HyLang@DeclareLang{brazilian}{portuges}{}
3645 \HyLang@DeclareLang{portuguese}{portuges}{}
3646 \HyLang@DeclareLang{spanish}{spanish}{}
3647 \HyLang@DeclareLang{catalan}{catalan}{}
3648 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3649 \HyLang@DeclareLang{french}{french}{}
3650 \HyLang@DeclareLang{frenchb}{french}{}
3651 \HyLang@DeclareLang{français}{french}{}
3652 \HyLang@DeclareLang{acadian}{french}{}
3653 \HyLang@DeclareLang{canadien}{french}{}
3654 \HyLang@DeclareLang{italian}{italian}{}
3655 \HyLang@DeclareLang{magyar}{magyar}{}
3656 \HyLang@DeclareLang{hungarian}{magyar}{}
3657 \HyLang@DeclareLang{greek}{greek}{}

```

More work is needed in case of options vietnamese and vietnam.

```

3658 \DeclareVoidOption{vietnamese}{%
3659   \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3660   \Hy@AtEndOfPackage{%
3661     \@ifundefined{T@PU}{}{}%
3662     \input{puvnenc.def}%
3663   }%
3664 }%
3665 }
3666 \DeclareVoidOption{vietnam}{%
3667   \HyLang@addto\extrasvietnam\HyLang@vietnamese
3668   \Hy@AtEndOfPackage{%
3669     \@ifundefined{T@PU}{}{}%
3670     \input{puvnenc.def}%
3671   }%
3672 }%
3673 }

```

Similar for option arabic that just loads the additions to PU encoding for Arabi.

```

3674 \DeclareVoidOption{arabic}{%
3675   \Hy@AtEndOfPackage{%
3676     \@ifundefined{T@PU}{}{}%
3677     \input{puarenc.def}%
3678   }%
3679 }%
3680 }

```

13 Options to change appearance of links

Colouring links at the L^AT_EX level is useful for debugging, perhaps.

```

3681 \define@key{Hyp}{colorlinks}[true]{%
3682   \Hy@boolkey{colorlinks}{#1}%
3683 }
3684 \DeclareVoidOption{hidelinks}{%
3685   \Hy@colorlinksfalse

```

```

3686 \Hy@ocgcolorlinksfalse
3687 \Hy@frenchlinksfalse
3688 \def\Hy@colorlink##1{\begingroup}%
3689 \def\Hy@endcolorlink{\endgroup}%
3690 \def\@pdfborder{0 0 0}%
3691 \let\@pdfborderstyle\tx@empty
3692 }
3693 \define@key{Hyp}{ocgcolorlinks}[true]{%
3694 \Hy@boolkey{ocgcolorlinks}{#1}%
3695 }
3696 \Hy@AtBeginDocument{%
3697 \begingroup
3698 \@ifundefined{OBJ@OCG@view}{%
3699 \ifHy@ocgcolorlinks
3700 \Hy@Warning{%
3701 Driver does not support `ocgcolorlinks',\MessageBreak
3702 using `colorlinks' instead%
3703 }%
3704 \fi
3705 }{}%
3706 \endgroup
3707 }
3708 \define@key{Hyp}{frenchlinks}[true]{%
3709 \Hy@boolkey{frenchlinks}{#1}%
3710 }

```

14 Bookmarking

```

3711 \begingroup\expandafter\expandafter\expandafter\endgroup
3712 \expandafter\ifx\csname chapter\endcsname\relax
3713 \def\toclevel@part{0}%
3714 \else
3715 \def\toclevel@part{-1}%
3716 \fi
3717 \def\toclevel@chapter{0}
3718 \def\toclevel@section{1}
3719 \def\toclevel@subsection{2}
3720 \def\toclevel@subsubsection{3}
3721 \def\toclevel@paragraph{4}
3722 \def\toclevel@subparagraph{5}
3723 \def\toclevel@figure{0}
3724 \def\toclevel@table{0}
3725 \@ifpackageloaded{listings}{%
3726 \providecommand*\theHlstlisting{\thelstlisting}%
3727 \providecommand*\toclevel@lstlisting{0}%
3728 }{}
3729 \@ifpackageloaded{listing}{%
3730 \providecommand*\theHlisting{\thelisting}%
3731 \providecommand*\toclevel@listing{0}%
3732 }{}
3733 \define@key{Hyp}{bookmarks}[true]{%
3734 \Hy@boolkey{bookmarks}{#1}%
3735 }
3736 \define@key{Hyp}{bookmarksopen}[true]{%
3737 \Hy@boolkey{bookmarksopen}{#1}%
3738 }

```

The depth of the outlines is controlled by option `bookmarksdepth`. The option acts globally and distinguishes three cases:

- `bookmarksdepth`: Without value `hyperref` uses counter `tocdepth` (compatible behaviour and default).
- `bookmarksdepth=<number>`: the depth is set to `<number>`.
- `bookmarksdepth=<name>`: The `<name>` must not start with a number or minus sign. It is a document division name (part, chapter, section, ...). Internally the value of macro `\toclevel@<name>` is used.

```

3739 \let\Hy@bookmarksdepth\c@tocdepth
3740 \define@key{Hyp}{bookmarksdepth}[]{%
3741   \begingroup
3742   \edef\x{#1}%
3743   \ifx\x\empty
3744     \global\let\Hy@bookmarksdepth\c@tocdepth
3745   \else
3746     \@ifundefined{toclevel@\x}{%
3747       \@onelevel@sanitize\x
3748       \edef\y{\expandafter\@car\x\@nil}%
3749       \ifcase 0\expandafter\ifx\y-1\fi
3750         \expandafter\ifnum\expandafter`\y>47 %
3751           \expandafter\ifnum\expandafter`\y<58 1\fi\fi\relax
3752         \Hy@Warning{Unknown document division name (\x)}%
3753       \else
3754         \setbox\z@=\hbox{%
3755           \count@=\x
3756           \xdef\Hy@bookmarksdepth{\the\count@}%
3757         }%
3758       \fi
3759     }{%
3760       \setbox\z@=\hbox{%
3761         \count@=\csname toclevel@\x\endcsname
3762         \xdef\Hy@bookmarksdepth{\the\count@}%
3763       }%
3764     }%
3765   \fi
3766 \endgroup
3767 }

```

‘`bookmarksopenlevel`’ to specify the open level. From Heiko Oberdiek.

```

3768 \define@key{Hyp}{bookmarksopenlevel}{%
3769   \def\@bookmarksopenlevel{#1}%
3770 }
3771 \def\@bookmarksopenlevel{\maxdimen}
3772 % `bookmarkstype' to specify which `toc' file to mimic
3773 \define@key{Hyp}{bookmarkstype}{%
3774   \def\Hy@bookmarkstype{#1}%
3775 }
3776 \def\Hy@bookmarkstype{toc}

```

Richard Curnow <richard@curnow.demon.co.uk> suggested this functionality. It adds section numbers etc to bookmarks.

```

3777 \define@key{Hyp}{bookmarksnumbered}[true]{%
3778   \Hy@boolkey{bookmarksnumbered}{#1}%
3779 }

```


Option CJKbookmarks enables the patch for CJK bookmarks.

```

3780 \define@key{Hyp}{CJKbookmarks}[true]{%
3781   \Hy@boolkey{CJKbookmarks}{#1}%
3782 }

3783 \def\Hy@temp#1{%
3784   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3785 }
3786 \def\Hy@@temp#1#2#3{%
3787   \define@key{Hyp}{#2color}{%
3788     \HyColor@HyperrefColor{##1}#1%
3789   }%
3790   \def#1{#3}%
3791 }
3792 \Hy@temp{link}{red}
3793 \Hy@temp{anchor}{black}
3794 \Hy@temp{cite}{green}
3795 \Hy@temp{file}{cyan}
3796 \Hy@temp{url}{magenta}
3797 \Hy@temp{menu}{red}
3798 \Hy@temp{run}{\@filecolor}
3799 \define@key{Hyp}{pagecolor}{%
3800   \Hy@WarningPageColor
3801 }
3802 \def\Hy@WarningPageColor{%
3803   \Hy@WarningNoLine{Option `pagecolor' is not available anymore}%
3804   \global\let\Hy@WarningPageColor\relax
3805 }
3806 \define@key{Hyp}{allcolors}{%
3807   \HyColor@HyperrefColor{#1}\@linkcolor
3808   \HyColor@HyperrefColor{#1}\@anchorcolor
3809   \HyColor@HyperrefColor{#1}\@citecolor
3810   \HyColor@HyperrefColor{#1}\@filecolor
3811   \HyColor@HyperrefColor{#1}\@urlcolor
3812   \HyColor@HyperrefColor{#1}\@menucolor
3813   \HyColor@HyperrefColor{#1}\@runcolor
3814 }

3815 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3816 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3817 \let\@baseurl\@empty
3818 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3819 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3820 \hyperlinkfileprefix{file:}

```

15 PDF-specific options

`\@pdfpagetransition` The value of option `pdfpagetransition` is stored in `\@pdfpagetransition`. Its initial value is set to `\relax` in order to be able to differentiate between a not used option and an option with an empty value.

```

3821 \let\@pdfpagetransition\relax
3822 \define@key{Hyp}{pdfpagetransition}{%
3823   \def\@pdfpagetransition{#1}%
3824 }

```

`\@pdfpageduration` The value of option `pdfpageduration` is stored in `\@pdfpageduration`. Its initial value is set to `\relax` in order to be able to differentiate between a not used option

and an option with an empty value.

```

3825 \let\@pdfpageduration\relax
3826 \define@key{Hyp}{pdfpageduration}{%
3827   \def\@pdfpageduration{#1}%
3828   \Hy@Match\@pdfpageduration}{%
3829     ^(|[0-9]+\.\?[0-9]*|[0-9]*\.\?[0-9]+)$%
3830   }{)%
3831   \Hy@Warning{%
3832     Invalid value '\@pdfpageduration'\MessageBreak
3833     of option `pdfpageduration'\MessageBreak
3834     is replaced by an empty value%
3835   }%
3836   \let\@pdfpageduration\ltx@empty
3837 }%
3838 }

```

The entry for the /Hid key in the page object is only necessary, if it is used and set to true for at least one time. If it is always false, then the /Hid key is not written to the pdf page object in order not to enlarge the pdf file.

```

3839 \newif\ifHy@useHidKey
3840 \Hy@useHidKeyfalse
3841 \define@key{Hyp}{pdfpagehidden}[true]{%
3842   \Hy@boolkey{pdfpagehidden}{#1}%
3843   \ifHy@pdfpagehidden
3844     \global\Hy@useHidKeytrue
3845   \fi
3846 }

```

The value of the bordercolor options are not processed by the color package. Therefore the value consists of space separated rgb numbers in the range 0 until 1.

Package xcolor provides \XC@bordercolor since version 1.1. If the two spaces in the color specification are missing, then the value is processed as color specification from package xcolor by using \XC@bordercolor (since xcolor 2004/05/09 v1.11, versions 2005/03/24 v2.02 until 2006/11/28 v2.10 do not work because of a bug that is fixed in 2007/01/21 v2.11).

```

3847 \def\Hy@ColorList{cite,file,link,menu,run,url}
3848 \@for\Hy@temp:=\Hy@ColorList\do{%
3849   \edef\Hy@temp{%
3850     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3851       \noexpand\HyColor@HyperrefBorderColor
3852         {##1}%
3853       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3854       {hyperref}%
3855       {\Hy@temp bordercolor}%
3856     }%
3857   }%
3858   \Hy@temp
3859 }
3860 \define@key{Hyp}{pagebordercolor}{%
3861   \Hy@WarningPageBorderColor
3862 }
3863 \def\Hy@WarningPageBorderColor{%
3864   \Hy@WarningNoLine{Option `pagebordercolor' is not available anymore}%
3865   \global\let\Hy@WarningPageBorderColor\relax
3866 }
3867 \define@key{Hyp}{allbordercolors}{%

```

```

3868 \def\Hy@temp##1##2{%
3869   \HyColor@HyperrefBorderColor{#1}##1{hyperref}{##2bordercolor}%
3870 }%
3871 \Hy@temp\@citebordercolor{cite}%
3872 \Hy@temp\@filebordercolor{file}%
3873 \Hy@temp\@linkbordercolor{link}%
3874 \Hy@temp\@menubordercolor{menu}%
3875 \Hy@temp\@runbordercolor{run}%
3876 \Hy@temp\@urlbordercolor{url}%
3877 }

3878 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3879 \Hy@DefNameKey{pdfhighlight}{%
3880   \do{/I}{Invert}%
3881   \do{/N}{None}%
3882   \do{/O}{Outline}%
3883   \do{/P}{Push}%
3884 }
3885 \def\Hy@setpdfhighlight{%
3886   \ifx\@pdfhighlight\@empty
3887     \else
3888     /H\@pdfhighlight
3889     \fi
3890 }
3891 \define@key{Hyp}{pdfborder}{%
3892   \let\Hy@temp\@pdfborder
3893   \def\@pdfborder{#1}%
3894   \Hy@Match\@pdfborder}{%
3895     ~\HyPat@NonNegativeReal/ %
3896     \HyPat@NonNegativeReal/ %
3897     \HyPat@NonNegativeReal/%
3898     ( ?[\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*]?$%
3899   }{ }{%
3900     \Hy@Warning{%
3901       Invalid value ` \@pdfborder'\MessageBreak
3902       for option `pdfborder'.\MessageBreak
3903       Option setting is ignored%
3904     }%
3905     \let\@pdfborder\Hy@temp
3906   }%
3907 }
3908 \define@key{Hyp}{pdfborderstyle}{%
3909   \let\Hy@temp\@pdfborderstyle
3910   \def\@pdfborderstyle{#1}%
3911   \Hy@Match\@pdfborderstyle}{%
3912     ~%
3913     ( */Type */Border%
3914     | */W +\HyPat@NonNegativeReal/%
3915     | */S */[SDBIU]%
3916     | */D *[ ( \HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)? )? ]%
3917     )* *$%
3918   }{ }{%
3919     \Hy@Warning{%
3920       Invalid value ` \@pdfborderstyle'\MessageBreak
3921       for option `pdfborderstyle'.\MessageBreak
3922       Option setting is ignored%
3923     }%
3924     \let\@pdfborderstyle\Hy@temp

```

```

3925 }%
3926 }
3927 \def\Hy@setpdfborder{%
3928 \ifx\@pdfborder\@empty
3929 \else
3930 /Border[\@pdfborder]%
3931 \fi
3932 \ifx\@pdfborderstyle\@empty
3933 \else
3934 /BS<<\@pdfborderstyle>>%
3935 \fi
3936 }
3937 \Hy@DefNameKey{pdfpagemode}{%
3938 \do{UseNone}{}%
3939 \do{UseOutlines}{}%
3940 \do{UseThumbs}{}%
3941 \do{FullScreen}{}%
3942 \do{UseOC}{PDF 1.5}%
3943 \do{UseAttachments}{PDF 1.6}%
3944 }
3945 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3946 \do{UseNone}{}%
3947 \do{UseOutlines}{}%
3948 \do{UseThumbs}{}%
3949 \do{FullScreen}{}%
3950 \do{UseOC}{PDF 1.5}%
3951 \do{UseAttachments}{PDF 1.6}%
3952 }
3953 \Hy@DefNameKey{pdfdirection}{%
3954 \do{L2R}{Left to right}%
3955 \do{R2L}{Right to left}%
3956 }
3957 \Hy@DefNameKey{pdfviewarea}{%
3958 \do{MediaBox}{}%
3959 \do{CropBox}{}%
3960 \do{BleedBox}{}%
3961 \do{TrimBox}{}%
3962 \do{ArtBox}{}%
3963 }
3964 \Hy@DefNameKey{pdfviewclip}{%
3965 \do{MediaBox}{}%
3966 \do{CropBox}{}%
3967 \do{BleedBox}{}%
3968 \do{TrimBox}{}%
3969 \do{ArtBox}{}%
3970 }
3971 \Hy@DefNameKey{pdfprintarea}{%
3972 \do{MediaBox}{}%
3973 \do{CropBox}{}%
3974 \do{BleedBox}{}%
3975 \do{TrimBox}{}%
3976 \do{ArtBox}{}%
3977 }
3978 \Hy@DefNameKey{pdfprintclip}{%
3979 \do{MediaBox}{}%
3980 \do{CropBox}{}%
3981 \do{BleedBox}{}%

```

```

3982 \do{TrimBox}{}%
3983 \do{ArtBox}{}%
3984 }
3985 \Hy@DefNameKey{pdfprintscaling}{%
3986 \do{AppDefault}{}%
3987 \do{None}{}%
3988 }
3989 \Hy@DefNameKey{pdfduplex}{%
3990 \do{Simplex}{}%
3991 \do{DuplexFlipShortEdge}{}%
3992 \do{DuplexFlipLongEdge}{}%
3993 }
3994 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3995 \do{true}{}%
3996 \do{false}{}%
3997 }
3998 \define@key{Hyp}{pdfprintpagerange}{%
3999 \def\@pdfprintpagerange{#1}%
4000 }
4001 \Hy@DefNameKey{pdfnumcopies}{%
4002 \do{2}{two copies}%
4003 \do{3}{three copies}%
4004 \do{4}{four copies}%
4005 \do{5}{five copies}%
4006 }
4007 \define@key{Hyp}{pdfusetitle}[true]{%
4008 \Hy@boolkey{pdfusetitle}{#1}%
4009 }
4010 \def\HyXeTeX@CheckUnicode{%
4011 \ifxetex
4012 \ifHy@unicode
4013 \else
4014 \Hy@WarningNoLine{%
4015 XeTeX driver only supports unicode.\MessageBreak
4016 Enabling option `unicode'%
4017 }%
4018 \kvsetkeys{Hyp}{unicode}%
4019 \fi
4020 \else
4021 \let\HyXeTeX@CheckUnicode\relax
4022 \fi
4023 }
4024 \def\HyPsd@PrerenderUnicode#1{%
4025 \begingroup
4026 \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
4027 \else
4028 \sbox0{%
4029 \let\GenericInfo\@gobbletwo
4030 \let\GenericWarning\@gobbletwo
4031 \let\GenericError\@gobblefour
4032 \PrerenderUnicode{#1}%
4033 }%
4034 \fi
4035 \endgroup
4036 }
4037 \define@key{Hyp}{pdftitle}{%
4038 \HyXeTeX@CheckUnicode

```

```

4039 \HyPsd@XeTeXBigCharstrue
4040 \HyPsd@PrerenderUnicode{#1}%
4041 \pdfstringdef\@pdftitle{#1}%
4042 }
4043 \define@key{Hyp}{pdfauthor}{%
4044 \HyXeTeX@CheckUnicode
4045 \HyPsd@XeTeXBigCharstrue
4046 \HyPsd@PrerenderUnicode{#1}%
4047 \pdfstringdef\@pdfauthor{#1}%
4048 }
4049 \define@key{Hyp}{pdfproducer}{%
4050 \HyXeTeX@CheckUnicode
4051 \HyPsd@XeTeXBigCharstrue
4052 \HyPsd@PrerenderUnicode{#1}%
4053 \pdfstringdef\@pdfproducer{#1}%
4054 }
4055 \define@key{Hyp}{pdfcreator}{%
4056 \HyXeTeX@CheckUnicode
4057 \HyPsd@XeTeXBigCharstrue
4058 \HyPsd@PrerenderUnicode{#1}%
4059 \pdfstringdef\@pdfcreator{#1}%
4060 }
4061 \define@key{Hyp}{addtopdfcreator}{%
4062 \HyXeTeX@CheckUnicode
4063 \HyPsd@XeTeXBigCharstrue
4064 \HyPsd@PrerenderUnicode{#1}%
4065 \pdfstringdef\@pdfcreator{\@pdfcreator, #1}%
4066 }
4067 \define@key{Hyp}{pdfcreationdate}{%
4068 \begingroup
4069 \Hy@unicodedefalse
4070 \pdfstringdef\@pdfcreationdate{#1}%
4071 \endgroup
4072 }
4073 \define@key{Hyp}{pdfmoddate}{%
4074 \begingroup
4075 \Hy@unicodedefalse
4076 \pdfstringdef\@pdfmoddate{#1}%
4077 \endgroup
4078 }
4079 \define@key{Hyp}{pdfsubject}{%
4080 \HyXeTeX@CheckUnicode
4081 \HyPsd@XeTeXBigCharstrue
4082 \HyPsd@PrerenderUnicode{#1}%
4083 \pdfstringdef\@pdfsubject{#1}%
4084 }
4085 \define@key{Hyp}{pdfkeywords}{%
4086 \HyXeTeX@CheckUnicode
4087 \HyPsd@XeTeXBigCharstrue
4088 \HyPsd@PrerenderUnicode{#1}%
4089 \pdfstringdef\@pdfkeywords{#1}%
4090 }
4091 \define@key{Hyp}{pdftrapped}{%
4092 \lowercase{\edef\Hy@temp{#1}}%
4093 \ifx\Hy@temp\HyInfo@trapped@true
4094 \def\@pdftrapped{True}%
4095 \else

```

```

4096 \ifx\Hy@temp\HyInfo@trapped@false
4097 \def\@pdftrapped{False}%
4098 \else
4099 \ifx\Hy@temp\HyInfo@trapped@unknown
4100 \def\@pdftrapped{Unknown}%
4101 \else
4102 \ifx\Hy@temp\@empty
4103 \else
4104 \Hy@Warning{%
4105     Unsupported value `#1'\MessageBreak
4106     for option `pdftrapped'%
4107     }%
4108 \fi
4109 \def\@pdftrapped{}%
4110 \fi
4111 \fi
4112 \fi
4113 }
4114 \def\HyInfo@trapped@true{true}
4115 \def\HyInfo@trapped@false{false}
4116 \def\HyInfo@trapped@unknown{unknown}
4117 \def\HyInfo@TrappedUnsupported{%
4118 \ifx\@pdftrapped\@empty
4119 \else
4120 \Hy@WarningNoLine{`pdftrapped' is not supported by this driver}%
4121 \gdef\HyInfo@TrappedUnsupported{}%
4122 \fi
4123 }
4124 \define@key{Hyp}{pdffinfo}{%
4125 \kvsetkeys{pdffinfo}{#1}%
4126 }
4127 \def\Hy@temp#1{%
4128 \lowercase{\Hy@temp@A{#1}}{#1}%
4129 }
4130 \def\Hy@temp@A#1#2{%
4131 \define@key{pdffinfo}{#2}{%
4132 \hypersetup{pdf#1={##1}}%
4133 }%
4134 }
4135 \Hy@temp{Title}
4136 \Hy@temp{Author}
4137 \Hy@temp{Keywords}
4138 \Hy@temp{Subject}
4139 \Hy@temp{Creator}
4140 \Hy@temp{Producer}
4141 \Hy@temp{CreationDate}
4142 \Hy@temp{ModDate}
4143 \Hy@temp{Trapped}
4144 \newif\ifHyInfo@AddonUnsupported
4145 \kv@set@family@handler{pdffinfo}{%
4146 \HyInfo@AddonHandler{#1}{#2}%
4147 }
4148 \let\HyInfo@do\relax
4149 \def\HyInfo@AddonHandler#1#2{%
4150 \ifx\kv@value\relax
4151 \Hy@Warning{%
4152 Option `pdffinfo': ignoring key `kv@key' without value%

```

```

4153 }%
4154 \else
4155 \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
4156 \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
4157 \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
4158 \ifHyInfo@AddonUnsupported
4159 \Hy@Warning{%
4160   This driver does not support additional\MessageBreak
4161   information entries, therefore\MessageBreak
4162   `kv@key' is ignored%
4163 }%
4164 \else
4165 \def\HyInfo@tmp##1{%
4166   \kv@define@key{pdfinfo}{##1}{%
4167     \HyXeTeX@CheckUnicode
4168     \HyPsd@XeTeXBigCharstrue
4169     \HyPsd@PrerenderUnicode{####1}%
4170     \pdfstringdef\HyInfo@Value{####1}%
4171     \global\expandafter
4172     \let\csname HyInfo@Value@##1\endcsname
4173     \HyInfo@Value
4174   }%
4175 }%
4176 \expandafter\HyInfo@tmp\expandafter{\HyInfo@Key}%
4177 \global\expandafter
4178 \let\csname KV@pdfinfo@\HyInfo@Key\expandafter\endcsname
4179 \csname KV@pdfinfo@\HyInfo@Key\endcsname
4180 \xdef\HyInfo@AddonList{%
4181   \HyInfo@AddonList
4182   \HyInfo@do{\HyInfo@Key}%
4183 }%
4184 \kv@parse@normalized{%
4185   \HyInfo@Key={#2}%
4186 }{%
4187   \kv@processor@default{pdfinfo}%
4188 }%
4189 \fi
4190 \else
4191 \kv@parse@normalized{%
4192   \HyInfo@Key={#2}%
4193 }{%
4194   \kv@processor@default{pdfinfo}%
4195 }%
4196 \fi
4197 \fi
4198 }
4199 \def\HyInfo@GenerateAddons{%
4200 \ifHyInfo@AddonUnsupported
4201 \def\HyInfo@Addons{}%
4202 \else
4203 \begingroup
4204 \toks@{}%
4205 \def\HyInfo@do##1{%
4206 \EdefEscapeName\HyInfo@Key{##1}%
4207 \edef\x{%
4208 \toks@{%
4209 \the\toks@

```



```

4210     /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
4211     }%
4212     }%
4213     \x
4214     }%
4215     \HyInfo@AddonList
4216     \edef\x{\endgroup
4217     \def\noexpand\HyInfo@Addons{\the\toks@}%
4218     }%
4219     \x
4220     \fi
4221     }
4222 \global\let\HyInfo@AddonList\ltx@empty

4223 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
4224 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
4225 \let\setpdfinkmargin\@gobble
4226 \def\calculate@pdfview#1 #2\{\%
4227 \def\@pdfview{#1}%
4228 \ifx\#2\%
4229 \def\@pdfviewparams{-32768}%
4230 \else
4231 \def\@pdfviewparams{#2}%
4232 \fi
4233 }
4234 \begin@group\expandafter\expandafter\expandafter\end@group
4235 \expandafter\ifx\csname numexpr\endcsname\relax
4236 \def\Hy@number#1{%
4237 \expandafter\@firstofone\expandafter{\number#1}%
4238 }%
4239 \else
4240 \def\Hy@number#1{%
4241 \the\numexpr#1\relax
4242 }%
4243 \fi
4244 \define@key{Hyp}{pdfstartpage}{%
4245 \ifx\#1\%
4246 \let\@pdfstartpage\ltx@empty
4247 \else
4248 \edef\@pdfstartpage{\Hy@number{#1}}%
4249 \fi
4250 }%
4251 \define@key{Hyp}{pdfstartview}{%
4252 \ifx\#1\%
4253 \let\@pdfstartview\ltx@empty
4254 \else
4255 \hypercalcbpdef\@pdfstartview{/#1}%
4256 \fi
4257 }
4258 \def\HyPat@NonNegativeReal/{%
4259 \ *([0-9]+\.[0-9]*|[0-9]*\.[0-9]+) *%
4260 }
4261 \define@key{Hyp}{pdfremotestartview}{%
4262 \ifx\#1\%
4263 \def\@pdfremotestartview{/Fit}%
4264 \else
4265 \hypercalcbpdef\@pdfremotestartview{#1}%
4266 \edef\@pdfremotestartview{\@pdfremotestartview}%

```

```

4267 \Hy@Match\@pdfremotestartview{ }{%
4268   ^{XYZ(%
4269     ()| %
4270     (null|-?\HyPat@NonNegativeReal/) %
4271     (null|-?\HyPat@NonNegativeReal/) %
4272     (null|\HyPat@NonNegativeReal/)%
4273   )|% end of "XYZ"
4274   Fit(%
4275     ()| %
4276     B| %
4277     (H|V|BH|BV)(%
4278       ()| %
4279       (null|\HyPat@NonNegativeReal/)%
4280     )| %
4281     R %
4282     \HyPat@NonNegativeReal/ %
4283     \HyPat@NonNegativeReal/ %
4284     \HyPat@NonNegativeReal/ %
4285     \HyPat@NonNegativeReal/%
4286   )% end of "Fit"
4287   )$%
4288 } }{%
4289 \Hy@Warning{%
4290   Invalid value ` \@pdfremotestartview'\MessageBreak
4291   of `pdfremotestartview'\MessageBreak
4292   is replaced by `Fit'%
4293 } %
4294 \let\@pdfremotestartview\@empty
4295 } %
4296 \ifx\@pdfremotestartview\@empty
4297   \def\@pdfremotestartview{/Fit}%
4298 \else
4299   \edef\@pdfremotestartview{/ \@pdfremotestartview}%
4300 \fi
4301 \fi
4302 }
4303 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
4304 \define@key{Hyp}{pdftoolbar}[true]{%
4305   \Hy@boolkey{pdftoolbar}{#1}%
4306 }
4307 \define@key{Hyp}{pdfmenubar}[true]{%
4308   \Hy@boolkey{pdfmenubar}{#1}%
4309 }
4310 \define@key{Hyp}{pdfwindowui}[true]{%
4311   \Hy@boolkey{pdfwindowui}{#1}%
4312 }
4313 \define@key{Hyp}{pdffitwindow}[true]{%
4314   \Hy@boolkey{pdffitwindow}{#1}%
4315 }
4316 \define@key{Hyp}{pdfcenterwindow}[true]{%
4317   \Hy@boolkey{pdfcenterwindow}{#1}%
4318 }
4319 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
4320   \Hy@boolkey{pdfdisplaydoctitle}{#1}%
4321 }
4322 \define@key{Hyp}{pdfa}[true]{%
4323   \Hy@boolkey{pdfa}{#1}%

```

```

4324 }
4325 \define@key{Hyp}{pdfnewwindow}[true]{%
4326 \def\Hy@temp{#1}%
4327 \ifx\Hy@temp\@empty
4328 \Hy@pdfnewwindowsetfalse
4329 \else
4330 \Hy@pdfnewwindowsettrue
4331 \Hy@boolkey{pdfnewwindow}{#1}%
4332 \fi
4333 }
4334 \def\Hy@SetNewWindow{%
4335 \ifHy@pdfnewwindowset
4336 /NewWindow %
4337 \ifHy@pdfnewwindow true\else false\fi
4338 \fi
4339 }
4340 \Hy@DefNameKey{pdfpagelayout}{%
4341 \do{SinglePage}{}%
4342 \do{OneColumn}{}%
4343 \do{TwoColumnLeft}{}%
4344 \do{TwoColumnRight}{}%
4345 \do{TwoPageLeft}{PDF 1.5}%
4346 \do{TwoPageRight}{PDF 1.5}%
4347 }
4348 \define@key{Hyp}{pdflang}{%
4349 \edef\@pdflang{#1}%
4350 \def\Hy@temp{\relax}%
4351 \ifx\@pdflang\Hy@temp
4352 \let\@pdflang\relax
4353 \fi
4354 \ifx\@pdflang\relax
4355 \else
4356 \ifx\@pdflang\ltx@empty
4357 \else

```

Test according to ABNF of RFC 3066.

```

4358 \Hy@Match\@pdflang{icase}{%
4359 ~%
4360 [a-z]{1,8}%
4361 (-[a-z0-9]{1,8})*%
4362 $%
4363 }{%

```

Test according to ABNF of RFC 5646.

```

4364 \Hy@Match\@pdflang{icase}{%
4365 ~%
4366 (%
4367 % langtag
4368 (% language
4369 [a-z]{2,3}%
4370 ([a-z]{3}(-[a-z]{3}){0,2})?% extlang
4371 |[a-z]{4}% reserved for future use
4372 |[a-z]{5,8}% registered language subtag
4373 )%
4374 (-[a-z]{4})?% script
4375 (-([a-z]{2}|[0-9]{3}))?% region
4376 (-([a-z]{5,8}|[0-9][a-z0-9]{3}))?% variant
4377 (-[0-9a-wyz](-[a-z0-9]{2,8})+)% extension

```

```

4378      (-x(-[a-z0-9]{1,8})+)?% privateuse
4379      % privateuse
4380      |x(-[a-z0-9]{1,8})+%
4381      % grandfathered/irregular
4382      |en-GB-oed%
4383      |i-(ami|bnn|default|enochian|hak|klinton|lux|mi-
4384      mingo|navajo|pwn|tao|tay|tsu)%
4385      |sgn-(BE-FR|BE-NL|CH-DE)%
4386      % grandfathered/regular
4387      |art-lojban%
4388      |cel-gaulish%
4389      |no-(bok|nyn)%
4390      |zh-(guoyu|hakka|min|min-nan|xiang)%
4391      )%
4392      $%
4393      }{%

```

Test for unique extensions.

```

4394      \Hy@Match{-\@pdflang}{icase}{-[a-wyz0-9]-}{%
4395      \Hy@Match{\@pdflang}{icase}{~x-}{}%
4396      % remove privateuse
4397      \edef\Hy@temp{-\@pdflang}%
4398      \Hy@Match\Hy@temp{icase}{{%
4399      ~%
4400      (%
4401      (-[a-wyz0-9]|-[a-z0-9]{2,8})*%
4402      )%
4403      -x-%
4404      }{%
4405      \edef\Hy@temp{%
4406      \expandafter\strip@prefix\pdfastmatch1%
4407      }%
4408      }{}%
4409      \Hy@Match\Hy@temp{icase}{{%
4410      (-[a-wyz0-9]-).*\tx@backslashchar1%
4411      }{%
4412      \Hy@Warning{%
4413      Invalid language identifier `#1'\MessageBreak
4414      for option `pdflang', because it violates\MessageBreak
4415      well-formedness defined in RFC 4646\MessageBreak
4416      by duplicate singleton subtags%
4417      }%
4418      \let\@pdflang\relax
4419      }{}%
4420      }%
4421      }{}%

```

User-assigned country codes are forbidden in language tags (RFC 3066).

```

4422      \ifx\@pdflang\relax
4423      \else
4424      \Hy@Match{\@pdflang}{icase}{{%
4425      ~%
4426      [a-zA-Z]{2}-%
4427      (%
4428      aa|AA|%
4429      [qQ][m-zA-Z]|%
4430      [xX][a-zA-Z]|%
4431      zz|ZZ%

```

```

4432     )%
4433     (-|$)%
4434   }{%
4435     \Hy@Warning{%
4436       Invalid language identifier `#1'\MessageBreak
4437       for option `pdflang' because of invalid country code%
4438       \MessageBreak
4439       in second subtag (RFC 3066)%
4440     }%
4441     \let\@pdflang\relax
4442   }{%}
4443   \fi
4444 }{%
4445   \Hy@Warning{%
4446     Invalid language identifier `#1'\MessageBreak
4447     for option `pdflang', because it violates\MessageBreak
4448     well-formedness defined in RFC 5646%
4449   }%
4450   \let\@pdflang\relax
4451 }%
4452 }{%
4453   \Hy@Warning{%
4454     Invalid language identifier `#1'\MessageBreak
4455     for option `pdflang' (RFC 3066)%
4456   }%
4457   \let\@pdflang\relax
4458 }%
4459 \fi
4460 \fi
4461 }
4462 \define@key{Hyp}{pdfpagelabels}[true]{%
4463   \Hy@boolkey{pdfpagelabels}{#1}%
4464 }
4465 \define@key{Hyp}{pdfescapeform}[true]{%
4466   \Hy@boolkey{pdfescapeform}{#1}%
4467 }

```

Default values:

```

4468 \def\@linkbordercolor{1 0 0}
4469 \def\@urlbordercolor{0 1 1}
4470 \def\@menubordercolor{1 0 0}
4471 \def\@filebordercolor{0 .5 .5}
4472 \def\@runbordercolor{0 .7 .7}
4473 \def\@citebordercolor{0 1 0}
4474 \def\@pdfhighlight{/I}
4475 \let\@pdftitle\ltx@empty
4476 \let\@pdfauthor\ltx@empty
4477 \let\@pdfproducer\relax
4478 \def\@pdfcreator{LaTeX with hyperref}
4479 \let\@pdfcreationdate\ltx@empty
4480 \let\@pdfmoddate\ltx@empty
4481 \let\@pdfsubject\ltx@empty
4482 \let\@pdfkeywords\ltx@empty
4483 \let\@pdftrapped\ltx@empty
4484 \let\@pdfpagescrop\ltx@empty
4485 \def\@pdfstartview{/Fit}
4486 \def\@pdfremotestartview{/Fit}
4487 \def\@pdfstartpage{1}

```

```

4488 \let\@pdfprintpagerange\ltx@empty
4489 \let\@pdflang\relax
4490 \let\PDF@SetupDoc\@empty
4491 \let\PDF@FinishDoc\@empty
4492 \let\phantomsection\@empty
4493 \let\special@paper\@empty
4494 \def\HyperDestNameFilter#1{#1}
4495 \Hy@AtBeginDocument{%
4496   \begingroup
4497     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
4498     \dimen@=\x\relax
4499     \ifdim\dimen@>\z@
4500       \else
4501         \dimen@=11in\relax
4502         \Hy@WarningNoLine{%
4503           Height of page (\expandafter\string\x) %
4504           is invalid (\the\x),\MessageBreak
4505           using 11in%
4506         }%
4507       \fi
4508       \dimen@=0.99626401\dimen@
4509       \xdef\Hy@pageheight{\strip@pt\dimen@}%
4510     \endgroup
4511 }
4512 \def\HyInd@EncapChar{\|}

```

Allow the user to use `\ExecuteOptions` in the `cfg` file even though this package does not use the normal option mechanism. Use `\hyper@normalise` as a scratch macro, since it is going to be defined in a couple of lines anyway.

```

4513 \let\hyper@normalise\ExecuteOptions
4514 \let\ExecuteOptions\hypersetup
4515 \Hy@RestoreCatcodes
4516 \InputIfFileExists{hyperref.cfg}{}{}
4517 \Hy@SetCatcodes
4518 \let\ExecuteOptions\hyper@normalise
4519 \ifx\Hy@MaybeStopNow\relax
4520 \else
4521   \Hy@stoppedearlytrue
4522   \expandafter\Hy@MaybeStopNow
4523 \fi
4524 \Hy@stoppedearlyfalse

```

To add flexibility, we will not use the ordinary processing of package options, but put them through the `keyval` package. This section was written by David Carlisle.

```

4525 \SetupKeyvalOptions{family=Hyp}
4526 \DeclareLocalOptions{%
4527   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4528 }

```

Add option `tex4ht` if package `tex4ht` is loaded.

```

4529 \@ifpackagewith{hyperref}{tex4ht}{%
4530 }{%
4531   \@ifpackageloaded{tex4ht}{%
4532     \PassOptionsToPackage{tex4ht}{hyperref}%
4533   }{%
4534     \ltx@ifundefined{HCode}{%
4535     }{%
4536       \begingroup

```

```

4537 \def\Hy@pkg{tex4ht}%
4538 \def\Hy@temp@A#1\RequirePackage[#2]#3#4\Hy@NIL{%
4539 \def\Hy@param{#2#3}%
4540 \ifx\Hy@param\ltx@empty
4541 \expandafter\ltx@gobble
4542 \else
4543 \def\Hy@param{#3}%
4544 \ifx\Hy@param\Hy@pkg
4545 \PassOptionsToPackage{#2}{tex4ht}%
4546 \expandafter\expandafter\expandafter\@gobble
4547 \else
4548 \expandafter\expandafter\expandafter\ltx@firstofone
4549 \fi
4550 \fi
4551 {\Hy@temp@A#4\Hy@NIL}%
4552 }%
4553 \expandafter
4554 \Hy@temp@A\@documentclasshook\RequirePackage[]{}\Hy@NIL
4555 \endgroup
4556 \PassOptionsToPackage{tex4ht}{hyperref}%
4557 }%
4558 }%
4559 }

4560 \let\ReadBookmarks\relax
4561 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package xspace support

```

4562 \def\Hy@xspace@end{}
4563 \ltx@ifundefined{xspaceaddeceptions}{%
4564 \Hy@AtBeginDocument{%
4565 \ltx@ifundefined{xspaceaddeceptions}{%
4566 }{%
4567 \def\Hy@xspace@end{%
4568 \ltx@gobble{end for xspace}%
4569 }%
4570 \xspaceaddeceptions{%
4571 \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4572 }%
4573 }%
4574 }%
4575 }{%
4576 \def\Hy@xspace@end{%
4577 \ltx@gobble{end for xspace}%
4578 }%
4579 \xspaceaddeceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4580 }

```

15.2 Option draft

```

4581 \Hy@AtBeginDocument{%
4582 \ifHy@draft
4583 \let\hyper@@anchor\@gobble
4584 \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4585 \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4586 \def\hyper@anchorend{\Hy@xspace@end}%

```

```

4587 \let\hyper@linkstart\@gobbletwo
4588 \def\hyper@linkend{\Hy@xspace@end}%
4589 \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4590 \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4591 \def\hyper@link@[#1]#2#3#4{#4\Hy@xspace@end}%
4592 \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4593 \let\PDF@SetupDoc\@empty
4594 \let\PDF@FinishDoc\@empty
4595 \let\@fifthoffive\@secondoftwo
4596 \let\@secondoffive\@secondoftwo
4597 \let\ReadBookmarks\relax
4598 \let\WriteBookmarks\relax
4599 \Hy@WarningNoLine{Draft mode on}%
4600 \fi
4601 \Hy@DisableOption{draft}%
4602 \Hy@DisableOption{nolinks}%
4603 \Hy@DisableOption{final}%
4604 }

```

15.3 PDF/A

```

4605 \Hy@DisableOption{pdfa}
4606 \ifHy@pdfa
4607 \ifnum \Hy@pdfversion < 4
4608 \kvsetkeys{Hyp}{pdfversion=1.4}%
4609 \fi
4610 \Hy@DisableOption{pdfversion}%
4611 \def\Hy@Acrobatmenu#1#2{%
4612 \leavevmode
4613 \begingroup
4614 \edef\x{#1}%
4615 \@onelevel@sanitize\x
4616 \ifx\x\Hy@NextPage
4617 \let\y=Y%
4618 \else
4619 \ifx\x\Hy@PrevPage
4620 \let\y=Y%
4621 \else
4622 \ifx\x\Hy@FirstPage
4623 \let\y=Y%
4624 \else
4625 \ifx\x\Hy@LastPage
4626 \let\y=Y%
4627 \else
4628 \let\y=N%
4629 \fi
4630 \fi
4631 \fi
4632 \fi
4633 \expandafter\endgroup
4634 \ifx\y Y%
4635 \else
4636 \Hy@Error{%
4637 PDF/A: Named action `#1' is not permitted%
4638 }\@ehc
4639 {#2}%
4640 \expandafter\@gobble
4641 \fi

```



```

4642 }%
4643 \def\Hy@temp#1{%
4644   \expandafter\def\csname Hy@#1\endcsname{#1}%
4645   \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4646 }%
4647 \Hy@temp{NextPage}%
4648 \Hy@temp{PrevPage}%
4649 \Hy@temp{FirstPage}%
4650 \Hy@temp{LastPage}%
4651 \else
4652 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4653 \fi

```

15.4 Patch for babel's \texttilde

Babel does not define `\texttilde` in NFSS2 manner, so the NFSS2 definitions of PD1 or PU encoding is not compatible. To fix this, `\texttilde` is defined in babel manner.

```

4654 \Hy@nextfalse
4655 \ltx@ifundefined{spanish@sh@"@sel}{\Hy@nexttrue}
4656 \ltx@ifundefined{galician@sh@"@sel}{\Hy@nexttrue}
4657 \ltx@ifundefined{estonian@sh@"@sel}{\Hy@nexttrue}
4658 \ifHy@next
4659 \let\texttilde\~%
4660 \fi

4661 \def\Hy@wrapper@babel#1#2{%
4662   \begingroup
4663   \Hy@safe@activestruer
4664   \set@display@protect
4665   \edef\x{#2}%
4666   \@onelevel@sanitize\x
4667   \toks@{#1}%
4668   \edef\x{\endgroup\the\toks@\x}}%
4669 \x
4670 }
4671 \def\Hy@WrapperDef#1{%
4672   \begingroup
4673   \escapechar=\m@ne
4674   \xdef\Hy@gtemp{%
4675     \expandafter\noexpand\csname HyWrap@\string#1\endcsname
4676   }%
4677   \endgroup
4678   \edef#1{%
4679     \noexpand\Hy@wrapper@babel
4680     \expandafter\noexpand\Hy@gtemp
4681   }%
4682   \expandafter\def\Hy@gtemp
4683 }

4684 \ifHy@hyperfigures
4685 \Hy@Info{Hyper figures ON}%
4686 \else
4687 \Hy@Info{Hyper figures OFF}%
4688 \fi
4689 \ifHy@nesting
4690 \Hy@Info{Link nesting ON}%
4691 \else
4692 \Hy@Info{Link nesting OFF}%

```

```

4693 \fi
4694 \ifHy@hyperindex
4695 \Hy@Info{Hyper index ON}%
4696 \else
4697 \Hy@Info{Hyper index OFF}%
4698 \fi
4699 \ifHy@plainpages
4700 \Hy@Info{Plain pages ON}%
4701 \else
4702 \Hy@Info{Plain pages OFF}%
4703 \fi
4704 \ifHy@backref
4705 \Hy@Info{Backreferencing ON}%
4706 \else
4707 \Hy@Info{Backreferencing OFF}%
4708 \fi
4709 \ifHy@typexml
4710 \Hy@AtEndOfPackage{%
4711 \RequirePackage{color}%
4712 \RequirePackage{nameref}[2012/07/28]%
4713 }%
4714 \fi
4715 \Hy@DisableOption{typexml}
4716 \ifHy@implicit
4717 \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4718 \else
4719 \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4720 \def\MaybeStopEarly{%
4721 \Hy@Message{Stopped early}%
4722 \Hy@AtBeginDocument{%
4723 \PDF@FinishDoc
4724 \gdef\PDF@FinishDoc{}%
4725 }%
4726 \endinput
4727 }%
4728 \Hy@AtBeginDocument{%
4729 \let\autoref\ref
4730 \let\autopageref\pageref
4731 \ifx\@pdfpagemode\@empty
4732 \gdef\@pdfpagemode{UseNone}%
4733 \fi
4734 \global\Hy@backreffalse
4735 }%
4736 \Hy@AtEndOfPackage{%
4737 \global\let\ReadBookmarks\relax
4738 \global\let\WriteBookmarks\relax
4739 }%
4740 \fi
4741 \Hy@DisableOption{implicit}

```

15.4.1 Driver loading

```

4742 \Hy@AtEndOfPackage{%
4743 \ifpackageloaded{tex4ht}{%
4744 \def\Hy@driver{htex4ht}%
4745 \Hy@texhttrue
4746 }{}%

```

Some drivers can be detected. Check for these drivers, whether the given driver option is ok. Otherwise force the right driver or use the default driver.

```

4747 \ifx\Hy@driver\@empty
4748 \else
4749   \ifx\pdfextension\@undefined
4750     \def\Hy@temp{hpdftex}%
4751   \else
4752     \def\Hy@temp{hluatex}%
4753   \fi
4754 \ifpdf
4755   \ifx\Hy@driver\Hy@temp
4756   \else
4757     \Hy@WarningNoLine{%
4758       Wrong driver `\'Hy@driver.def';\MessageBreak
4759       pdfTeX is running in PDF mode.\MessageBreak
4760       Forcing driver `\'Hy@temp.def'%
4761     }%
4762     \let\Hy@driver\Hy@temp
4763   \fi
4764 \else
4765   \ifx\Hy@driver\Hy@temp
4766     \Hy@WarningNoLine{%
4767       Wrong driver `\'Hy@driver.def';\MessageBreak
4768       pdfTeX is not running in PDF mode.\MessageBreak
4769       Using default driver%
4770     }%
4771     \let\Hy@driver\@empty
4772   \fi
4773 \fi
4774 \fi
4775 \ifHy@texht
4776 \else
4777   \ifx\Hy@driver\@empty
4778   \else
4779     \def\Hy@temp{hxetex}%
4780   \ifxetex
4781     \ifx\Hy@driver\Hy@temp
4782     \else
4783       \Hy@WarningNoLine{%
4784         Wrong driver `\'Hy@driver.def';\MessageBreak
4785         XeTeX is running.\MessageBreak
4786         Forcing driver `\'Hy@temp.def' for XeTeX%
4787       }%
4788       \let\Hy@driver\Hy@temp
4789     \fi
4790   \fi
4791 \fi
4792 \fi
4793 \ifx\Hy@driver\@empty
4794 \else
4795   \def\Hy@temp{hvtexhtm}%
4796 \ifvtexhtml
4797   \ifx\Hy@driver\Hy@temp
4798   \else
4799     \Hy@WarningNoLine{%
4800       Wrong driver `\'Hy@driver.def';\MessageBreak
4801       VTeX is running in HTML mode.\MessageBreak

```

```

4802     Forcing driver `\'Hy@temp.def'%
4803   }%
4804   \let\'Hy@driver\'Hy@temp
4805   \fi
4806 \else
4807   \ifx\'Hy@driver\'Hy@temp
4808     \Hy@WarningNoLine{%
4809       Wrong driver `\'Hy@driver.def';\MessageBreak
4810       VTeX is not running in HTML mode.\MessageBreak
4811       Using default driver%
4812     }%
4813   \let\'Hy@driver@empty
4814   \fi
4815 \fi
4816 \fi

```

If the driver is not given, find the right driver or use the default driver.

```

4817 \let\'HyOpt@DriverType\ltx@empty
4818 \ifx\'HyOpt@CustomDriver\ltx@empty
4819   \ifx\'Hy@driver@empty
4820     \def\'HyOpt@DriverType{ (autodetected)}%
4821     \providecommand*{\'Hy@defaultdriver}{hypertex}%
4822     \ifpdf
4823       \ifx\'pdfextension\@undefined
4824         \def\'Hy@driver{hpdfTeX}%
4825       \else
4826         \def\'Hy@driver{hluatex}%
4827       \fi
4828     \else
4829       \ifxetex
4830         \def\'Hy@driver{hxetex}%
4831       \else
4832         \ifvtexhtml
4833           \def\'Hy@driver{hvtexhtm}%
4834           \def\MaybeStopEarly{%
4835             \Hy@Message{Stopped early}%
4836             \Hy@AtBeginDocument{%
4837               \PDF@FinishDoc
4838               \gdef\PDF@FinishDoc{}}%
4839             }%
4840           \endinput
4841           }%
4842         \else
4843           \ifvtexpdf
4844             \def\'Hy@driver{hvtex}%
4845           \else
4846             \ifvtexps
4847               \def\'Hy@driver{hvtex}%
4848             \else
4849               \ifx\'HyOpt@DriverFallback\ltx@empty
4850                 \let\'Hy@driver\'Hy@defaultdriver
4851                 \def\'HyOpt@DriverType{ (default)}%
4852             \else
4853               \begingroup
4854                 \toks@\expandafter{\'HyOpt@DriverFallback}%
4855                 \edef\x{\endgroup
4856                   \noexpand\kvsetkeys{Hyp}{\the\toks@}}%
4857               }%

```

```

4858         \x
4859         \ifx\Hy@driver\ltx@empty
4860             \let\Hy@driver\Hy@defaultdriver
4861             \def\HyOpt@DriverType{ (default)}%
4862         \else
4863             \def\HyOpt@DriverType{ (fallback)}%
4864         \fi
4865     \fi
4866 \fi
4867 \fi
4868 \fi
4869 \fi
4870 \fi
4871 \ifx\Hy@driver\Hy@defaultdriver
4872     \def\Hy@temp{hdvwind}%
4873     \ifx\Hy@temp\Hy@driver
4874         \kvsetkeys{Hyp}{colorlinks}%
4875         \PassOptionsToPackage{dviwindo}{color}%
4876     \fi
4877 \fi
4878 \fi
4879 \else
4880     \def\HyOpt@DriverType{ (custom)}%
4881     \let\Hy@driver\HyOpt@CustomDriver
4882 \fi
4883 \Hy@InfoNoLine{Driver\HyOpt@DriverType: \Hy@driver}%
4884 \chardef\Hy@VersionChecked=0 %
4885 \input{\Hy@driver.def}%
4886 \ifcase\Hy@VersionChecked
4887     \Hy@VersionCheck{\Hy@driver.def}%
4888 \fi
4889 \let\@unprocessedoptions\relax
4890 \Hy@RestoreCatcodes
4891 \Hy@DisableOption{tex4ht}%
4892 \Hy@DisableOption{pdftex}%
4893 \Hy@DisableOption{nativepdf}%
4894 \Hy@DisableOption{dvipdfm}%
4895 \Hy@DisableOption{dvipdfmx}%
4896 \Hy@DisableOption{dvipdfmx-outline-open}%
4897 \Hy@DisableOption{pdfmark}%
4898 \Hy@DisableOption{dvips}%
4899 \Hy@DisableOption{hypertex}%
4900 \Hy@DisableOption{vtex}%
4901 \Hy@DisableOption{vtexpdfmark}%
4902 \Hy@DisableOption{dviwindo}%
4903 \Hy@DisableOption{dvipsone}%
4904 \Hy@DisableOption{textures}%
4905 \Hy@DisableOption{latex2html}%
4906 \Hy@DisableOption{ps2pdf}%
4907 \Hy@DisableOption{xetex}%
4908 \Hy@DisableOption{driverfallback}%
4909 \Hy@DisableOption{customdriver}%
4910 \Hy@DisableOption{pdfversion}%
4911 }

```

Support for open outlines is enabled for XeTeX ≥ 0.9995 . I don't know, if older versions also support this. AFAIK older dvipdfmx versions will break, thus the switch cannot be turned on by default.

```

4912 \newif\ifHy@DvipdfmxOutlineOpen
4913 \ifxetex
4914   \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4915   \else
4916     \chardef\SpecialDvipdfmxOutlineOpen\@ne
4917     \Hy@DvipdfmxOutlineOpenttrue
4918   \fi
4919 \fi
4920 \begingroup\expandafter\expandafter\expandafter\endgroup
4921 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4922 \else
4923   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4924     \Hy@DvipdfmxOutlineOpenttrue
4925   \fi
4926 \fi

```

15.4.2 Bookmarks

```

4927 \def\WriteBookmarks{0}
4928 \def\@bookmarkopenstatus#1{%
4929   \ifHy@bookmarksopen

```

The purpose of the \@firstofone-number-space-construct is that no \relax will be inserted by T_EX before the \else:

```

4930   \ifnum#1<\expandafter\@firstofone\expandafter
4931     {\number\@bookmarksopenlevel} % explicit space
4932   \else
4933     -%
4934   \fi
4935 \else
4936   -%
4937 \fi
4938 }
4939 \ifHy@bookmarks
4940   \Hy@Info{Bookmarks ON}%
4941   \ifx\@pdfpagemode\@empty
4942     \def\@pdfpagemode{UseOutlines}%
4943   \fi
4944 \else
4945   \let\@bookmarkopenstatus\ltx@gobble
4946   \Hy@Info{Bookmarks OFF}%
4947   \Hy@AtEndOfPackage{%
4948     \global\let\ReadBookmarks\relax
4949     \global\let\WriteBookmarks\relax
4950   }%
4951   \ifx\@pdfpagemode\@empty
4952     \def\@pdfpagemode{UseNone}%
4953   \fi
4954 \fi
4955 \Hy@DisableOption{bookmarks}

```

Add wrapper for setting standard catcodes (babel's shorthands).

```

4956 \def\Hy@CatcodeWrapper#1{%
4957   \let\Hy@endWrap\ltx@empty
4958   \def\TMP@EnsureCode##1##2{%
4959     \edef\Hy@endWrap{%
4960       \Hy@endWrap
4961       \catcode##1 \the\catcode##1\relax
4962     }%
4963   \catcode##1 ##2\relax

```

```

4964 }%
4965 \TMP@EnsureCode{10}{12}% ^^J
4966 \TMP@EnsureCode{33}{12}% !
4967 \TMP@EnsureCode{34}{12}% "
4968 \TMP@EnsureCode{36}{3}% $ (math)
4969 \TMP@EnsureCode{38}{4}% & (alignment)
4970 \TMP@EnsureCode{39}{12}% '
4971 \TMP@EnsureCode{40}{12}% (
4972 \TMP@EnsureCode{41}{12}% )
4973 \TMP@EnsureCode{42}{12}% *
4974 \TMP@EnsureCode{43}{12}% +
4975 \TMP@EnsureCode{44}{12}% ,
4976 \TMP@EnsureCode{45}{12}% -
4977 \TMP@EnsureCode{46}{12}% .
4978 \TMP@EnsureCode{47}{12}% /
4979 \TMP@EnsureCode{58}{12}% :
4980 \TMP@EnsureCode{59}{12}% ;
4981 \TMP@EnsureCode{60}{12}% <
4982 \TMP@EnsureCode{61}{12}% =
4983 \TMP@EnsureCode{62}{12}% >
4984 \TMP@EnsureCode{63}{12}% ?
4985 \TMP@EnsureCode{91}{12}% [
4986 \TMP@EnsureCode{93}{12}% ]
4987 \TMP@EnsureCode{94}{7}% ^ (superscript)
4988 \TMP@EnsureCode{95}{8}% _ (subscript)
4989 \TMP@EnsureCode{96}{12}% `
4990 \TMP@EnsureCode{124}{12}% |
4991 \TMP@EnsureCode{126}{13}% ~ (active)
4992 #1\relax
4993 \Hy@EndWrap
4994 }

```

`\HyColor@UseColor` expects a macro as argument. It contains the color specification.

```

4995 \Hy@AtBeginDocument{%
4996   \ifHy@ocgcolorlinks
4997     \kvsetkeys{Hyp}{colorlinks}%
4998     \ifHy@pdfa
4999       \Hy@Warning{%
5000         PDF/A: Optional Content Groups are prohibited,\MessageBreak
5001         using `colorlinks' instead of `ocgcolorlinks'%
5002       }%
5003     \Hy@ocgcolorlinksfalse
5004   \fi
5005 \fi
5006 \ifHy@ocgcolorlinks
5007 \else
5008   \Hy@DisableOption{ocgcolorlinks}%
5009 \fi
5010 \ifHy@colorlinks
5011   \def\@pdfborder{0 0 0}%
5012   \let\@pdfborderstyle\@empty
5013   \ifHy@typexml
5014     \else
5015       \Hy@CatcodeWrapper{%
5016         \RequirePackage{color}%
5017       }%
5018   \fi

```

```

5019 \def\Hy@colorlink#1{%
5020 \begingroup
5021 \HyColor@UseColor#1%
5022 }%
5023 \def\Hy@endcolorlink{\endgroup}%
5024 \Hy@Info{Link coloring ON}%
5025 \else
5026 \ifHy@frenchlinks
5027 \def\Hy@colorlink#1{\begingroup\fontshape{\scdefault}\selectfont}%
5028 \def\Hy@endcolorlink{\endgroup}%
5029 \Hy@Info{French linking ON}%
5030 \else
for grouping consistency:
5031 \def\Hy@colorlink#1{\begingroup}%
5032 \def\Hy@endcolorlink{\endgroup}%
5033 \Hy@Info{Link coloring OFF}%
5034 \fi
5035 \fi
5036 \Hy@DisableOption{colorlinks}%
5037 \Hy@DisableOption{frenchlinks}%
5038 \ifHy@texht
5039 \long\def\@firstoffive#1#2#3#4#5{#1}%
5040 \long\def\@secondoffive#1#2#3#4#5{#2}%
5041 \long\def\@thirdoffive#1#2#3#4#5{#3}%
5042 \long\def\@fourthoffive#1#2#3#4#5{#4}%
5043 \long\def\@fifthoffive#1#2#3#4#5{#5}%
5044 \providecommand*\@safe@activestruel{}%
5045 \providecommand*\@safe@activesfalse{}%
5046 \def\T@ref#1{%
5047 \Hy@safe@activestruel
5048 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
5049 \Hy@safe@activesfalse
5050 }%
5051 \def\T@pageref#1{%
5052 \Hy@safe@activestruel
5053 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
5054 \Hy@safe@activesfalse
5055 }%
5056 \else
5057 \ifHy@typexml
5058 \else
5059 \Hy@CatcodeWrapper{%
5060 \RequirePackage{nameref}[2012/07/28]%
5061 }%
5062 \fi
5063 \fi
5064 \DeclareRobustCommand\ref{%
5065 \@ifstar\@refstar\T@ref
5066 }%
5067 \DeclareRobustCommand\pageref{%
5068 \@ifstar\@pagerefstar\T@pageref
5069 }%
5070 % \ifclassloaded{memoir}{%
5071 % \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
5072 % \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
5073 % }%
5074 % }\ltx@secondoftwo

```



```

5075 % {%
5076 %   \DeclareRobustCommand*{\nameref}{%
5077 %     \@ifstar\@mem@titleref\@mem@titleref
5078 %   }%
5079 % }{%
5080   \DeclareRobustCommand*{\nameref}{%
5081     \@ifstar\@namerefstar\T@nameref
5082   }%
5083 % }%
5084 }
5085 \Hy@AtBeginDocument{%
5086   \ifHy@texht
5087   \else
5088     \Hy@CatcodeWrapper\ReadBookmarks
5089   \fi
5090 }

5091 \ifHy@backref
5092   \RequirePackage{backref}%
5093 \else
5094   \let\Hy@backout\@gobble
5095 \fi
5096 \Hy@DisableOption{backref}
5097 \Hy@DisableOption{pagebackref}

5098 \Hy@activeanchorfalse

```

16 User hypertext macros

We need to normalise all user commands taking a URL argument; Within the argument the following special definitions apply: `\#`, `\%`, `~` produce `#`, `%`, `~` respectively. for consistency `~` produces `~` as well. At the *top level only* ie not within the argument of another command, you can use `#` and `%` unescaped, to produce themselves. even if, say, `#` is entered as `#` it will be converted to `\#` so it does not die if written to an aux file etc. `\#` will write as `#` locally while making `\specials`.

```

5099 \begingroup
5100   \endlinechar=-1 %
5101   \catcode`\^^A=14 %
5102   \catcode`\^^M\active
5103   \catcode`\%\active
5104   \catcode`\#\active
5105   \catcode`\_\active
5106   \catcode`\$\active
5107   \catcode`\&\active
5108   \gdef\hyper@normalise{^^A
5109     \begingroup
5110     \catcode`\^^M\active
5111     \def^^M{ }^^A
5112     \catcode`\%\active
5113     \let%\@percentchar
5114     \let\%\@percentchar
5115     \catcode`\#\active
5116     \def#{\hyper@hash}^^A
5117     \def#{\hyper@hash}^^A
5118     \@makeother\&^^A
5119     \edef&{\string&}^^A
5120     \edef&{\string&}^^A

```

```

5121 \edef\textunderscore{\string_}^^A
5122 \let\_ \textunderscore
5123 \catcode\_ \active
5124 \let\_ \textunderscore
5125 \let~ \hyper@tilde
5126 \let\~ \hyper@tilde
5127 \let\textasciitilde\hyper@tilde
5128 \let\\ \@backslashchar
5129 \edef$\string$^^A
5130 \Hy@safe@activestruel
5131 \hyper@n@rmalise
5132 }^^A
5133 \catcode\#=6 ^^A
5134 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
5135 \gdef\hyper@n@rmalise#1#2{^^A
5136 \def\Hy@tempa{#2}^^A
5137 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
5138 \ltx@ReturnAfterElseFi{^^A
5139 \hyper@@normalise{#1}^^A
5140 }^^A
5141 \else
5142 \ltx@ReturnAfterFi{^^A
5143 \hyper@@normalise{#1}{#2}^^A
5144 }^^A
5145 \fi
5146 }^^A
5147 \gdef\hyper@@normalise#1#2{^^A
5148 \edef\Hy@tempa{^^A
5149 \endgroup
5150 \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
5151 }^^A
5152 \Hy@tempa
5153 }^^A
5154 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
5155 #1^^A
5156 \ifx\limits#2\limits
5157 \else
5158 \ltx@ReturnAfterFi{^^A
5159 \Hy@RemovePercentCr #2\@nil
5160 }^^A
5161 \fi
5162 }^^A
5163 \endgroup
5164 \providecommand*\hyper@chars{%
5165 \let\#\hyper@hash
5166 \let\%\@percentchar
5167 \Hy@safe@activestruel
5168 }

5169 \def\hyperlink#1#2{%
5170 \hyper@@link{#1}{#2}%
5171 }

5172 \def\Hy@VerboseLinkStart#1#2{%
5173 \ifHy@verbose
5174 \begingroup
5175 \Hy@safe@activestruel
5176 \xdef\Hy@VerboseGlobalTemp{(#1) `#2'}%
5177 \Hy@Info{Reference \Hy@VerboseGlobalTemp}%

```

```

5178 \xdef\Hy@VerboseGlobalTemp{%
5179 \Hy@VerboseGlobalTemp, %
5180 line \the\inputlineno
5181 }%
5182 \endgroup
5183 \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
5184 \@onelevel@sanitize\Hy@VerboseLinkInfo
5185 \fi
5186 }

5187 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
5188 \def\Hy@VerboseLinkStop{%
5189 \ifHy@verbose
5190 \begingroup
5191 \edef\x{\endgroup
5192 \write\m@ne{%
5193 Package `hyperref' Info: %
5194 End of reference \Hy@VerboseLinkInfo.%
5195 }%
5196 }%
5197 \x
5198 \fi
5199 }

5200 \def\Hy@VerboseAnchor#1{%
5201 \ifHy@verbose
5202 \begingroup
5203 \Hy@safe@activestrue
5204 \Hy@Info{Anchor ``HyperDestNameFilter{#1}'}%
5205 \endgroup
5206 \fi
5207 }

5208 \def\Hy@AllowHyphens{%
5209 \relax
5210 \ifhmode
5211 \penalty\@M
5212 \hskip\z@skip
5213 \fi
5214 }

5215 \DeclareRobustCommand*\href[1]{}{%
5216 \begingroup
5217 \setkeys{href}{#1}%
5218 \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
5219 }
5220 \def\Hy@href#1{%
5221 \hyper@normalise\href@
5222 }
5223 \begingroup
5224 \catcode`\$=6 %
5225 \catcode`\#=12 %
5226 \gdef\href@\$1{\expandafter\href@split$1##\}%
5227 \gdef\href@split$1#$2##$3\\$4{%
5228 \hyper@@link{$1}->{$2}->{$4}%
5229 \endgroup
5230 }%
5231 \endgroup

```

Option ‘page’.

```

5232 \define@key{href}{page}{%
5233   \def\Hy@href@page{#1}%
5234 }
5235 \let\Hy@href@page\@empty
5236 \newcount\c@Hy@tempcnt
5237 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
5238 \def\Hy@MakeRemoteAction{%
5239   \ifx\Hy@href@page\@empty
5240     \def\Hy@href@page{0}%
5241   \else
5242     \setcounter{Hy@tempcnt}{\Hy@href@page}%
5243     \ifnum\c@Hy@tempcnt<\@ne
5244       \Hy@Warning{%
5245         Invalid page number (\theHy@tempcnt)\MessageBreak
5246         for remote PDF file.\MessageBreak
5247         Using page 1%
5248       }%
5249     \def\Hy@href@page{0}%
5250   \else
5251     \global\advance\c@Hy@tempcnt\m@ne
5252   \edef\Hy@href@page{\theHy@tempcnt}%
5253   \fi
5254 \fi

```

If a next action is set, then also a new window should be opened. Otherwise AR reclaims that it closes the current file with discarding the next actions.

```

5255 \ifx\Hy@href@nextactionraw\@empty
5256 \else
5257   \Hy@pdfnewwindowsettrue
5258   \Hy@pdfnewwindowtrue
5259 \fi
5260 }

```

Option ‘pdfremotestartview’.

```

5261 \define@key{href}{pdfremotestartview}{%
5262   \setkeys{Hyp}{pdfremotestartview={#1}}%
5263 }

```

Option ‘pdfnewwindow’.

```

5264 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
5265 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```

Option ‘ismap’.

```

5266 \newif\ifHy@href@ismap
5267 \define@key{href}{ismap}[true]{%
5268   \tx@ifundefined{Hy@href@ismap#1}{%
5269     \Hy@Error{%
5270       Invalid value (#1) for key `ismap'.\MessageBreak
5271       Permitted values are `true' or `false'.\MessageBreak
5272       Ignoring `ismap'%
5273     }\@ehc
5274   }{%
5275     \csname Hy@href@ismap#1\endcsname
5276   }%
5277 }

```

Option ‘nextactionraw’.

```

5278 \let\Hy@href@nextactionraw\@empty
5279 \define@key{href}{nextactionraw}{%

```

```

5280 \edef\Hy@href@nextactionraw{#1}%
5281 \ifx\Hy@href@nextactionraw\@empty
5282 \else
5283 \Hy@Match\Hy@href@nextactionraw{ }{%
5284 ~(\HyPat@ObjRef/|<<.*[/S| /.+>>|)%
5285 \[( ?\HyPat@ObjRef/|<<.*[/S| /.+>>)+ ?)]$%
5286 }{ }{%
5287 \Hy@Warning{Invalid value for `nextactionraw':\MessageBreak
5288 \Hy@href@nextactionraw\MessageBreak
5289 The action is discarded%
5290 }%
5291 }%
5292 \ifx\Hy@href@nextactionraw\@empty
5293 \else
5294 \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
5295 \fi
5296 \fi
5297 }
5298 \def\HyPat@ObjRef/{.+}

```

Load package url.sty and save the meaning of the original \url in \nolinkurl.

```

5299 \RequirePackage{url}
5300 \let\HyOrg@url\url
5301 \def\Hurl{\begingroup \Url}
5302 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
5303 \def\nolinkurl@#1{\Hurl{#1}}
5304 \DeclareRobustCommand*\url{\hyper@normalise\url@}
5305 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

5306 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
5307 \providecommand\hyper@image[2]{#2}

5308 \def\hypertarget#1#2{%
5309 \ifHy@nesting
5310 \hyper@@anchor{#1}{#2}%
5311 \else
5312 \hyper@@anchor{#1}{\relax}#2%
5313 \fi
5314 }

```

\hyperref is more complicated, as it includes the concept of a category of link, used to make the name. This is not really used in this package. \hyperdef sets up an anchor in the same way. They each have three parameters of category, linkname, and marked text, and \hyperref also has a first parameter of URL. If there is an optional first parameter to \hyperdef, it is the name of a L^AT_EX label which can be used in a short form of \hyperref later, to avoid remembering the name and category.

```

5315 \DeclareRobustCommand*\hyperref{ }{%
5316 \@ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
5317 }
5318 \def\Hy@babelnormalise#1[#2]{%
5319 \begingroup
5320 \Hy@safe@activestru
5321 \edef\Hy@tempa{%
5322 \endgroup
5323 \noexpand#1[#2]}%
5324 }%
5325 \Hy@tempa
5326 }

```

```

5327 \def\@hyperref{\hyper@normalise\@hyperref}
5328 \def\@hyperref#1#2#3{%
5329   \edef\ref@one{\ifx\#2\#3\else#2.\fi#3}%
5330   \expandafter\tryhyper@link\ref@one\{#1}%
5331 }
5332 \def\tryhyper@link#1\#2{%
5333   \hyper@@link{#2}{#1}%
5334 }

5335 \def\hyperdef{\@ifnextchar{\label@hyperdef}{\@hyperdef}}
5336 \def\@hyperdef#1#2#3{%, category, name, text
5337   \ifx\#1\%
5338     \def\Hy@AnchorName{#2}%
5339   \else
5340     \def\Hy@AnchorName{#1.#2}%
5341   \fi
5342   \ifHy@nesting
5343     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
5344   \else
5345     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
5346   \fi
5347 }

```

We also have a need to give a L^AT_EX *label* to a hyper reference, to ease the pain of referring to it later. `\hyperrefundefinedlink` may be redefined by a user to add colour or other formatting.

```

5348 \let\hyperrefundefinedlink\@firstofone
5349 \def\label@hyperref[#1]{%
5350   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
5351 }%
5352 \def\label@@hyperref#1#2#3{%
5353   \ifx#1\relax
5354     \protect\G@refundefinedtrue
5355     \@latex@warning{%
5356       Hyper reference `#2' on page \thepage \space undefined%
5357     }%
5358     \begingroup
5359       \hyperrefundefinedlink{#3}%
5360     \endgroup
5361   \else
5362     \hyper@@link{\expandafter\@fifthoffive#1}%
5363     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
5364   \fi
5365 }
5366 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5367                               % anchor text
5368   \@bsphack
5369   \ifx\#2\%
5370     \def\Hy@AnchorName{#3}%
5371   \else
5372     \def\Hy@AnchorName{#2.#3}%
5373   \fi
5374   \if@filesw
5375     \protected@write\@auxout{}{%
5376       \string\newlabel{#1}{\{#\}#\}{\Hy@AnchorName}\}%
5377     }%
5378   \fi
5379   \@esphack

```

```

5380 \ifHy@nesting
5381   \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}#{#4}%
5382 \else
5383   \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
5384 \fi
5385 }

```

16.1 Link box support for XeTeX

```

5386 \newdimen\XeTeXLinkMargin
5387 \setlength{\XeTeXLinkMargin}{2pt}
5388 \ifxetex
5389   \font\XeTeXLink@font=pzdr at 1sp\relax
5390   \newcommand*\XeTeXLink@space{%
5391     \begingroup
5392       \XeTeXLink@font
5393       \@xxxii
5394     \endgroup
5395   }%
5396   \newcommand{\XeTeXLinkBox}[1]{%
5397     \begingroup
5398       \leavevmode
5399       \sbox\z@{#1}%
5400       \begingroup
5401         \dimen@=\dp\z@
5402         \advance\dimen@\XeTeXLinkMargin
5403         \setbox\tw@=\llap{%
5404           \hb@xt@\XeTeXLinkMargin{%
5405             \lower\dimen@\hbox{\XeTeXLink@space}%
5406             \hss
5407           }%
5408         }%
5409         \dp\tw@=\dp\z@
5410         \ht\tw@=\ht\z@
5411         \copy\tw@
5412       \endgroup
5413       \copy\z@
5414       \dimen@=\ht\z@
5415       \advance\dimen@\XeTeXLinkMargin
5416       \setbox\tw@=\rlap{%
5417         \hb@xt@\XeTeXLinkMargin{%
5418           \hss
5419           \raise\dimen@\hbox{\XeTeXLink@space}%
5420         }%
5421       }%
5422       \dp\tw@=\dp\z@
5423       \ht\tw@=\ht\z@
5424       \copy\tw@
5425     \endgroup
5426   }%
5427 \else
5428   \newcommand*\XeTeXLinkBox}[1]{%
5429     \begingroup
5430       \leavevmode
5431       \sbox\z@{#1}%
5432       \copy\z@
5433     \endgroup

```

```
5434 }%
5435 \fi
```

17 Underlying basic hypertext macros

Links have an optional type, a filename (possibly a URL), an internal name, and some marked text. (Caution: the internal name may contain babel shorthand characters.) If the second parameter is empty, its an internal link, otherwise we need to open another file or a URL. A link start has a type, and a URL.

```
5436 \def\hyper@@link{\let\Hy@reserved@a\relax
5437 \@ifnextchar{\hyper@link@}{\hyper@link@[link]}%
5438 }
5439 % #1: type
5440 % #2: URL
5441 % #3: destination name
5442 % #4: text
5443 \def\hyper@link@[#1]#2#3#4{%
5444 \ltx@ifempty{#4}{% link text
5445 \Hy@Warning{Suppressing empty link}%
5446 }{%
5447 \begingroup
5448 \protected@edef\Hy@tempa{#2}%
5449 \edef\Hy@tempb{#3}%
5450 \ifx\Hy@tempa\ltx@empty
5451 \ifx\Hy@tempb\ltx@empty
5452 \Hy@Warning{Suppressing link with empty target}%
5453 \toks@{%
5454 \endgroup
5455 \ltx@secondoftwo
5456 }%
5457 \else
5458 \toks@{%
5459 \endgroup
5460 \hyper@link{#1}%
5461 }%
5462 \fi
5463 \else
5464 \toks@{%
5465 \endgroup
5466 \expandafter\hyper@readexternallink#2\{\#1}%
5467 }%
5468 \fi
5469 \Hy@safe@activesfalse
5470 \toks@\expandafter{%
5471 \the\expandafter\toks@
5472 \expandafter{\Hy@tempb}{#4}%
5473 }%
5474 \the\toks@
5475 }%
5476 }
```

The problem here is that the first (URL) parameter may be a local file: reference (in which case some browsers treat it differently) or a genuine URL, in which case we'll have to activate a real Web browser. Note that a simple name is also a URL, as that is interpreted as a relative file name. We have to worry about # signs in a local file as well.

```
5477 \def\hyper@readexternallink#1\#2#3#4{%
```



```

5478 \begingroup
5479 \let\\\relax
5480 \expandafter\endgroup
5481 \expandafter\@hyper@@readexternallink#1\\\{#2}\{#3}\{#4}%
5482 }
5483 \def\@hyper@@readexternallink#1\\\#2#3#4{%

```

Parameters are:

1. The URL or file name
2. The type
3. The internal name
4. The link string

We need to get the 1st parameter properly expanded, so we delimit the arguments rather than passing it inside a group.

```

5484 \@hyper@readexternallink{#2}\{#3}\{#4}\#1::\{#1}%
5485 }

```

Now (potentially), we are passed: 1) The link type 2) The internal name, 3) the link string, 4) the URL type (http, mailto, file etc), 5) the URL details 6) anything after a real : in the URL 7) the whole URL again

```

5486 \def\@pdftempwordfile{file}%
5487 \def\@pdftempwordrun{run}%
5488 \def\@hyper@readexternallink#1#2#3#4:#5:#6\\\#7{%

```

If there are no colons at all (**#6** is blank), its a local file; if the URL type (**#4**) is blank, its probably a Mac filename, so treat it like a **file: URL**. The only flaw is if its a relative Mac path, with several colon-separated elements — then we lose. Such names must be prefixed with an explicit **dvi**:

```

5489 \ifx\\\#6\\\%
5490 \@hyper@linkfile file:#7\\\{#3}\{#2}\{#7}%
5491 \else
5492 \ifx\\\#4\\\%
5493 \@hyper@linkfile file:#7\\\{#3}\{#2}\{#7}%
5494 \else

```

If the URL type is ‘file’, pass it for local opening

```

5495 \def\@pdftempa{#4}%
5496 \ifx\@pdftempa\@pdftempwordfile
5497 \@hyper@linkfile#7\\\{#3}\{#2}\{#7}%
5498 \else

```

if it starts ‘run:’, its to launch an application.

```

5499 \ifx\@pdftempa\@pdftempwordrun
5500 \ifHy@pdfa
5501 \Hy@Error{%
5502 PDF/A: Launch action is prohibited%
5503 }\@ehc
5504 \begingroup
5505 \leavevmode
5506 #2%
5507 \endgroup
5508 \else
5509 \@hyper@launch#7\\\{#3}\{#2}%
5510 \fi
5511 \else

```

otherwise its a URL

```
5512     \hyper@linkurl{#3}{#7\ifx\\#2\\else\hyper@hash#2\fi}%
5513     \fi
5514     \fi
5515     \fi
5516     \fi
5517 }
```

By default, turn run: into file:

```
5518 \def\@hyper@launch run:#1\\#2#3{% filename, anchor text, linkname
5519     \hyper@linkurl{#2}{%
5520         \Hy@linkfileprefix
5521         #1%
5522         \ifx\\#3\\%
5523         \else
5524             \hyper@hash
5525             #3%
5526         \fi
5527     }%
5528 }
```

D P Story <story@uakron.edu> pointed out that relative paths starting .. fell over. Switched to using \filename@parse to solve this.

```
5529 \def\@hyper@linkfile file:#1\\#2#3#4{%
5530     %file url,link string, name, original uri
5531     \filename@parse{#1}%
5532     \ifx\filename@ext\relax
5533         \edef\filename@ext{\XR@ext}%
5534     \fi
5535     \def\use@file{\filename@area\filename@base.\filename@ext}%
5536     \Hy@ifStringEndsWith\filename@ext\XR@ext{%
5537         \hyper@linkfile{#2}{\use@file}{#3}%
5538     }{%
5539         \ifx\@baseurl\@empty
5540             \hyper@linkurl{#2}{%
5541                 #4\ifx\\#3\\else\hyper@hash#3\fi
5542             }%
5543         \else
5544             \hyper@linkurl{#2}{\use@file\ifx\\#3\\else\hyper@hash#3\fi}%
5545         \fi
5546     }%
5547 }

5548 \def\Hy@ifStringEndsWith#1#2{%
5549     \begingroup
5550     \edef\x{#1}%
5551     \@onelevel@sanitize\x
5552     \edef\x{.x}%
5553     \edef\y{#2}%
5554     \@onelevel@sanitize\y
5555     \edef\y{.y}%
5556     \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5557         \endgroup
5558         \ifx\relax##2\relax
5559             \expandafter\ltx@secondoftwo
5560         \else
5561             \expandafter\ltx@firstoftwo
5562         \fi
5563     }%
```

```

5564 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5565 }

5566 \def\Hy@StringLocalhost{localhost}
5567 \@onelevel@sanitize\Hy@StringLocalhost
5568 \def\Hy@CleanupFile#1{%
5569   \edef#1{#1}%
5570   \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5571 }
5572 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5573   \begingroup
5574   \toks@{\endgroup}%
5575   \def\x{#1}%
5576   \ifx\x\@empty
5577     \def\x{#2}%
5578     \ifx\x\@empty
5579       \toks@{\endgroup\def#5{/#3}}%
5580     \else
5581       \@onelevel@sanitize\x
5582       \ifx\x\Hy@StringLocalhost
5583         \toks@{\endgroup\def#5{/#3}}%
5584       \fi
5585     \fi
5586   \fi
5587   \the\toks@
5588 }

```

Anchors have a name, and marked text. We have to be careful with the marked text, as if we break off part of something to put a `\special` around it, all hell breaks loose. Therefore, we check the category code of the first token, and only proceed if its safe. Tanmoy sorted this out.

A curious case arises if the original parameter was in braces. That means that `#2` comes here a multiple letters, and the `noexpand` just looks at the first one, putting the rest in the output. Yuck.

```

5589 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5590 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5591   \ifx\#1\%
5592     #2\Hy@Warning{Ignoring empty anchor}%
5593   \else
5594     \def\anchor@spot{#2#3}%
5595     \let\put@me@back\@empty
5596     \ifx\relax#2\relax
5597     \else
5598       \ifHy@nesting
5599       \else
5600         \ifcat a\noexpand#2\relax
5601         \else
5602           \ifcat 0\noexpand#2 \relax
5603           \else
5604             \typeout{Anchor start is not alphanumeric %
5605             on input line\the\inputlineno%
5606             }%
5607             \let\anchor@spot\@empty
5608             \def\put@me@back{#2#3}%
5609           \fi
5610         \fi
5611       \fi
5612     \fi

```

```

5613 \ifHy@activeanchor
5614 \anchor@spot
5615 \else
5616 \hyper@anchor{#1}%
5617 \fi
5618 \expandafter\put@me@back
5619 \fi
5620 \let\anchor@spot\@empty
5621 }
5622 \let\anchor@spot\tx@empty

```

18 Option ‘destlabel’

```
5623 \ifHy@destlabel
```

```
\hyper@newdestlabel
```

```

5624 \def\hyper@newdestlabel#1#2{%
5625 \begingroup
5626 \Hy@safe@activetrue
5627 \edef\x{\endgroup
5628 \noexpand\@newl@bel{HyDL}{#1}{#2}%
5629 }%
5630 \x
5631 }%

```

```
\hyper@destlabel@hook
```

```
5632 \providecommand*\hyper@destlabel@hook{}
```

```
\Hy@DestRename
```

```

5633 \newcommand*\Hy@DestRename}[2]{%
5634 \ltx@ifundefined{HyDL!#1}{%
5635 \begingroup
5636 \Hy@safe@activetrue
5637 \edef\dest@name{#1}%
5638 \edef\label@name{#2}%
5639 \hyper@destlabel@hook
5640 \Hy@IsNotEmpty{dest@name}{%
5641 \Hy@IsNotEmpty{label@name}{%
5642 \global\expandafter
5643 \let\csname HyDL!#1\endcsname\ltx@empty
5644 \if@filesw
5645 \protected@write\@auxout{}{%
5646 \string\hyper@newdestlabel
5647 {#1}%
5648 {\label@name}%
5649 }%
5650 \fi
5651 }%
5652 }%
5653 \endgroup
5654 }{}%
5655 }%

```

```
\HyperDestRename
```

```

5656 \newcommand*\HyperDestRename}[2]{%
5657 \AtBeginDocument{%

```

```

5658 \Hy@DestRename{#1}{#2}%
5659 }%
5660 }%
5661 \AtBeginDocument{%
5662 \let\HyperDestRename\Hy@DestRename
5663 }%

```

\Hy@IsNotEmpty

```

5664 \def\Hy@IsNotEmpty#1{%
5665 \ltx@ifundefined{#1}\ltx@gobble{%
5666 \expandafter\ifx\csname#1\endcsname\ltx@empty
5667 \expandafter\ltx@gobble
5668 \else
5669 \expandafter\ltx@firstofone
5670 \fi
5671 }%
5672 }%

5673 \ltx@GlobalAppendToMacro\label@hook{%
5674 \HyperDestRename\@currentHref\label@name
5675 }%

```

\HyperDestLabelReplace

```

5676 \def\HyperDestLabelReplace#1{%
5677 \ltx@ifundefined{HyDL@#1}{%
5678 #1%
5679 }{%
5680 \csname HyDL@#1\endcsname
5681 }%
5682 }%

```

\HyperDestNameFilter

```

5683 \let\HyperDestNameFilter\HyperDestLabelReplace

5684 \else

```

\hyper@newdestlabel

```

5685 \let\hyper@newdestlabel\ltx@gobbletwo

```

\HyperDestLabelReplace

```

5686 \let\HyperDestLabelReplace\ltx@firstofone

```

\HyperDestRename

```

@gobbletwo

5687 \fi
5688 \Hy@DisableOption{destlabel}

```

Provide a dummy default definition of \hyper@newdestlabel inside the .aux files.

```

5689 \AddLineBeginAux{%
5690 \string\providecommand\string\hyper@newdestlabel[2]{}%
5691 }

```

19 Compatibility with the *L^AT_EX2html* package

Map our macro names on to Nikos', so that documents prepared for that system will work without change.

Note, however, that the whole complicated structure for segmenting documents is not supported; it is assumed that the user will load `html.sty` first, and then `hyperref.sty`, so that the definitions in `html.sty` take effect, and are then overridden in a few circumstances by this package.

```
5692 \let\htmladding\hyperimage
5693 \def\htmladdnormallink#1#2{\href{#2}{#1}}
5694 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
5695 \def\htmlref#1#2{% anchor text, label
5696   \label@hyperref[#{#2}]{#1}%
5697 }
```

This is really too much. The *L^AT_EX2html* package defines its own `\hyperref` command, with a different syntax. Was this always here? Its weird, anyway. We interpret it in the 'printed' way, since we are about fidelity to the page.

```
5698 \def\@@l@textohtmlX{%
5699   \let\hhyperref\hyperref
5700   \def\hyperref##1##2###3###4{% anchor text for HTML
5701     % text to print before label in print
5702     % label
5703     % post-label text in print
5704     ##2\ref{###4}##3%
5705   }%
5706 }
```

20 Forms creation

Allow for creation of PDF or HTML forms. The effects here are limited somewhat by the need to support both output formats, so it may not be as clever as something which only wants to make PDF forms.

I (Sebastian) could not have started this without the encouragement of T V Raman.

20.1 Field flags

The field flags are organized in a bit set.

```
5707 \RequirePackage{bitset}
```

Each flag has a option name, an `\if` switch, and a bit position. The default is always 'false', the flag is clear. This is also the default of the switch created by `\newif`.

The names of the flags in the PDF specification (1.7) are used as lowercase option names.

```
\HyField@NewFlag #1: type: F annot flags, Ff field flags
#2: PDF name
#3: PDF position
5708 \def\HyField@NewFlag#1#2{%
5709   \lowercase{\HyField@NewOption{#2}}%
5710   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5711 }
```

```

\HyField@NewFlagOnly
5712 \def\HyField@NewFlagOnly#1#2{%
5713 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5714 }

\HyField@NewOption #1: option name
5715 \def\HyField@NewOption#1{%
5716 \expandafter\newif\csname ifFld@#1\endcsname
5717 \define@key{Field}{#1}[true]{%
5718 \lowercase{\Field@boolkey{##1}}{#1}%
5719 }%
5720 }

\HyField@NewBitsetFlag Package 'bitset' uses zero based positions, the PDF specification starts with one.
#1: option
#2: PDF name
#3: type: F annot flags, Ff field flags
#4: PDF position
5721 \def\HyField@NewBitsetFlag#1#2#3#4{%
5722 \begingroup
5723 \count@=#4\relax
5724 \advance\count@\m@ne
5725 \def\x##1{%
5726 \endgroup
5727 \expandafter\def\csname HyField@#3@##1\endcsname{##1}%
5728 \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
5729 \expandafter\edef\csname HyField@#3@##1\endcsname{%
5730 (\number#4) #2%
5731 }%
5732 \else
5733 \expandafter\edef\csname HyField@#3@##1\endcsname{%
5734 \csname HyField@#3@##1\endcsname
5735 /#2%
5736 }%
5737 \fi
5738 }%
5739 \expandafter\x\expandafter{\the\count@}%
5740 }

\HyField@UseFlag The bit set is HyField@#1
5741 \def\HyField@UseFlag#1#2{%
5742 \lowercase{\HyField@@UseFlag{#2}}{#1}%
5743 }

\HyField@@UseFlag
5744 \def\HyField@@UseFlag#1#2{%
5745 \bitsetSetValue{HyField@#2}{%
5746 \csname HyField@#2@#1\endcsname
5747 }{%
5748 \csname ifFld@#1\endcsname 1\else 0\fi
5749 }%
5750 }

\HyField@SetFlag The bit set is HyField@#1
5751 \def\HyField@SetFlag#1#2{%
5752 \lowercase{\HyField@@SetFlag{#2}}{#1}%
5753 }

```

```

\HyField@@SetFlag
5754 \def\HyField@@SetFlag#1#2{%
5755 \bitsetSetValue{HyField@#2}{%
5756 \csname HyField@#2@#1\endcsname
5757 }{1}%
5758 }

\HyField@PrintFlags
5759 \def\HyField@PrintFlags#1#2{%
5760 \ifHy@verbose
5761 \begingroup
5762 \let\Hy@temp\@empty
5763 \let\MessageBreak\relax
5764 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5765 \bitsetGetSetBitList{HyField@#1}\do{%
5766 \edef\Hy@temp{%
5767 \Hy@temp
5768 \csname HyField@#1@\x\endcsname\MessageBreak
5769 }%
5770 }%
5771 \edef\x{\endgroup
5772 \noexpand\Hy@Info{%
5773 Field flags: %
5774 \expandafter\ifx\@car#1\@nil S\else/\fi
5775 #1 %
5776 \bitsetGetDec{HyField@#1} %
5777 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5778 \Hy@temp
5779 for #2%
5780 }%
5781 }\x
5782 \fi
5783 }

```

20.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

5784 \HyField@NewFlag{Ff}{ReadOnly}{1}
5785 \HyField@NewFlag{Ff}{Required}{2}
5786 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5787 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5788 \HyField@NewFlag{Ff}{Radio}{16}
5789 \HyField@NewFlag{Ff}{Pushbutton}{17}
5790 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5791 \HyField@NewFlag{Ff}{Multiline}{13}
5792 \HyField@NewFlag{Ff}{Password}{14}
5793 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5794 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5795 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5796 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5797 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5798 \HyField@NewFlag{Ff}{Combo}{18}

```



```

5799 \HyField@NewFlag{Ff}{Edit}{19}
5800 \HyField@NewFlag{Ff}{Sort}{20}
5801 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5802 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5803 \HyField@NewFlag{Ff}{CommitOnSelChange}{27}% PDF 1.5

```

Signature fields are not supported.

Until 6.76i hyperref uses field option ‘combo’ to set three flags ‘Combo’, ‘Edit’, and ‘Sort’. Option ‘popdown’ sets flag ‘Combo’ only.

```

5804 \newif\ifFld@popdown
5805 \define@key{Field}{popdown}{true}{%
5806 \lowercase{\Field@boolkey{#1}}{popdown}%
5807 }

```

Annotation flags. The form objects are widget annotations. There are two flags for readonly settings, the one in the annotation flags is ignored, instead the other in the field flags is used.

Flag `Print` is not much useful, because hyperref do not use the appearance entry of the annotations for most fields.

```

5808 \HyField@NewFlag{F}{Invisible}{1}
5809 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5810 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5811 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5812 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5813 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5814 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5815 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5816 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

5817 \ifHy@pdfa
5818 \def\HyField@PDFAFflagWarning#1#2{%
5819 \Hy@Warning{%
5820 PDF/A: Annotation flag `#1' must\MessageBreak
5821 be set to `#2'%
5822 }%
5823 }%
5824 \Fld@invisiblefalse
5825 \def\Fld@invisibletrue{%
5826 \HyField@PDFAFflagWarning{invisible}{false}%
5827 }%
5828 \Fld@hiddenfalse
5829 \def\Fld@hiddentrue{%
5830 \HyField@PDFAFflagWarning{hidden}{false}%
5831 }%
5832 \Fld@printtrue
5833 \def\Fld@printfalse{%
5834 \HyField@PDFAFflagWarning{print}{true}%
5835 }%
5836 \Fld@nozoomtrue
5837 \def\Fld@nozoomfalse{%
5838 \HyField@PDFAFflagWarning{nozoom}{true}%
5839 }%
5840 \Fld@norotatetrue
5841 \def\Fld@norotatefalse{%
5842 \HyField@PDFAFflagWarning{norotate}{true}%
5843 }%
5844 \Fld@noviewfalse
5845 \def\Fld@noviewtrue{%

```

```

5846 \HyField@PDFAFIWarning{noview}{false}%
5847 }%
5848 \fi

```

Submit flags. Flag 1 Include/Exclude is not supported, use option noexport instead.

```

5849 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5850 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5851 \HyField@NewFlag{Submit}{GetMethod}{4}
5852 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5853 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5854 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5855 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5856 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5857 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5858 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5859 \HyField@NewFlag{Submit}{ExclFKey}{12}
5860 \HyField@NewFlag{Submit}{EmbedForm}{14}

5861 \define@key{Field}{export}{%
5862 \lowercase{\def\Hy@temp{#1}}%
5863 \@ifundefined{Fld@export@\Hy@temp}{%
5864 \@onelevel@sanitize\Hy@temp
5865 \Hy@Error{%
5866 Unknown export format ` \Hy@temp'.\MessageBreak
5867 Known formats are `FDF', `HTML', `XFDF', and `PDF'%
5868 } \@ehc
5869 }{%
5870 \let\Fld@export\Hy@temp
5871 }%
5872 }
5873 \def\Fld@export{fdf}
5874 \@namedef{Fld@export@fdf}{0}%
5875 \@namedef{Fld@export@html}{1}%
5876 \@namedef{Fld@export@xfdf}{2}%
5877 \@namedef{Fld@export@pdf}{3}%

```

20.1.2 Set submit flags

\HyField@FlagsSubmit

```

5878 \def\HyField@FlagsSubmit{%
5879 \bitsetReset{HyField@Submit}%
5880 \ifcase\@nameuse{Fld@export@\Fld@export} %
5881 % FDF
5882 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5883 \HyField@UseFlag{Submit}{SubmitCoordinates}%
5884 \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5885 \HyField@UseFlag{Submit}{IncludeAnnotations}%
5886 \HyField@UseFlag{Submit}{CanonicalFormat}%
5887 \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5888 \HyField@UseFlag{Submit}{ExclFKey}%
5889 \HyField@UseFlag{Submit}{EmbedForm}%
5890 \or % HTML
5891 \HyField@SetFlag{Submit}{ExportFormat}%
5892 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5893 \HyField@UseFlag{Submit}{GetMethod}%
5894 \HyField@UseFlag{Submit}{SubmitCoordinates}%
5895 \HyField@UseFlag{Submit}{CanonicalFormat}%

```

```

5896 \or % XFDF
5897   \HyField@SetFlag{Submit}{XFDF}%
5898   \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5899   \HyField@UseFlag{Submit}{SubmitCoordinates}%
5900   \HyField@UseFlag{Submit}{CanonicalFormat}%
5901 \or % PDF
5902   \HyField@SetFlag{Submit}{SubmitPDF}%
5903   \HyField@UseFlag{Submit}{GetMethod}%
5904 \fi
5905 \HyField@PrintFlags{Submit}{submit button field}%
5906 \bitsetIsEmpty{HyField@Submit}{%
5907   \let\Fld@submitflags\tx@empty
5908 }{%
5909   \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5910 }%
5911 }

```

20.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5912 \def\HyField@FlagsAnnot#1{%
5913   \bitsetReset{HyField@F}%
5914   \HyField@UseFlag{F}{Invisible}%
5915   \HyField@UseFlag{F}{Hidden}%
5916   \HyField@UseFlag{F}{Print}%
5917   \HyField@UseFlag{F}{NoZoom}%
5918   \HyField@UseFlag{F}{NoRotate}%
5919   \HyField@UseFlag{F}{NoView}%
5920   \HyField@UseFlag{F}{Locked}%
5921   \HyField@UseFlag{F}{ToggleNoView}%
5922   \HyField@UseFlag{F}{LockedContents}%
5923   \HyField@PrintFlags{F}{#1}%
5924   \bitsetIsEmpty{HyField@F}{%
5925     \let\Fld@annotflags\tx@empty
5926   }{%
5927     \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
5928   }%
5929 }

```

20.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5930 \def\HyField@FlagsPushButton{%
5931   \HyField@FlagsAnnot{push button field}%
5932   \bitsetReset{HyField@Ff}%
5933   \HyField@UseFlag{Ff}{ReadOnly}%
5934   \HyField@UseFlag{Ff}{Required}%
5935   \HyField@UseFlag{Ff}{NoExport}%
5936   \HyField@SetFlag{Ff}{PushButton}%
5937   \HyField@PrintFlags{Ff}{push button field}%
5938   \bitsetIsEmpty{HyField@Ff}{%
5939     \let\Fld@flags\tx@empty
5940   }{%
5941     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5942   }%
5943 }

```

20.1.5 Check box field

`\HyField@FlagsCheckBox`

```
5944 \def\HyField@FlagsCheckBox{%
5945 \HyField@FlagsAnnot{check box field}%
5946 \bitsetReset{HyField@Ff}%
5947 \HyField@UseFlag{Ff}{ReadOnly}%
5948 \HyField@UseFlag{Ff}{Required}%
5949 \HyField@UseFlag{Ff}{NoExport}%
5950 \HyField@PrintFlags{Ff}{check box field}%
5951 \bitsetIsEmpty{HyField@Ff}{%
5952 \let\Fld@flags\ltx@empty
5953 }{%
5954 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5955 }%
5956 }
```

20.1.6 Radio button field

`\HyField@FlagsRadioButton`

```
5957 \def\HyField@FlagsRadioButton{%
5958 \HyField@FlagsAnnot{radio button field}%
5959 \bitsetReset{HyField@Ff}%
5960 \HyField@UseFlag{Ff}{ReadOnly}%
5961 \HyField@UseFlag{Ff}{Required}%
5962 \HyField@UseFlag{Ff}{NoExport}%
5963 \HyField@UseFlag{Ff}{NoToggleToOff}%
5964 \HyField@SetFlag{Ff}{Radio}%
5965 \HyField@UseFlag{Ff}{RadiosInUnison}%
5966 \HyField@PrintFlags{Ff}{radio button field}%
5967 \bitsetIsEmpty{HyField@Ff}{%
5968 \let\Fld@flags\ltx@empty
5969 }{%
5970 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5971 }%
5972 }
```

20.1.7 Text fields

`\HyField@FlagsText`

```
5973 \def\HyField@FlagsText{%
5974 \HyField@FlagsAnnot{text field}%
5975 \bitsetReset{HyField@Ff}%
5976 \HyField@UseFlag{Ff}{ReadOnly}%
5977 \HyField@UseFlag{Ff}{Required}%
5978 \HyField@UseFlag{Ff}{NoExport}%
5979 \HyField@UseFlag{Ff}{Multiline}%
5980 \HyField@UseFlag{Ff}{Password}%
5981 \HyField@UseFlag{Ff}{FileSelect}%
5982 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5983 \HyField@UseFlag{Ff}{DoNotScroll}%
5984 \ifFld@comb
5985 \ifcase0\ifFld@multiline
5986 \else\ifFld@password
5987 \else\ifFld@fileselect
5988 \else 1\fi\fi\fi\relax
5989 \Hy@Error{%
```

```

5990     Field option `comb' cannot used together with\MessageBreak
5991     `multiline', `password', or `fileselect'%
5992   }\@ehc
5993   \else
5994     \HyField@UseFlag{Ff}{Comb}%
5995   \fi
5996 \fi
5997 \HyField@UseFlag{Ff}{RichText}%
5998 \HyField@PrintFlags{Ff}{text field}%
5999 \bitsetIsEmpty{HyField@Ff}{%
6000   \let\Fld@flags\ltx@empty
6001 }{%
6002   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
6003 }%
6004 }

```

20.1.8 Choice fields

\HyField@FlagsChoice

```

6005 \def\HyField@FlagsChoice{%
6006   \HyField@FlagsAnnot{choice field}%
6007   \bitsetReset{HyField@Ff}%
6008   \HyField@UseFlag{Ff}{ReadOnly}%
6009   \HyField@UseFlag{Ff}{Required}%
6010   \HyField@UseFlag{Ff}{NoExport}%
6011   \HyField@UseFlag{Ff}{Combo}%
6012   \ifFld@combo
6013     \HyField@UseFlag{Ff}{Edit}%
6014   \fi
6015   \HyField@UseFlag{Ff}{Sort}%
6016   \HyField@UseFlag{Ff}{MultiSelect}%
6017   \ifFld@combo
6018     \ifFld@edit
6019       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
6020     \fi
6021   \fi
6022   \HyField@UseFlag{Ff}{CommitOnSelChange}%
6023   \HyField@PrintFlags{Ff}{choice field}%
6024   \bitsetIsEmpty{HyField@Ff}{%
6025     \let\Fld@flags\ltx@empty
6026   }{%
6027     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
6028   }%
6029 }

```

20.2 Choice field

\HyField@PDFChoices #1: list of choices in key value syntax, key = exported name, value = displayed text.

Input: \Fld@default, \Fld@value, \ifFld@multiselect
Result: \Fld@choices with entries: /Opt, /DV, /V, /I.

```

6030 \def\HyField@PDFChoices#1{%
6031   \begingroup
6032   \global\let\Fld@choices\ltx@empty
6033   \let\HyTmp@optlist\ltx@empty
6034   \let\HyTmp@optitem\relax

```

```

6035 \count@=0 %
6036 \kv@parse{#1}{%
6037 \Hy@pdfstringdef\kv@key\kv@key
6038 \ifx\kv@value\relax
6039 \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
6040 \xdef\Fld@choices{\Fld@choices(\kv@key)(\kv@key)}%
6041 \else
6042 \xdef\Fld@choices{\Fld@choices(\kv@key)}%
6043 \fi
6044 \else
6045 \Hy@pdfstringdef\kv@value\kv@value
6046 \xdef\Fld@choices{\Fld@choices(\kv@value)(\kv@key)}%
6047 \fi
6048 \edef\HyTmp@optlist{%
6049 \HyTmp@optlist
6050 \HyTmp@optitem{\the\count@}{\kv@key}0%
6051 }%
6052 \advance\count@ by 1 %
6053 \@gobbletwo
6054 }%
6055 \xdef\Fld@choices{/Opt[\Fld@choices]}%
6056 \ifFld@multiselect
6057 \HyField@@PDFChoices{DV}\Fld@default
6058 \HyField@@PDFChoices{V}\Fld@value
6059 \else
6060 \ifx\Fld@default\relax
6061 \else
6062 \pdfstringdef\Hy@gtemp\Fld@default
6063 \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
6064 \fi
6065 \ifx\Fld@value\relax
6066 \else
6067 \pdfstringdef\Hy@gtemp\Fld@value
6068 \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
6069 \fi
6070 \fi
6071 \endgroup
6072 }

```

\HyField@@PDFChoices

```

6073 \def\HyField@@PDFChoices#1#2{%
6074 \ifx#2\relax
6075 \else
6076 \count@=0 %
6077 \def\HyTmp@optitem##1##2##3{%
6078 \def\HyTmp@key{##2}%
6079 \ifx\HyTmp@key\Hy@gtemp
6080 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
6081 \HyTmp@optlist
6082 \HyTmp@optitem{##1}{##2}1%
6083 }%
6084 \let\HyTmp@found=Y%
6085 \else
6086 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
6087 \HyTmp@optlist
6088 \HyTmp@optitem{##1}{##2}##3%
6089 }%
6090 \fi

```

```

6091 }%
6092 \expandafter\comma@parse\expandafter{#2}{%
6093 \pdfstringdef\Hy@gtemp\comma@entry
6094 \let\HyTmp@found=N %
6095 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
6096 \HyTmp@optlist
6097 \ifx\HyTmp@found Y%
6098 \advance\count@ by 1 %
6099 \else
6100 \@onelevel@sanitize\comma@entry
6101 \PackageWarning{hyperref}{%
6102 \string\ChoiceBox: Ignoring value `\'comma@entry',%
6103 \MessageBreak
6104 it cannot be found in the choices%
6105 }%
6106 \fi
6107 \@gobble
6108 }%
6109 \def\HyTmp@optitem##1##2##3{%
6110 \ifnum##3=1 %
6111 (##2)%
6112 \fi
6113 }%
6114 \ifcase\count@
6115 \or
6116 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
6117 \else
6118 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
6119 \ifx#1V%
6120 \def\HyTmp@optitem##1##2##3{%
6121 \ifnum##3=1 %
6122 \@firstofone{ ##1}%
6123 \fi
6124 }%
6125 \edef\HyTmp@optlist{\HyTmp@optlist}%
6126 \xdef\Fld@choices{%
6127 \Fld@choices
6128 /I[\expandafter\@firstofone\HyTmp@optlist]}%
6129 }%
6130 \fi
6131 \fi
6132 \fi
6133 }

```

20.3 Forms

\HyField@SetKeys

```

6134 \def\HyField@SetKeys{%
6135 \kvsetkeys{Field}%
6136 }

6137 \newif\ifFld@checked
6138 \newif\ifFld@disabled
6139 \Fld@checkedfalse
6140 \Fld@disabledfalse
6141 \newcount\Fld@menulength
6142 \newdimen\Field@Width

```

```

6143 \newdimen\Fld@charsize
6144 \Fld@charsize=10\p@
6145 \def\Fld@maxlen{0}
6146 \def\Fld@align{0}
6147 \def\Fld@color{0 0 0 rg}
6148 \def\Fld@bcolor{1 1 1}
6149 \def\Fld@bordercolor{1 0 0}
6150 \def\Fld@bordersep{1\p@}
6151 \def\Fld@borderwidth{1}
6152 \def\Fld@borderstyle{S}
6153 \def\Fld@cbsymbol{4}
6154 \def\Fld@radiosymbol{H}
6155 \def\Fld@rotation{0}
6156 \def\Form{\@ifnextchar{\@Form}{\@Form[]}}
6157 \def\endForm{\@endForm}
6158 \newif\ifForm@html
6159 \Form@htmlfalse
6160 \def\Form@boolkey#1#2{%
6161   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6162 }
6163 \define@key{Form}{action}{%
6164   \hyper@normalise\Hy@DefFormAction{#1}%
6165 }
6166 \def\Hy@DefFormAction{\def\Form@action}
6167 \def\enc@@html{html}
6168 \define@key{Form}{encoding}{%
6169   \def\Hy@tempa{#1}%
6170   \ifx\Hy@tempa\enc@@html
6171     \Form@htmltrue
6172     \def\Fld@export{html}%
6173   \else
6174     \Hy@Warning{%
6175       Form `encoding' key with \MessageBreak
6176       unknown value `#1'%
6177     }%
6178     \Form@htmlfalse
6179   \fi
6180 }
6181 \define@key{Form}{method}{%
6182   \lowercase{\def\Hy@temp{#1}}%
6183   \@ifundefined{Form@method@\Hy@temp}{%
6184     \@onelevel@sanitize\Hy@temp
6185     \Hy@Error{%
6186       Unknown method ``\Hy@temp'.\MessageBreak
6187       Known values are `post' and `get'%
6188     } \@ehc
6189   }{%
6190     \let\Form@method\Hy@temp
6191     \ifcase\@nameuse{Form@method@\Hy@temp} %
6192       \Fld@getmethodfalse
6193     \else
6194       \Fld@getmethodtrue
6195     \fi
6196   }%
6197 }
6198 \def\Form@method{}
6199 \@namedef{Form@method@post}{0}

```



```

6200 \@namedef{Form@method@get}{1}
6201 \newif\ifHyField@NeedAppearances
6202 \def\HyField@NeedAppearancesfalse{%
6203   \global\let\ifHyField@NeedAppearances\iffalse
6204 }
6205 \def\HyField@NeedAppearancestrue{%
6206   \global\let\ifHyField@NeedAppearances\iftrue
6207 }
6208 \HyField@NeedAppearancestrue
6209 \define@key{Form}{NeedAppearances}[true]{%
6210   \edef\Hy@tempa{#1}%
6211   \ifx\Hy@tempa\Hy@true
6212     \HyField@NeedAppearancestrue
6213   \else
6214     \ifx\Hy@tempa\Hy@false
6215       \HyField@NeedAppearancesfalse
6216     \else
6217       \Hy@Error{%
6218         Unexpected value `\'Hy@tempa'\MessageBreak
6219         of option `NeedAppearances' instead of\MessageBreak
6220         `true' or `false'%
6221       } \@ehc
6222     \fi
6223   \fi
6224 }
6225 \def\Field@boolkey#1#2{%
6226   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6227 }
6228 \ifHy@texht
6229   \newtoks\Field@toks
6230   \Field@toks={ }%
6231   \def\Field@addtoks#1#2{%
6232     \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
6233     \@processme
6234   }%
6235 \else
6236   \def\Hy@WarnHTMLFieldOption#1{%
6237     \Hy@Warning{%
6238       HTML field option `#1'\MessageBreak
6239       is ignored%
6240     }%
6241   }%
6242 \fi
6243 \def\Fld@checkequals#1=#2=#3\{\%
6244   \def\@currDisplay{#1}%
6245   \ifx\#2\%
6246     \def\@currValue{#1}%
6247   \else
6248     \def\@currValue{#2}%
6249   \fi
6250 }
6251 \define@key{Field}{loc}{%
6252   \def\Fld@loc{#1}%
6253 }
6254 \define@key{Field}{checked}[true]{%
6255   \lowercase{\Field@boolkey{#1}}{checked}%
6256 }

```

```

6257 \define@key{Field}{disabled}[true]{%
6258   \lowercase{\Field@boolkey{#1}}{disabled}%
6259 }
6260 \ifHy@texht
6261   \define@key{Field}{accesskey}{%
6262     \Field@addtoks{accesskey}{#1}%
6263   }%
6264   \define@key{Field}{tabkey}{%
6265     \Field@addtoks{tabkey}{#1}%
6266   }%
6267 \else
6268   \define@key{Field}{accesskey}{%
6269     \Hy@WarnHTMLFieldOption{accesskey}%
6270   }%
6271   \define@key{Field}{tabkey}{%
6272     \Hy@WarnHTMLFieldOption{tabkey}%
6273   }%
6274 \fi
6275 \define@key{Field}{name}{%
6276   \def\Fld@name{#1}%
6277 }
6278 \let\Fld@altname\relax
6279 \define@key{Field}{altname}{%
6280   \def\Fld@altname{#1}%
6281 }
6282 \let\Fld@mappingname\relax
6283 \define@key{Field}{mappingname}{%
6284   \def\Fld@mappingname{#1}%
6285 }
6286 \define@key{Field}{width}{%
6287   \def\Fld@width{#1}%
6288   \Field@Width#1\setbox0=\hbox{m}%
6289 }
6290 \define@key{Field}{maxlen}{%
6291   \def\Fld@maxlen{#1}%
6292 }
6293 \define@key{Field}{menulength}{%
6294   \Fld@menulength=#1\relax
6295 }
6296 \define@key{Field}{height}{%
6297   \def\Fld@height{#1}%
6298 }
6299 \define@key{Field}{charsize}{%
6300   \setlength{\Fld@charsize}{#1}%
6301 }
6302 \define@key{Field}{borderwidth}{%
6303   \Hy@defaultbp\Fld@borderwidth{#1}%
6304 }
6305 \def\Hy@defaultbp#1#2{%
6306   \begingroup
6307   \afterassignment\Hy@defaultbpAux
6308   \dimen@=#2bp\relax{#1}{#2}%
6309 }
6310 \begingroup\expandafter\expandafter\expandafter\endgroup
6311 \expandafter\ifx\csname dimexpr\endcsname\relax
6312   \def\Hy@defaultbpAux#1\relax#2#3{%
6313     \ifx!#1!%

```

```

6314 \endgroup
6315 \def#2{#3}%
6316 \else
6317 \dimen@=.99626\dimen@
6318 \edef\x{\endgroup
6319 \def\noexpand#2{%
6320 \strip@pt\dimen@
6321 }%
6322 }\x
6323 \fi
6324 }%
6325 \else
6326 \def\Hy@defaultbpAux#1\relax#2#3{%
6327 \ifx!#1!%
6328 \endgroup
6329 \def#2{#3}%
6330 \else
6331 \edef\x{\endgroup
6332 \def\noexpand#2{%
6333 \strip@pt\dimexpr\dimen@*800/803\relax
6334 }%
6335 }\x
6336 \fi
6337 }%
6338 \fi
6339 \define@key{Field}{borderstyle}{%
6340 \let\Hy@temp\Fld@borderstyle
6341 \def\Fld@borderstyle{#1}%
6342 \Hy@Match\Fld@borderstyle}{}%
6343 ~[SDBIU]$%
6344 }-}{%
6345 \Hy@Warning{%
6346 Invalid value `@\pdfborderstyle'\MessageBreak
6347 for option `pdfborderstyle'. Valid values:\MessageBreak
6348 \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
6349 \space\space I (Inset), U (Underline)\MessageBreak
6350 Option setting is ignored%
6351 }%
6352 \let\Fld@borderstyle\Hy@temp
6353 }%
6354 }
6355 \define@key{Field}{bordersep}{%
6356 \def\Fld@bordersep{#1}%
6357 }
6358 \define@key{Field}{default}{%
6359 \def\Fld@default{#1}%
6360 }
6361 \define@key{Field}{align}{%
6362 \def\Fld@align{#1}%
6363 }
6364 \define@key{Field}{value}{%
6365 \Hy@pdfstringdef\Fld@value{#1}%
6366 }
6367 \define@key{Field}{checkboxsymbol}{%
6368 \Fld@DingDef\Fld@cbsymbol{#1}%
6369 }
6370 \define@key{Field}{radiosymbol}{%

```

```

6371 \Fld@DingDef\Fld@radiosymbol{#1}%
6372 }
6373 \def\Fld@DingDef#1#2{%
6374 \let\Fld@temp\ltx@empty
6375 \Fld@@@DingDef#2\ding{}}\@nil
6376 \let#1\Fld@temp
6377 }
6378 \def\Fld@@@DingDef#1\ding#2#3\@nil{%
6379 \expandafter\def\expandafter\Fld@temp\expandafter{%
6380 \Fld@temp
6381 #1%
6382 }%
6383 \ifx\#3\%
6384 \expandafter\@gobble
6385 \else
6386 \begingroup
6387 \lccode`0=#2\relax
6388 \lowercase{\endgroup
6389 \expandafter\def\expandafter\Fld@temp\expandafter{%
6390 \Fld@temp
6391 0%
6392 }%
6393 }%
6394 \expandafter\@firstofone
6395 \fi
6396 {%
6397 \Fld@@@DingDef#3\@nil
6398 }%
6399 }

6400 \define@key{Field}{rotation}{%
6401 \def\Fld@rotation{#1}%
6402 }

6403 \define@key{Field}{backgroundcolor}{%
6404 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6405 }
6406 \define@key{Field}{bordercolor}{%
6407 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6408 }
6409 \define@key{Field}{color}{%
6410 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6411 }

6412 \let\Fld@onclick@code\ltx@empty
6413 \let\Fld@format@code\ltx@empty
6414 \let\Fld@validate@code\ltx@empty
6415 \let\Fld@calculate@code\ltx@empty
6416 \let\Fld@keystroke@code\ltx@empty
6417 \let\Fld@onfocus@code\ltx@empty
6418 \let\Fld@onblur@code\ltx@empty
6419 \let\Fld@onmousedown@code\ltx@empty
6420 \let\Fld@onmouseup@code\ltx@empty
6421 \let\Fld@onenter@code\ltx@empty
6422 \let\Fld@onexit@code\ltx@empty
6423 \def\Hy@temp#1{%
6424 \expandafter\Hy@@@temp\csname Fld@#1@code\endcsname{#1}%
6425 }
6426 \def\Hy@@@temp#1#2{%

```

```

6427 \ifHy@pdfa
6428   \define@key{Field}{#2}{%
6429     \Hy@Error{%
6430       PDF/A: Additional action `#2' is prohibited%
6431     }\@ehc
6432   }%
6433 \else
6434   \define@key{Field}{#2}{%
6435     \def#1{##1}%
6436   }%
6437 \fi
6438 }
6439 \Hy@temp{keystroke}
6440 \Hy@temp{format}
6441 \Hy@temp{validate}
6442 \Hy@temp{calculate}
6443 \Hy@temp{onfocus}
6444 \Hy@temp{onblur}
6445 \Hy@temp{onenter}
6446 \Hy@temp{onexit}

6447 \let\Fld@calculate@sortkey\ltx@empty
6448 \define@key{Field}{calculatesortkey}[1]{%
6449   \def\Fld@calculate@sortkey{#1}%
6450 }

6451 \ifHy@texht
6452   \def\Hy@temp#1{%
6453     \define@key{Field}{#1}{%
6454       \Field@addtoks{#1}{##1}%
6455     }%
6456   }%
6457 \else
6458   \def\Hy@temp#1{%
6459     \define@key{Field}{#1}{%
6460       \Hy@WarnHTMLFieldOption{#1}%
6461     }%
6462   }%
6463 \fi
6464 \Hy@temp{ondblclick}
6465 \Hy@temp{onmousedown}
6466 \Hy@temp{onmouseup}
6467 \Hy@temp{onmouseover}
6468 \Hy@temp{onmousemove}
6469 \Hy@temp{onmouseout}
6470 \Hy@temp{onkeydown}
6471 \Hy@temp{onkeyup}
6472 \Hy@temp{onselect}
6473 \Hy@temp{onchange}
6474 \Hy@temp{onkeypress}
6475 \ifHy@texht
6476   \define@key{Field}{onclick}{%
6477     \Field@addtoks{onclick}{#1}%
6478   }%
6479 \else
6480   \ifHy@pdfa
6481     \define@key{Field}{onclick}{%
6482       \Hy@Error{%
6483         PDF/A: Action `onclick' is prohibited%

```

```

6484     }\@ehc
6485   }%
6486 \else
6487   \define@key{Field}{onclick}{%
6488     \def\Fld@onclick@code{#1}%
6489   }%
6490 \fi
6491 \fi

6492 \DeclareRobustCommand\TextField{%
6493   \@ifnextchar[{\@TextField}{\@TextField[]}%
6494 }
6495 \DeclareRobustCommand\ChoiceMenu{%
6496   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6497 }
6498 \DeclareRobustCommand\CheckBox{%
6499   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6500 }
6501 \DeclareRobustCommand\PushButton{%
6502   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6503 }
6504 \DeclareRobustCommand\Gauge{%
6505   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6506 }
6507 \DeclareRobustCommand\Submit{%
6508   \@ifnextchar[{\@Submit}{\@Submit[]}%
6509 }
6510 \DeclareRobustCommand\Reset{%
6511   \@ifnextchar[{\@Reset}{\@Reset[]}%
6512 }
6513 \def\LayoutTextField#1#2{% label, field
6514   #1 #2%
6515 }
6516 \def\LayoutChoiceField#1#2{% label, field
6517   #1 #2%
6518 }
6519 \def\LayoutCheckField#1#2{% label, field
6520   #1 #2%
6521 }
6522 \def\LayoutPushButtonField#1{% button
6523   #1%
6524 }
6525 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6526 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6527 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6528 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6529 \def\MakeButtonField#1{%
6530   \sbox0{%
6531     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6532   }%
6533   \@tempdima\ht0 %
6534   \advance\@tempdima by \Fld@borderwidth bp %
6535   \advance\@tempdima by \Fld@borderwidth bp %
6536   \ht0\@tempdima
6537   \@tempdima\dp0 %
6538   \advance\@tempdima by \Fld@borderwidth bp %
6539   \advance\@tempdima by \Fld@borderwidth bp %
6540   \dp0\@tempdima

```

```

6541 \box0\relax
6542 }
6543 \def\DefaultHeightofSubmit{14pt}
6544 \def\DefaultWidthofSubmit{2cm}
6545 \def\DefaultHeightofReset{14pt}
6546 \def\DefaultWidthofReset{2cm}
6547 \def\DefaultHeightofCheckBox{\baselineskip}
6548 \def\DefaultWidthofCheckBox{\baselineskip}
6549 \def\DefaultHeightofChoiceMenu{\baselineskip}
6550 \def\DefaultWidthofChoiceMenu{\baselineskip}
6551 \def\DefaultHeightofText{\baselineskip}
6552 \def\DefaultHeightofTextMultiline{4\baselineskip}
6553 \def\DefaultWidthofText{3cm}
6554 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6555 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6556 \def\DefaultOptionsofPushButton{print}
6557 \def\DefaultOptionsofCheckBox{print}
6558 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

6559 \def\DefaultOptionsofListBox{print}
6560 \def\DefaultOptionsofComboBox{print,edit,sort}
6561 \def\DefaultOptionsofPopdownBox{print}
6562 \def\DefaultOptionsofRadio{print,notoggetooff}

```

21 Setup

```

6563 \ifHy@hyperfigures
6564 \Hy@Info{Hyper figures ON}%
6565 \else
6566 \Hy@Info{Hyper figures OFF}%
6567 \fi
6568 \ifHy@nesting
6569 \Hy@Info{Link nesting ON}%
6570 \else
6571 \Hy@Info{Link nesting OFF}%
6572 \fi
6573 \ifHy@hyperindex
6574 \Hy@Info{Hyper index ON}%
6575 \else
6576 \Hy@Info{Hyper index OFF}%
6577 \fi
6578 \ifHy@backref
6579 \Hy@Info{backreferencing ON}%
6580 \else
6581 \Hy@Info{backreferencing OFF}%
6582 \fi
6583 \ifHy@colorlinks
6584 \Hy@Info{Link coloring ON}%
6585 \else
6586 \Hy@Info{Link coloring OFF}%
6587 \fi
6588 \ifHy@ocgcolorlinks
6589 \Hy@Info{Link coloring with OCG ON}%
6590 \else
6591 \Hy@Info{Link coloring with OCG OFF}%
6592 \fi

```

```

6593 \ifHy@pdfa
6594 \Hy@Info{PDF/A mode ON}%
6595 \else
6596 \Hy@Info{PDF/A mode OFF}%
6597 \fi

```

22 Low-level utility macros

We need unrestricted access to the #, ~ and " characters, so make them nice macros.

```

6598 \edef\hyper@hash{\string#}
6599 \edef\hyper@tilde{\string~}
6600 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

6601 \def\@currentHref{Doc-Start}
6602 \let\Hy@footnote@currentHref\@empty

```

We give the start of document a special label; this is used in backreferencing-by-section, to allow for cites before any sectioning commands. Set up PDF info.

```

6603 \Hy@AtBeginDocument{%
6604 \Hy@pdfstringtrue
6605 \PDF@SetupDoc
6606 \let\PDF@SetupDoc\@empty
6607 \Hy@DisableOption{pdfpagescrop}%
6608 \Hy@DisableOption{pdfpagemode}%
6609 \Hy@DisableOption{pdfnonfullscreenpagemode}%
6610 \Hy@DisableOption{pdfdirection}%
6611 \Hy@DisableOption{pdfviewarea}%
6612 \Hy@DisableOption{pdfviewclip}%
6613 \Hy@DisableOption{pdfprintarea}%
6614 \Hy@DisableOption{pdfprintclip}%
6615 \Hy@DisableOption{pdfprintscaling}%
6616 \Hy@DisableOption{pdfduplex}%
6617 \Hy@DisableOption{pdfpicktraybypdfsize}%
6618 \Hy@DisableOption{pdfprintpagerange}%
6619 \Hy@DisableOption{pdfnumcopies}%
6620 \Hy@DisableOption{pdfstartview}%
6621 \Hy@DisableOption{pdfstartpage}%
6622 \Hy@DisableOption{pdftoolbar}%
6623 \Hy@DisableOption{pdfmenubar}%
6624 \Hy@DisableOption{pdfwindowui}%
6625 \Hy@DisableOption{pdfitwindow}%
6626 \Hy@DisableOption{pdfcenterwindow}%
6627 \Hy@DisableOption{pdfdisplaydoctitle}%
6628 \Hy@DisableOption{pdfpagelayout}%
6629 \Hy@DisableOption{pdflang}%
6630 \Hy@DisableOption{baseurl}%
6631 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6632 \Hy@pdfstringfalse
6633 }

```

Ignore star from referencing macros:

```

6634 \LetLtxMacro\NoHy@OrgRef\ref
6635 \DeclareRobustCommand*{\ref}{%
6636 \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6637 }
6638 \LetLtxMacro\NoHy@OrgPageRef\pageref

```



```

6639 \DeclareRobustCommand*\pageref}{%
6640 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6641 }

```

23 Localized nullifying of package

Sometimes we just don't want the wretched package interfering with us. Define an environment we can put in manually, or include in a style file, which stops the hypertext functions doing anything. This is used, for instance, in the Elsevier classes, to stop `hyperref` playing havoc in the front matter.

```

6642 \def\NoHyper{%
6643 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6644 \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
6645 \global\let\hyper@livelink\hyper@link
6646 \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6647 \let\hyper@anchor\ltx@gobble
6648 \let\hyper@anchorstart\ltx@gobble
6649 \def\hyper@anchorend{\Hy@xspace@end}%
6650 \let\hyper@linkstart\ltx@gobbletwo
6651 \def\hyper@linkend{\Hy@xspace@end}%
6652 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6653 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6654 \let\Hy@backout\@gobble
6655 }
6656 \def\stop@hyper{%
6657 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6658 \let\Hy@backout\@gobble
6659 \let\hyper@@anchor\ltx@gobble
6660 \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6661 \let\hyper@anchor\ltx@gobble
6662 \let\hyper@anchorstart\ltx@gobble
6663 \def\hyper@anchorend{\Hy@xspace@end}%
6664 \let\hyper@linkstart\ltx@gobbletwo
6665 \def\hyper@linkend{\Hy@xspace@end}%
6666 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6667 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6668 }
6669 \def\endNoHyper{%
6670 \global\let\hyper@link\hyper@livelink
6671 }
6672 \</package>

```

24 Package nohyperref

This package is introduced by Sebastian Rahtz.

Package `nohyperref` is a dummy package that defines some low level and some top-level commands. It is done for `jadetex`, which calls `hyperref` low-level commands, but it would also be useful with people using normal `hyperref`, who really do not want the package loaded at all.

Some low-level commands:

```

6673 \*nohyperref
6674 \RequirePackage{letltxmacro}[2008/06/13]
6675 \let\hyper@@anchor\@gobble
6676 \def\hyper@link##1##2##3{##3}%

```

```

6677 \let\hyper@anchorstart\@gobble
6678 \let\hyper@anchorend\@empty
6679 \let\hyper@linkstart\@gobbletwo
6680 \let\hyper@linkend\@empty
6681 \def\hyper@linkurl#1#2{#1}%
6682 \def\hyper@linkfile#1#2#3{#1}%
6683 \def\hyper@link@[#1]#2#3{#1}%
6684 \let\PDF@SetupDoc\@empty
6685 \let\PDF@FinishDoc\@empty
6686 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6687 \def\Acrobatmenu#1#2{\leavevmode#2}
6688 \let\pdfstringdefDisableCommands\@gobbletwo
6689 \let\texorpdfstring\@firstoftwo
6690 \let\pdfbookmark\@undefined
6691 \newcommand\pdfbookmark[3]{}
6692 \let\phantomsection\@empty
6693 \let\hypersetup\@gobble
6694 \let\hyperbaseurl\@gobble
6695 \newcommand*\href[3]{}
6696 \let\hyperdef\@gobbletwo
6697 \let\hyperlink\@gobble
6698 \let\hypertarget\@gobble
6699 \def\hyperref{%
7000 \ifnextchar\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
7001 }
7002 \long\def\@gobbleopt[#1]{}
7003 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

6704 \LetLtxMacro\NoHy@OrgRef\ref
6705 \DeclareRobustCommand*\ref{%
6706 \ifstar\NoHy@OrgRef\NoHy@OrgRef
6707 }
6708 \LetLtxMacro\NoHy@OrgPageRef\pageref
6709 \DeclareRobustCommand*\pageref{%
6710 \ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6711 }
6712 \nohyperref

```

25 The Mangling Of Aux and Toc Files

Some extra tests so that the hyperref package may be removed or added to a document without having to remove .aux and .toc files (this section is by David Carlisle) All the code is delayed to `\begin{document}`

```

6713 \*package
6714 \Hy@AtBeginDocument{%

```

First the code to deal with removing the hyperref package from a document.

Write some stuff into the aux file so if the next run is done without hyperref, then `\contentsline` and `\newlabel` are defined to cope with the extra arguments.

```

6715 \if@filesw
6716 \ifHy@typexml
6717 \immediate\closeout\@mainaux
6718 \immediate\openout\@mainaux\jobname.aux\relax
6719 \immediate\write\@auxout{<relaxxml>\relax}%

```

```

6720 \fi
6721 \immediate\write\@auxout{%
6722 \string\providecommand\string\HyperFirstAtBeginDocument{%
6723 \string\AtBeginDocument}^^J%
6724 \string\HyperFirstAtBeginDocument{%
6725 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6726 \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
6727 \string\gdef\string\contentsline%
6728 \string#1\string#2\string#3\string#4{%
6729 \string\oldcontentsline%
6730 {\string#1}{\string#2}{\string#3}}^^J%
6731 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6732 \string\gdef\string\newlabel\string#1\string#2{%
6733 \string\newlabelxx{\string#1}\string#2}^^J%
6734 \string\gdef\string\newlabelxx%
6735 \string#1\string#2\string#3\string#4\string#5\string#6{%
6736 \string\oldnewlabel{\string#1}{\string#2}{\string#3}}^^J%

```

But the new aux file will be read again at the end, with the normal definitions expected, so better put things back as they were.

```

6737 \string\AtEndDocument{%
6738 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6739 \string\let\string\contentsline\string\oldcontentsline^^J%
6740 \string\let\string\newlabel\string\oldnewlabel^^J%
6741 \string\fi%
6742 }^^J%

```

If the document is being run with hyperref put this definition into the aux file, so we can spot it on the next run.

```

6743 \string\fi%
6744 }^^J%
6745 \string\global\string\let\string\hyper@last\relax^^J%
6746 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6747 }%
6748 \fi
6749 \let\HyperFirstAtBeginDocument\ltx@firstofone

```

Now the code to deal with adding the hyperref package to a document with aux and toc written the standard way.

If hyperref was used last time, do nothing. If it was not used, or an old version of hyperref was used, don't use that TOC at all but generate a warning. Not ideal, but better than failing with pre-5.0 hyperref TOCs.

```

6750 \ifx\hyper@last\@undefined
6751 \def\@starttoc#1{%
6752 \begingroup
6753 \makeatletter
6754 \ltx@ifpackageloaded{parskip}{\parskip\z@}{}%
6755 \IfFileExists{\jobname.#1}{%
6756 \Hy@WarningNoLine{%
6757 old #1 file detected, not used; run LaTeX again%
6758 }%
6759 }{}%
6760 \if@filesw
6761 \expandafter\newwrite\csname tf@#1\endcsname
6762 \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
6763 \fi
6764 \@nobreakfalse
6765 \endgroup

```

```

6766 }%
6767 \def\newlabel#1#2{\@newlabel{#1}{#2}{-}{-}}%
6768 \fi
6769 }

```

26 Title strings

If options `pdftitle` and `pdfauthor` are not used, these informations for the pdf information dictionary can be extracted by the `\title` and `\author`.

```

6770 \ifHy@pdfusetitle
6771 \let\HyOrg@title\title
6772 \let\HyOrg@author\author
6773 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6774 \def\Hy@scanopttitle[#1]{%
6775 \gdef\Hy@title{#1}%
6776 \HyOrg@title{#1}%
6777 }%
6778 \def\Hy@scantitle#1{%
6779 \gdef\Hy@title{#1}%
6780 \HyOrg@title{#1}%
6781 }%
6782 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6783 \def\Hy@scanoptauthor[#1]{%
6784 \gdef\Hy@author{#1}%
6785 \HyOrg@author{#1}%
6786 }%
6787 \def\Hy@scanauthor#1{%
6788 \gdef\Hy@author{#1}%
6789 \HyOrg@author{#1}%
6790 }%

```

The case, that `\title`, or `\author` are given before `hyperref` is loaded, is much more complicate, because LaTeX initializes the macros `\@title` and `\@author` with LaTeX error and warning messages.

```

6791 \begingroup
6792 \def\process@me#1\@nil#2{%
6793 \expandafter\let\expandafter\x\csname @#2\endcsname
6794 \edef\y{\expandafter\strip@prefix\meaning\x}%
6795 \def\c##1##2\@nil{%
6796 \ifx\##1\%
6797 \else
6798 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6799 \expandafter{\x}%
6800 \fi
6801 }%
6802 \expandafter\c\y\relax#1\@nil
6803 }%
6804 \expandafter\process@me\string\@latex@\@nil{title}%
6805 \expandafter\process@me\string\@latex@\@nil{author}%
6806 \endgroup
6807 \fi
6808 \Hy@DisableOption{pdfusetitle}

```

Macro `\Hy@UseMaketitleInfos` is used in the driver files, before the information entries are used.

The newline macro `\newline` or `\` is much more complicate. In the title a good replacement can be a space, but can be already a space after `\` in the title

string. So this space is removed by scanning for the next non-empty argument.

In the macro `\author` the newline can perhaps separate the different authors, so the newline expands here to a comma with space.

The possible arguments such as space or the optional argument after the newline macros are not detected.

```

6809 \def\Hy@UseMaketitleString#1{%
6810 \ltx@ifundefined{Hy@#1}{}%
6811 \begingroup
6812 \let\Hy@saved@hook\pdfstringdefPreHook
6813 \pdfstringdefDisableCommands{%
6814 \expandafter\let\expandafter\csname Hy@newline@#1\endcsname
6815 \let\newline\}%
6816 \def\and{;}%
6817 }%
6818 \expandafter\ifx\csname @pdf#1\endcsname\@empty
6819 \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6820 \csname Hy@#1\endcsname\@empty
6821 }%
6822 \fi
6823 \global\let\pdfstringdefPreHook\Hy@saved@hook
6824 \endgroup
6825 }%
6826 }
6827 \def\Hy@newline@title#1{ #1}
6828 \def\Hy@newline@author#1{, #1}
6829 \def\Hy@UseMaketitleInfos{%
6830 \Hy@UseMaketitleString{title}%
6831 \Hy@UseMaketitleString{author}%
6832 }

```

27 Page numbers

This stuff is done by Heiko Oberdiek.

28 Every page

```

6833 \RequirePackage{atbegshi}[2007/09/09]
6834 \let\Hy@EveryPageHook\ltx@empty
6835 \let\Hy@EveryPageBoxHook\ltx@empty
6836 \let\Hy@FirstPageHook\ltx@empty
6837 \AtBeginShipout{%
6838 \Hy@EveryPageHook
6839 \ifx\Hy@EveryPageBoxHook\ltx@empty
6840 \else
6841 \setbox\AtBeginShipoutBox=\vbox{%
6842 \offinterlineskip
6843 \Hy@EveryPageBoxHook
6844 \box\AtBeginShipoutBox
6845 }%
6846 \fi
6847 }
6848 \ltx@iffileloaded{hpdftex.def}{%
6849 \AtBeginShipout{%
6850 \Hy@FirstPageHook
6851 \global\let\Hy@FirstPageHook\ltx@empty

```

```

6852 }%
6853 }{%
6854 \AtBeginShipoutFirst{%
6855   \Hy@FirstPageHook
6856 }%
6857 }
6858 \g@addto@macro\Hy@FirstPageHook{%
6859   \PDF@FinishDoc
6860   \global\let\PDF@FinishDoc\ltx@empty
6861 }

```

28.1 PDF /PageLabels

Internal macros of this module are marked with `\HyPL@`.

```

6862 \ifHy@pdfpagelabels
6863   \begingroup\expandafter\expandafter\expandafter\endgroup
6864   \expandafter\ifx\csname thepage\endcsname\relax
6865     \Hy@pdfpagelabelsfalse
6866     \Hy@WarningNoLine{%
6867       Option `pdfpagelabels' is turned off\MessageBreak
6868       because \string\thepage\space is undefined%
6869     }%
6870     \csname fi\endcsname
6871     \csname iffalse\expandafter\endcsname
6872   \fi

```

`\thispdfpagelabel` The command `\thispdfpagelabel` allows to label a special page without the redefinition of `\thepage` for the page.

```

6873 \def\thispdfpagelabel#1{%
6874   \gdef\HyPL@thisLabel{#1}%
6875 }%
6876 \global\let\HyPL@thisLabel\relax

```

`\HyPL@Labels` The page labels are collected in `\HyPL@Labels` and set at the end of the document.

```

6877 \let\HyPL@Labels\ltx@empty

```

`\Hy@abspage` We have to know the the absolute page number and introduce a new counter for that.

```

6878 \newcount\Hy@abspage
6879 \Hy@abspage=0 %

```

For comparisons with the values of the previous page, some variables are needed:

```

6880 \def\HyPL@LastType{init}%
6881 \def\HyPL@LastNumber{0}%
6882 \let\HyPL@LastPrefix\ltx@empty

```

Definitions for the PDF names of the L^AT_EX pendants.

```

6883 \def\HyPL@arabic{D}%
6884 \def\HyPL@Roman{R}%
6885 \def\HyPL@roman{r}%
6886 \def\HyPL@Alph{A}%
6887 \def\HyPL@alph{a}%
6888 \let\HyPL@SlidesSetPage\ltx@empty
6889 \ltx@ifclassloaded{slides}{%
6890   \def\HyPL@SlidesSetPage{%
6891     \advance\c@page\ltx@one
6892     \ifnum\value{page}>\ltx@one

```

```

6893     \protected@edef\HyPL@SlidesOptionalPage{%
6894       \Hy@SlidesFormatOptionalPage{\thepage}%
6895     }%
6896   \else
6897     \let\HyPL@SlidesOptionalPage\ltx@empty
6898   \fi
6899   \advance\c@page-\ltx@one
6900   \def\HyPL@page{%
6901     \csname the\Hy@SlidesPage\endcsname
6902     \HyPL@SlidesOptionalPage
6903   }%
6904 }%
6905 }{}%

```

`\HyPL@EveryPage` If a page is shipout and the page number is known, `\HyPL@EveryPage` has to be called. It stores the current page label.

```

6906 \def\HyPL@EveryPage{%
6907   \begingroup
6908   \ifx\HyPL@thisLabel\relax
6909     \let\HyPL@page\thepage
6910     \HyPL@SlidesSetPage
6911   \else
6912     \let\HyPL@page\HyPL@thisLabel
6913     \global\let\HyPL@thisLabel\relax
6914   \fi
6915   \let\HyPL@Type\relax
6916   \ifnum\c@page>0 %
6917     \ifx\HyPL@SlidesSetPage\ltx@empty
6918       \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6919     \fi
6920   \fi
6921   \let\Hy@temp Y%
6922   \ifx\HyPL@Type\HyPL@LastType
6923   \else
6924     \let\Hy@temp N%
6925   \fi
6926   \ifx\HyPL@Type\relax
6927     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6928   \else
6929     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6930   \fi
6931   \ifx\HyPL@Prefix\HyPL@LastPrefix
6932   \else
6933     \let\Hy@temp N%
6934   \fi
6935   \if Y\Hy@temp
6936     \advance\c@page by -1 %
6937     \ifnum\HyPL@LastNumber=\the\c@page\relax
6938     \else
6939       \let\Hy@temp N%
6940     \fi
6941     \Hy@StepCount\c@page
6942   \fi
6943   \if N\Hy@temp
6944     \ifx\HyPL@Type\relax
6945       \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6946     \else

```

```

6947 \HyPL@StorePageLabel{%
6948 \ifx\HyPL@Prefix@empty
6949 \else
6950 /P(\HyPL@Prefix)%
6951 \fi
6952 /S/\csname HyPL\HyPL@Type\endcsname
6953 \ifnum\the\c@page=1 %
6954 \else
6955 \space/St \the\c@page
6956 \fi
6957 }%
6958 \fi
6959 \fi
6960 \xdef\HyPL@LastNumber{\the\c@page}%
6961 \global\let\HyPL@LastType\HyPL@Type
6962 \global\let\HyPL@LastPrefix\HyPL@Prefix
6963 \endgroup
6964 \Hy@GlobalStepCount\Hy@abspage
6965 }%

```

`\HyPL@CheckThePage` Macro `\HyPL@CheckThePage` calls `\HyPL@@CheckThePage` that does the job.

```

6966 \def\HyPL@CheckThePage#1@nil{%
6967 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page@nil
6968 }%

```

`\HyPL@@CheckThePage` The first check is, is `\thepage` is defined such as in L^AT_EX, e. g.: `\csname @arabic\endcsname\c@page`. In the current implementation the check fails, if there is another `\csname` before.

The second check tries to detect `\arabic{page}` at the end of the definition text of `\thepage`.

```

6969 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4@nil{%
6970 \def\Hy@tempa{#4}%
6971 \def\Hy@tempb{\csname\endcsname\c@page}%
6972 \ifx\Hy@tempa\Hy@tempb
6973 \expandafter\ifx\csname HyPL#3\endcsname\relax
6974 \else
6975 \def\HyPL@Type{#3}%
6976 \def\HyPL@Prefix{#2}%
6977 \fi
6978 \else
6979 \begingroup
6980 \let\Hy@next\endgroup
6981 \let\HyPL@found@undefined
6982 \def\arabic{\HyPL@Format{arabic}}%
6983 \def\Roman{\HyPL@Format{Roman}}%
6984 \def\roman{\HyPL@Format{roman}}%
6985 \def\Alph{\HyPL@Format{Alph}}%
6986 \def\alph{\HyPL@Format{alph}}%
6987 \protected@edef\Hy@temp{#1}%
6988 \ifx\HyPL@found\relax
6989 \toks@\expandafter{\Hy@temp}%
6990 \edef\Hy@next{\endgroup
6991 \noexpand\HyPL@@@CheckThePage\the\toks@
6992 \noexpand\HyPL@found\relax\noexpand@nil
6993 }%
6994 \fi
6995 \Hy@next

```



```
6996 \fi
6997 }%
```

`\HyPL@Format` The help macro `\HyPL@Format` is executed while a `\protected@edef` in the second check method of `\HyPL@@@CheckPage`. The first occurrences of, for example, `\arabic{page}` is marked by `\HyPL@found` that is also defined by `\csname`.

```
6998 \def\HyPL@Format#1#2{%
6999 \ifx\HyPL@found\undefined
7000 \expandafter\ifx\csname c@#2\endcsname\c@page
7001 \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
7002 \else
7003 \expandafter\noexpand\csname#1\endcsname{#2}%
7004 \fi
7005 \else
7006 \expandafter\noexpand\csname#1\endcsname{#2}%
7007 \fi
7008 }%
```

`\HyPL@@@CheckThePage` If the second check method is successful, `\HyPL@@@CheckThePage` scans the result of `\HyPL@Format` and stores the found values.

```
7009 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
7010 \def\Hy@tempa{#3}%
7011 \def\Hy@tempb{\HyPL@found\relax}%
7012 \ifx\Hy@tempa\Hy@tempb
7013 \def\HyPL@Type{#2}%
7014 \def\HyPL@Prefix{#1}%
7015 \fi
7016 }%
```

`\HyPL@StorePageLabel` Dummy for drivers that does not support `/PageLabel`.

```
7017 \providecommand*{\HyPL@StorePageLabel}[1]{}%
```

`\HyPL@Useless` The `/PageLabels` entry does not make sense, if the absolute page numbers and the page labels are the same. Then `\HyPL@Labels` has the meaning of `\HyPL@Useless`.

```
7018 \def\HyPL@Useless{0<</S/D>>}%
7019 \@onelevel@sanitize\HyPL@Useless
```

`\HyPL@SetPageLabels` The page labels are written to the PDF catalogue. The command `\Hy@PutCatalog` is defined in the driver files.

```
7020 \def\HyPL@SetPageLabels{%
7021 \@onelevel@sanitize\HyPL@Labels
7022 \ifx\HyPL@Labels\@empty
7023 \else
7024 \ifx\HyPL@Labels\HyPL@Useless
7025 \else
7026 \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
7027 \fi
7028 \fi
7029 }%
```

```
7030 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
7031 \fi
```

Option ‘pdfpagelabels’ has been used and is now disabled.

```
7032 \Hy@DisableOption{pdfpagelabels}
7033 </package>
```

28.1.1 pdfTeX and VTeX

Because of pdfTeX's `\pdfcatalog` command the `/PageLabels` entry can set at end of document in the first run.

`\Hy@PutCatalog`

```
7034 ⟨*pdftex⟩
7035 \pdf@ifdraftmode{%
7036   \let\Hy@PutCatalog\ltx@gobble
7037 }{%
7038   \let\Hy@PutCatalog\pdfcatalog
7039 }
7040 ⟨/pdftex⟩
```

The code for VTeX is more complicate, because it does not allow the direct access to the `/Catalog` object. The command scans its argument and looks for a `/PageLabels` entry.

VTeX 6.59g is the first version, that implements `\special{!pdfpagelabels...}`. For this version `\VTeXversion` reports 660.

```
7041 ⟨*vtex⟩
7042 \providecommand*\XR@ext}{pdf}
7043 \edef\Hy@VTeXversion{%
7044   \ifx\VTeXversion\@undefined
7045     \z@
7046   \else
7047     \ifx\VTeXversion\relax
7048       \z@
7049     \else
7050       \VTeXversion
7051     \fi
7052   \fi
7053 }
7054 \begingroup
7055   \ifnum\Hy@VTeXversion<660 %
7056     \gdef\Hy@PutCatalog#1{%
7057       \Hy@WarningNoLine{%
7058         VTeX 6.59g or above required for pdfpagelabels%
7059       }%
7060     }%
7061   \else
7062     \gdef\Hy@PutCatalog#1{%
7063       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
7064     }%
7065     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
7066       \ifx\#2\%
7067         \else
7068           \immediate\special{!pdfpagelabels #2}%
7069         \fi
7070       }%
7071     \fi
7072   \endgroup
7073 ⟨/vtex⟩

7074 ⟨*pdftex | vtex⟩
```

`\HyPL@StorePageLabel` This macro adds the entry `#1` to `\HyPL@Labels`.

```
7075 \ifHy@pdfpagelabels
7076   \def\HyPL@StorePageLabel#1{%
```

```

7077 \toks@\expandafter{\HyPL@Labels}%
7078 \xdef\HyPL@Labels{%
7079 \the\toks@
7080 \the\Hy@abspage<<#1>>%
7081 }%
7082 }%

```

Package atveryend is used to get behind the final `\clearpage` and to avoid a `\clearpage` in `\AtEndDocument`. Then the PDF catalog entry for `\PageLabels` is set.

```

7083 \RequirePackage{atveryend}[2009/12/07]%
7084 \AtVeryEndDocument{%
7085 \HyPL@SetPageLabels
7086 }%
7087 \fi
7088 </pdfTeX | vTeX>

```

28.1.2 xetex

```

7089 <*xetex>
7090 \HyPsd@LoadUnicode
7091 \Hy@unicodetrue
7092 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
7093 \else
7094 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
7095 \fi
7096 \HyPsd@LoadStringEnc
7097 \define@key{Hyp}{unicode}[true]{%
7098 \Hy@boolkey{unicode}{#1}%
7099 \ifHy@unicode
7100 \else
7101 \Hy@Warning{%
7102 XeTeX driver only supports `unicode=true'. Ignoring\MessageBreak
7103 option setting `unicode=false'%
7104 }%
7105 \Hy@unicodetrue
7106 \fi
7107 }
7108 \define@key{Hyp}{pdfencoding}{%
7109 \edef\HyPsd@temp{#1}%
7110 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
7111 \let\HyPsd@pdfencoding\HyPsd@temp
7112 \else
7113 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
7114 \let\HyPsd@pdfencoding\HyPsd@temp
7115 \else
7116 \Hy@Warning{%
7117 XeTeX driver only supports\MessageBreak
7118 `pdfencoding=unicode|auto'. Ignoring option\MessageBreak
7119 setting `pdfencoding=\HyPsd@temp'%
7120 }%
7121 \fi
7122 \fi
7123 }
7124 \let\HyXeTeX@CheckUnicode\relax

```

Since 2016 (x)dvipdfmx has a special to control the spacing of annotation borders. So let's make use of it:

```

7125 \def\setpdfinkmargin#1{%
7126   \begingroup
7127   \setlength{\dimen@}{#1}%
7128   \special{dvipdfmx:config g \strip@pt\dimen@}%
7129   \endgroup}
7130 \xetex

```

28.1.3 pdfmarkbase, dvipdfm, xetex

```

7131 (*pdfmarkbase)
7132 \begingroup
7133 \@ifundefined{headerps@out}{}{%
7134   \toks@\expandafter{\Hy@FirstPageHook}%
7135   \xdef\Hy@FirstPageHook{%
7136     \noexpand\headerps@out{%
7137       systemdict /pdfmark known%
7138       {%
7139         userdict /?pdfmark systemdict /exec get put%
7140       }{%
7141         userdict /?pdfmark systemdict /pop get put %
7142         userdict /pdfmark systemdict /cleartomark get put%
7143       }%
7144       ifelse%
7145     }%
7146     \the\toks@
7147   }%
7148 }%
7149 \endgroup
7150 \pdfmarkbase)

```

\Hy@PutCatalog

```

7151 (dvipdfm | xetex)\def\Hy@PutCatalog#1{\@pdfmark{docview <<#1>>}}
7152 (*pdfmarkbase)
7153 \def\Hy@PutCatalog#1{%
7154   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%
7155 }
7156 \pdfmarkbase)

7157 (*pdfmarkbase | dvipdfm | xetex)
7158 \ifHy@pdfpagelabels

```

\HyPL@StorePageLabel This macro writes a string to the .aux file.

```

7159 \def\HyPL@StorePageLabel#1{%
7160   \if@filesw
7161     \begingroup
7162     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
7163     \immediate\write\@mainaux{%
7164       \string\HyPL@Entry{\Hy@tempa}%
7165     }%
7166     \endgroup
7167   \fi
7168 }%

```

Write a dummy definition of \HyPL@Entry for the case, that the next run is done without hyperref. A marker for the rerun warning is set and the /PageLabels is written.

```

7169 \Hy@AtBeginDocument{%
7170   \if@filesw
7171     \immediate\write\@mainaux{%

```

```

7172     \string\providecommand\string*\string\HyPL@Entry[1]{}%
7173   }%
7174 \fi
7175 \ifx\HyPL@Labels\@empty
7176   \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
7177 \else
7178   \HyPL@SetPageLabels
7179 \fi
7180 \let\HyPL@Entry\@gobble
7181 }%

```

\HyPL@Entry

```

7182 \def\HyPL@Entry#1{%
7183   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
7184     \HyPL@Labels
7185     #1%
7186   }%
7187 }%

7188 \fi
7189 </pdfmarkbase | dvipdfm | xetex>
7190 <*package>
7191 \ifx\MaybeStopEarly\relax
7192 \else
7193   \Hy@stoppedearlytrue
7194   \expandafter\MaybeStopEarly
7195 \fi
7196 \Hy@stoppedearlyfalse

```

29 Automated L^AT_EX hypertext cross-references

Anything which can be referenced advances some counter; we overload this to put in a hypertext starting point (with no visible anchor), and make a note of that for later use in `\label`. This will fail badly if `\theH<name>` does not expand to a sensible reference. This means that classes or package which introduce new elements need to define an equivalent `\theH<name>` for every `\the<name>`. We do make a trap to make `\theH<name>` be the same as `\arabic{<name>}`, if `\theH<name>` is not defined, but this is not necessarily a good idea. Alternatively, the ‘naturalnames’ option uses whatever L^AT_EX provides, which may be useable. But then its up to you to make sure these are legal PDF and HTML names. The ‘hypertextnames=false’ option just makes up arbitrary names.

All the shenanigans is to make sure section numbers etc are always arabic, separated by dots. Who knows how people will set up `\@currentlabel`? If they put spaces in, or brackets (quite legal) then the hypertext processors will get upset.

But this is flaky, and open to abuse. Styles like `subeqn` will mess it up, for starters. Appendices are an issue, too. We just hope to cover most situations. We can at least cope with the standard sectioning structure, allowing for `\part` and `\chapter`.

Start with a fallback for equations

```

7197 \def\Hy@CounterExists#1{%
7198   \begingroup\expandafter\expandafter\expandafter\endgroup
7199   \expandafter\ifx\csname c@#1\endcsname\relax
7200     \expandafter\@gobble
7201   \else

```

```

7202 \begingroup\expandafter\expandafter\expandafter\endgroup
7203 \expandafter\ifx\csname the#1\endcsname\relax
7204 \expandafter\expandafter\expandafter\@gobble
7205 \else
7206 \expandafter\expandafter\expandafter\@firstofone
7207 \fi
7208 \fi
7209 }
7210 \Hy@CounterExists{section}{%
7211 \providecommand\theHequation{\theHsection.\arabic{equation}}}%
7212 }
7213 \Hy@CounterExists{part}{%
7214 \providecommand\theHpart{\arabic{part}}}%
7215 }
7216 \ltx@ifundefined{thechapter}{%
7217 \providecommand\theHsection {\arabic{section}}}%
7218 \providecommand\theHfigure {\arabic{figure}}}%
7219 \providecommand\theHtable {\arabic{table}}}%
7220 }{%
7221 \providecommand\theHchapter {\arabic{chapter}}}%
7222 \providecommand\theHfigure {\theHchapter.\arabic{figure}}}%
7223 \providecommand\theHtable {\theHchapter.\arabic{table}}}%
7224 \providecommand\theHsection {\theHchapter.\arabic{section}}}%
7225 }
7226 \providecommand\theHsubsection {\theHsection.\arabic{subsection}}
7227 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
7228 \providecommand\theHparagraph {\theHsubsubsection.\arabic{paragraph}}
7229 \providecommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
7230 \providecommand\theHtheorem {\theHsection.\arabic{theorem}}
7231 \providecommand\theHthm {\theHsection.\arabic{thm}}

```

Thanks to Greta Meyer (gbd@pop.cwru.edu) for making me realize that enumeration starts at 0 for every list! But `\item` occurs inside `\trivlist`, so check if its a real `\item` before incrementing counters.

```

7232 \let\H@item\item
7233 \newcounter{Item}
7234 \def\theHItem{\arabic{Item}}
7235 \def\item{%
7236 \@hyper@itemfalse
7237 \if@nmbrrlist\@hyper@itemtrue\fi
7238 \H@item
7239 }
7240 \providecommand\theHenumi {\theHItem}
7241 \providecommand\theHenumii {\theHItem}
7242 \providecommand\theHenumiii {\theHItem}
7243 \providecommand\theHenumiv {\theHItem}
7244 \providecommand\theHHfootnote {\arabic{Hfootnote}}
7245 \providecommand\theHmpfootnote{\arabic{mpfootnote}}
7246 \@ifundefined{theHHmpfootnote}{%
7247 \let\theHHmpfootnote\theHHfootnote
7248 }{}

```

Tanmoy asked for this default handling of undefined `\theH<name>` situations. It really isn't clear what would be ideal, whether to turn off hyperizing of unknown elements, to pick up the textual definition of the counter, or to default it to something like `\arabic{name}`. We take the latter course, slightly worriedly.

```

7249 \let\H@refstepcounter\refstepcounter

```

```

7250 \edef\name@of@eq{equation}%
7251 \edef\name@of@slide{slide}%

```

We do not want the handler for `\refstepcounter` to cut in during the processing of `\item` (we handle that separately), so we provide a bypass conditional.

```

7252 \newif\if@hyper@item
7253 \newif\if@skiphyperref
7254 \@hyper@itemfalse
7255 \@skiphyperreffalse
7256 \def\refstepcounter#1{%
7257   \ifHy@pdfstring
7258   \else
7259     \H@refstepcounter{#1}%
7260     \edef\This@name{#1}%
7261     \ifx\This@name\name@of@slide
7262     \else
7263       \if@skiphyperref
7264       \else
7265         \if@hyper@item
7266           \stepcounter{Item}%
7267           \hyper@refstepcounter{Item}%
7268         \@hyper@itemfalse
7269       \else
7270         \hyper@refstepcounter{#1}%
7271       \fi
7272     \fi
7273   \fi
7274 \fi
7275 }
7276 \let\Hy@saved@refstepcounter\refstepcounter

```

AMS \LaTeX processes all equations twice; we want to make sure that the hyper stuff is not executed twice, so we use the AMS `\ifmeasuring@`, initialized if AMS math is not used.

```

7277 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

7278 \def\hyper@refstepcounter#1{%
7279   \edef\This@name{#1}%
7280   \ifx\This@name\name@of@eq
7281     \@ifundefined{theHequation}{%
7282       \make@stripped@name{\theequation}%
7283       \let\theHequation\newname
7284     }{}%
7285   \fi
7286   \HyCnt@ProvideTheHCounter{#1}%
7287   \hyper@makecurrent{#1}%
7288   \ifmeasuring@
7289   \else
7290     \Hy@raisedlink{%
7291       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7292     }%
7293   \fi
7294 }

```

`\Hy@ProvideTheHCounter` `\theH<counter>` is not set for counters that are defined before ‘hyperref’ is loaded. In `\cl@ckpt`, the clear counter list of the artificial counter `@ckpt`, \LaTeX remembers the defined counters (needed for `\include`). We check the clear counter lists,

whether our counter is present. If we found it, then we add the parent counter value to `\theH<counter>`. The `\@elt` list is used in sanitized form for the comparison, because the list might contain other stuff than `\@elts`. Also it simplifies the implementation, because L^AT_EX', substring search `\in@` can be used.

```

7295 \def\HyCnt@ProvideTheHCounter#1{%
7296   \@ifundefined{theH#1}{%
7297     \expandafter\def\csname theH#1\endcsname{}%
7298     \def\Hy@temp{\@elt{#1}}%
7299     \ltx@onelevel@sanitize\Hy@temp
7300     \let\HyOrg@elt\@elt
7301     \edef\@elt{%
7302       \noexpand\HyCnt@LookForParentCounter
7303       \expandafter\noexpand\csname theH#1\endcsname
7304     }%
7305     \cl@@ckpt
7306     \let\@elt\HyOrg@elt
7307     \expandafter
7308     \ltx@LocalAppendToMacro\csname theH#1\endcsname
7309     \expandafter{%
7310       \expandafter\@arabic\csname c@#1\endcsname
7311     }%
7312   }{}%
7313 }
```

`\Hy@LookForParentCounter`

```

7314 \def\HyCnt@LookForParentCounter#1#2{%
7315   \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
7316   \ltx@ifundefined{cl@#2}{%
7317     }{%
7318     \ltx@onelevel@sanitize\Hy@temp@A
7319     \edef\Hy@temp@A{%
7320       \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
7321     }\Hy@temp@A
7322     \ifin@
7323     \ltx@ifundefined{theH#2}{%
7324       \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7325       \expandafter{%
7326         \expandafter\@arabic\csname c@#2\endcsname.%
7327       }%
7328     }{}%
7329     \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7330     \expandafter{%
7331       \csname theH#2\endcsname.%
7332     }%
7333   }%
7334   \fi
7335 }%
7336 }
```

After `\appendix` “chapter” (or “section” for classes without chapter) should be replaced by “appendix” to get `\autoref` work. Macro `\Hy@chapapp` contains the current valid name like `\@chapapp`, which cannot be used, because this string depends on the current language.

The “french” package defines counter `\thechapter` by `\newcounterchapter`, if `\@ifundefinedchapter`.

```

7337 \begingroup\expandafter\expandafter\expandafter\endgroup
```



```

7338 \expandafter\ifx\csname chapter\endcsname\relax
7339 \def\Hy@chapterstring{section}%
7340 \else
7341 \def\Hy@chapterstring{chapter}%
7342 \fi
7343 \def\Hy@appendixstring{appendix}
7344 \def\Hy@chapapp{\Hy@chapterstring}
7345 \ltx@ifundefined{appendix}{%
7346 }{%
7347 \let\HyOrg@appendix\appendix
7348 \def\Hy@AlphNoErr#1{%
7349 \ifnum\value{#1}>26 %
7350 Alph\number\value{#1}%
7351 \else
7352 \ifnum\value{#1}<1 %
7353 Alph\number\value{#1}%
7354 \else
7355 \Alph{#1}%
7356 \fi
7357 \fi
7358 }%
7359 \def\appendix{%
7360 \ltx@ifundefined{chapter}{%
7361 \gdef\theHsection{\Hy@AlphNoErr{section}}%
7362 }{%
7363 \gdef\theHchapter{\Hy@AlphNoErr{chapter}}%
7364 }%
7365 \xdef\Hy@chapapp{\Hy@appendixstring}%
7366 \HyOrg@appendix
7367 }%
7368 }

```

\Hy@Test@alph

```

7369 \def\Hy@Test@alph#1{%
7370 \ifcase#1\or
7371 a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
7372 k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
7373 u\or v\or w\or x\or y\or z%
7374 \else
7375 \@ctrerr
7376 \fi
7377 }

```

\Hy@Test@Alph

```

7378 \def\Hy@Test@Alph#1{%
7379 \ifcase#1\or
7380 A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7381 K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7382 U\or V\or W\or X\or Y\or Z%
7383 \else
7384 \@ctrerr
7385 \fi
7386 }

```

\hyper@makecurrent Because of Babel mucking around, nullify \textlatin when making names. And \@number because of babel's lrbabel.def.

```

7387 \def\hyper@makecurrent#1{%

```

```

7388 \begingroup
7389 \Hy@safe@activestruue
7390 \edef\Hy@param{#1}%
7391 \ifx\Hy@param\Hy@chapterstring
7392 \let\Hy@param\Hy@chapapp
7393 \fi
7394 \ifHy@hypertexnames
7395 \let\@number\@firstofone
7396 \def\@fnsymbol##1{fnsymbol\number##1}%
7397 \def\@arabic##1{\number##1}%
7398 \ifx\@alph\Hy@Test@alph
7399 \else
7400 \def\@alph{alph\number}%
7401 \fi
7402 \ifx\@Alph\Hy@Test@Alph
7403 \else
7404 \def\@Alph{Alph\number}%
7405 \fi
7406 \ifHy@naturalnames
7407 \let\textlatin\@firstofone
7408 \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7409 \else
7410 \xdef\HyperGlobalCurrentHref{%
7411 \csname
7412 the%
7413 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7414 #1%
7415 \endcsname
7416 }%
7417 \fi
7418 \xdef\HyperGlobalCurrentHref{%
7419 \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7420 }%
7421 \else
7422 \Hy@GlobalStepCount\Hy@linkcounter
7423 \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
7424 \fi
7425 \endgroup
7426 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7427 \ifHy@localanchorname
7428 \let\@currentHref\HyperLocalCurrentHref
7429 \else
7430 \global\let\@currentHref\HyperGlobalCurrentHref
7431 \fi
7432 }

```

\Hy@MakeCurrentHref

```

7433 \def\Hy@MakeCurrentHref#1{%
7434 \edef\HyperLocalCurrentHref{#1}%
7435 \@onelevel@sanitize\HyperLocalCurrentHref
7436 \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7437 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7438 \ifHy@localanchorname
7439 \let\@currentHref\HyperLocalCurrentHref
7440 \else
7441 \global\let\@currentHref\HyperGlobalCurrentHref
7442 \fi
7443 }

```

`\Hy@MakeCurrentHrefAuto`

```
7444 \def\Hy@MakeCurrentHrefAuto#1{%
7445   \Hy@GlobalStepCount\Hy@linkcounter
7446   \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7447 }
```

`\@currentHlabel` `\@currrentHlabel` is only defined for compatibility with package ‘hypdvips’.

```
7448 \def\@currentHlabel{\@currentHref}

7449 \@ifpackageloaded{fancyvrb}{%
7450   \@ifpackagelater{fancyvrb}{1998/05/20}{-}{%
7451     \def\FV@StepLineNo{%
7452       \FV@SetLineNo
7453       \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
7454       \FV@StepLineNo
7455     }%
7456   }%
7457 }
```

30 Package lastpage support

Package lastpage directly writes the `\newlabel` command to the aux file. Because package hyperref requires additional arguments, the internal command `\lastpage@putlabel` is redefined. The patch is deferred by `\AtBeginDocument`, because it is possible that package lastpage is loaded after package hyperref. The same algorithm (options hypertextnames and plainpages) is used to get the page anchor name as in `\Hy@EveryPageAnchor` (see sec. 39). The link will not work if option pageanchor is set to false.

`\lastpage@putlabel`

```
7458 \Hy@AtBeginDocument{%
7459   \@ifclassloaded{revtex4}{%
7460     \@namedef{ver@lastpage.sty}{1994/06/25}%
7461   }-%
7462   \@ifpackageloaded{lastpage}{%
7463     \ifHy@pageanchor
7464     \else
7465       \Hy@WarningNoLine{%
7466         The \string\pageref{LastPage} link doesn't work\MessageBreak
7467         with disabled option `pageanchor'%
7468       }%
7469     \fi
7470     \def\lastpage@putlabel{%
7471       \addtocounter{page}{-1}%
7472       \if@filesw
7473         \begingroup
7474           \let\@number\@firstofone
7475           \ifHy@pageanchor
7476             \ifHy@hypertextnames
7477               \ifHy@plainpages
7478                 \def\Hy@temp{\arabic{page}}%
7479               \else
7480                 \Hy@unicodedefalse
7481                 \pdfstringdef\Hy@temp{\thepage}%
7482             \fi
7483           \else
```

```

7484     \def\Hy@temp{\the\Hy@pagecounter}%
7485     \fi
7486     \fi
7487     \immediate\write\@auxout{%
7488     \string\newlabel
7489     {LastPage}{{}\{thepage}\}%
7490     \ifHy@pageanchor page.\Hy@temp\fi}}}%
7491     }%
7492     \endgroup
7493     \fi
7494     \addtocounter{page}{1}%
7495     }%
7496     \@ifclassloaded{revtex4}{%
7497     \begingroup
7498     \toks@\expandafter{\lastpage@putlabel}%
7499     \edef\x{\endgroup
7500     \def\noexpand\lastpage@putlabel{%
7501     \noexpand\stepcounter{page}%
7502     \the\toks@
7503     \noexpand\addtocounter{page}\noexpand\m@ne
7504     }%
7505     }%
7506     \x
7507     }-}%
7508     }-}%
7509 }
7510 \</package>
7511 \< *check>
7512 \checkpackage{lastpage}[1994/06/25]
7513 \checkcommand\def\lastpage@putlabel{%
7514 \addtocounter{page}{-1}%
7515 \immediate\write\@auxout{%
7516 \string\newlabel{LastPage}{{}\{thepage}\}%
7517 }%
7518 \addtocounter{page}{1}%
7519 }
7520 \</check>
7521 \< *package>

```

31 Package ifthen support

Since version 6.75a this is done in package nameref.

For compatibility `\hypergetref` and `\hypergetpageref` are still provided. But they do not generate warnings, if the reference is undefined.

```

7522 \def\hypergetref#1{\getrefbykeydefault{#1}{}{??}}
7523 \def\hypergetpageref#1{\getrefbykeydefault{#1}{page}{0}}

```

32 Package titlesec and titletoc support

This code is contributed by Javier Bezos (Email: jbezos@arrakis.es).

Package titlesec support:

```

7524 \@ifpackageloaded{titlesec}{%
7525 \def\ttl@Hy@steplink#1{%
7526 \Hy@MakeCurrentHrefAuto{#1*}%
7527 \edef\ttl@Hy@saveanchor{%

```

```

7528 \noexpand\Hy@raisedlink{%
7529 \noexpand\hyper@anchorstart{\@currentHref}%
7530 \noexpand\hyper@anchorend
7531 \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7532 \noexpand\ttl@Hy@PatchSaveWrite
7533 }%
7534 }%
7535 }%
7536 \def\ttl@Hy@PatchSaveWrite{%
7537 \begingroup
7538 \toks@\expandafter{\ttl@savewrite}%
7539 \edef\x{\endgroup
7540 \def\noexpand\ttl@savewrite{%
7541 \let\noexpand\@currentHref
7542 \noexpand\ttl@Hy@SavedCurrentHref
7543 \the\toks@
7544 }%
7545 }%
7546 \x
7547 }%
7548 \def\ttl@Hy@refstepcounter#1{%
7549 \let\ttl@b\Hy@raisedlink
7550 \def\Hy@raisedlink##1{%
7551 \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7552 }%
7553 \refstepcounter{#1}%
7554 \let\Hy@raisedlink\ttl@b
7555 }%
7556 }{}

Package titletoc support:
7557 \@ifpackageloaded{titletoc}{%
7558 \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
7559 }{}

```

33 Package varioref support

Package nameref uses five arguments for the ref system. Fix provided by Felix Neubauer (felix.neubauer@gmx.net).

```

7560 \def\Hy@varioref@undefined{??}{??}{-}{-}{-}
7561 \@ifpackageloaded{varioref}{%
7562 \def\vref@pagenum#1#2{%
7563 \@ifundefined{r@#2}{%
7564 \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7565 }{}%
7566 \edef#1{\getpagerefnumber{#2}}%
7567 }%
7568 }{}

```

Package varioref redefines `\refstepcounter`, thus it needs fixing, if the package is loaded *after* `hyperref`.

```

7569 \def\Hy@varioref@refstepcounter#1{%
7570 \stepcounter{#1}%
7571 \protected@edef\@currentlabel{%
7572 \csname p@#1\expandafter\endcsname\csname the#1\endcsname
7573 }%
7574 }

```

```

7575 \AtBeginDocument{%
7576   \ifx\refstepcounter\Hy@varioref\refstepcounter
7577     \let\H@refstepcounter\refstepcounter
7578     \let\refstepcounter\Hy@saved@refstepcounter
7579   \fi
7580 }

```

34 Package longtable support

Sometimes the anchor of the longtable goes to the previous page. Thus the following patch separates the anchor setting and counter incrementation by hyperref's `\refstepcounter` and the anchor setting is moved after `\vskip\LTpre`.

Patch of `\LT@array`: replace `\refstepcounter` by the original `\H@refstepcounter` without anchor generation

```

7581 \@ifpackageloaded{longtable}{%
7582   \begingroup
7583   \def\y{\LT@array}%
7584   \@ifundefined{scr@LT@array}{%
7585     \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}{%
7586     }\def\y{\scr@LT@array}}%
7587   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7588     \expandafter\endgroup
7589     \expandafter\def\y[##1]##2{%
7590       \H@refstepcounter{##1}%
7591       \hyper@makecurrent{table}%
7592       \let\Hy@LT@currentHref\@currentHref
7593       #2\@sharp###4%
7594     }%
7595   }%
7596   \expandafter\expandafter\expandafter\x\y[##1][##2]\@nil

```

Patch of `\LT@start`: add anchor before first line after `\vskip\LTpre`

```

7597   \begingroup
7598   \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7599     \endgroup
7600     \def\LT@start{%
7601       #1%
7602       \ifvoid\LT@foot#2\fi
7603       \let\@currentHref\Hy@LT@currentHref
7604       \Hy@raisedlink{%
7605         \hyper@anchorstart{\@currentHref}\hyper@anchorend
7606       }%
7607       #3%
7608     }%
7609   }%
7610   \expandafter\x\LT@start\@nil
7611 }-}

```

35 Equations

We want to make the whole equation a target anchor. Overload `equation`, temporarily reverting to original `\refstepcounter`. If, however, it is in AMS math, we do not do anything, as the tag mechanism is used there (see section 42). The exception is that we move the equation incrementation inside the math environment to avoid specials outside and a wrong vertical spacing of equation environments.

```

7612 \let\new@refstepcounter\refstepcounter
7613 \let\H@equation\equation
7614 \let\H@endequation\endequation

7615 \@ifpackageloaded{amsmath}{%
7616   \long\def\Hy@temp{%
7617     \incr@eqnum
7618     \mathdisplay@push
7619     \st@rredfalse \global\@eqnswtrue
7620     \mathdisplay{equation}%
7621   }%
7622   \ifx\Hy@temp\equation
7623     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
7624       \csname iftrue\endcsname
7625   \else
7626     \long\def\equation{%
7627       \mathdisplay@push
7628       \st@rredfalse \global\@eqnswtrue
7629       \mathdisplay{equation}%
7630       \incr@eqnum
7631     }%
7632   \fi
7633 \fi
7634 }{%
7635 \def\equation{%
7636   \let\refstepcounter\H@refstepcounter
7637   \H@equation
7638   \@ifundefined{theHequation}{%
7639     \make@stripped@name{\theequation}%
7640     \let\theHequation\newname
7641   }{%
7642     \hyper@makecurrent{equation}%

```

`\mathopen` is needed in case the equation starts with an unary minus, for example.

```

7643   \mathopen{%
7644     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
7645   }%
7646   \let\refstepcounter\new@refstepcounter
7647 }%
7648 \def\endequation{%
7649   \ifx\Hy@raisedlink\ltx@empty
7650     \hyper@anchorend
7651   \else
7652     \mathclose{\Hy@raisedlink{\hyper@anchorend}}%
7653   \fi
7654   \H@endequation
7655 }%
7656 }

```

My goodness, why can't L^AT_EX be consistent? Why is `\eqnarray` set up differently from other objects?

People (you know who you are, Thomas Beuth) sometimes make an `eqnarray` where *all* the lines end with `\notag`, so there is no suitable anchor at all. In this case, pass by on the other side.

```

7657 \newif\if@eqnstar
7658 \@eqnstarfalse
7659 \let\H@eqnarray\eqnarray
7660 \let\H@endeqnarray\endeqnarray

```

```

7661 \def\eqnarray{%
7662   \let\Hy@reserved@a\relax
7663   \def\@currentHref{%
7664     \H@eqnarray
7665     \if@eqnstar
7666     \else
7667       \ifx\@\@currentHref\@%
7668       \else
7669         \@ifundefined{theHequation}{%
7670           \make@stripped@name{\theequation}%
7671           \let\theHequation\newname
7672         }{}%
7673         \hyper@makecurrent{equation}%
7674         \mathopen{%
7675           \Hy@raisedlink{%
7676             \hyper@anchorstart{\@currentHref}\hyper@anchorend
7677           }%
7678         }%
7679       \fi
7680     \fi
7681   }
7682 \def\endeqnarray{%
7683   \H@endeqnarray
7684 }

```

This is quite heavy-handed, but it works for now. If its an `eqnarray*` we need to disable the hyperref actions. There may well be a cleaner way to trap this. Bill Moss found this.

```

7685 \@namedef{eqnarray*}{%
7686   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
7687 }
7688 \@namedef{endeqnarray*}{%
7689   \nonumber\endeqnarray\@eqnstarfalse
7690 }

```

Then again, we have the `subeqnarray` package. Tanmoy provided some code for this:

```

7691 \ltx@ifundefined{subeqnarray}{}{%
7692   \let\H@subeqnarray\subeqnarray
7693   \let\H@endsubeqnarray\endsubeqnarray
7694   \def\subeqnarray{%
7695     \let\Hy@reserved@a\relax
7696     \H@subeqnarray
7697     \@ifundefined{theHequation}{%
7698       \make@stripped@name{\theequation}%
7699       \let\theHequation\newname
7700     }{}%
7701     \hyper@makecurrent{equation}%
7702     \hyper@anchorstart{\@currentHref}\hyper@anchorend
7703   }%
7704   \def\endsubeqnarray{%
7705     \H@endsubeqnarray
7706   }%
7707   \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7708 }

```

The aim of this macro is to produce a sanitized version of its argument, to make it a safe label.


```

7709 \def\make@stripped@name#1{%
7710 \begingroup
7711 \escapechar\m@ne
7712 \global\let\newname\@empty
7713 \protected@edef\Hy@tempa{#1}%
7714 \edef\@tempb{%
7715 \noexpand\@tfor\noexpand\Hy@tempa:=%
7716 \expandafter\strip@prefix\meaning\Hy@tempa
7717 }%
7718 \@tempb\do{%
7719 \if\Hy@tempa\else
7720 \if\Hy@tempa\else
7721 \xdef\newname{\newname\Hy@tempa}%
7722 \fi
7723 \fi
7724 }%
7725 \endgroup
7726 }

```

Support for amsmath's subequations:

```

7727 \begingroup\expandafter\expandafter\expandafter\endgroup
7728 \expandafter\ifx\csname subequations\endcsname\relax
7729 \else
7730 \let\HyOrg@subequations\subequations
7731 \def\subequations{%
7732 \stepcounter{equation}%
7733 \protected@edef\theHparentequation{%
7734 \@ifundefined{theHequation}\theequation\theHequation
7735 }%
7736 \addtocounter{equation}{-1}%
7737 \HyOrg@subequations
7738 \def\theHequation{\theHparentequation\alph{equation}}%
7739 \ignorespaces
7740 }%
7741 \fi

```

Support for package amsthm (Daniel Müllner): also cleveref.

```

7742 \Hy@AtBeginDocument{%
7743 \@ifpackageloaded{cleveref}{%
7744 \let\Hy@savedthm\@thm
7745 \def\@thm{\ifhmode\unskip\fi\Hy@savedthm}%
7746 }{%
7747 \@ifpackageloaded{amsthm}{%

```

Class amsbook uses a different definition of `\@thm`, where two lines are added (thanks to Dan Luecking for his analysis):

```

\let\thm@indent\indent % indent
\thm@headfont{\scshape}% heading font small caps
7748 \def\Hy@temp#1#2#3{%
7749 \ifhmode\unskip\unskip\par\fi
7750 \normalfont
7751 \trivlist
7752 \let\thmheadnl\relax
7753 \let\thm@swap@gobble
7754 \let\thm@indent\indent % indent
7755 \thm@headfont{\scshape}% heading font small caps
7756 \thm@notefont{\fontseries\mddefault\upshape}%
7757 \thm@headpunct{.}% add period after heading

```

```

7758 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7759 \thm@space@setup
7760 #1% style overrides
7761 \@topsep \thm@preskip          % used by thm head
7762 \@topsepadd \thm@postskip      % used by \@endparenv
7763 \def\@tempa{#2}\ifx\@empty\@tempa
7764 \def\@tempa{\@oparg{\@begintheorem{#3}{}}{}}%
7765 \else
7766 \refstepcounter{#2}%
7767 \def\@tempa{%
7768 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}}%
7769 }%
7770 \fi
7771 \@tempa
7772 }%
7773 \ifx\Hy@temp\@thm
7774 \def\@thm#1#2#3{%
7775 \ifhmode
7776 \unskip\unskip\par
7777 \fi
7778 \normalfont
7779 \trivlist
7780 \let\thmheadnl\relax
7781 \let\thm@swap\@gobble
7782 \let\thm@indent\indent % indent
7783 \thm@headfont{\scshape}% heading font small caps
7784 \thm@notefont{\fontseries\mddefault\upshape}%
7785 \thm@headpunct{.}% add period after heading
7786 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7787 \thm@space@setup
7788 #1% style overrides
7789 \@topsep \thm@preskip          % used by thm head
7790 \@topsepadd \thm@postskip      % used by \@endparenv
7791 \def\@dth@counter{#2}%
7792 \ifx\@empty\@dth@counter
7793 \def\@tempa{%
7794 \@oparg{\@begintheorem{#3}{}}{}}%
7795 }%
7796 \else
7797 \H@refstepcounter{#2}%
7798 \hyper@makecurrent{#2}%
7799 \let\Hy@dth@currentHref\@currentHref
7800 \def\@tempa{%
7801 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}}%
7802 }%
7803 \fi
7804 \@tempa
7805 }%
7806 \else
7807 \def\@thm#1#2#3{%
7808 \ifhmode
7809 \unskip\unskip\par
7810 \fi
7811 \normalfont
7812 \trivlist
7813 \let\thmheadnl\relax
7814 \let\thm@swap\@gobble

```

```

7815 \thm@notefont{\fontseries\mddefault\upshape}%
7816 \thm@headpunct{.}% add period after heading
7817 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7818 \thm@space@setup
7819 #1% style overrides
7820 \@topsep \thm@preskip % used by thm head
7821 \@topsepadd \thm@postskip % used by \@endparenv
7822 \def\dth@counter{#2}%
7823 \ifx\@empty\dth@counter
7824 \def\@tempa{%
7825 \@oparg{\@begintheorem{#3}{}}[]%
7826 }%
7827 \else
7828 \H@refstepcounter{#2}%
7829 \hyper@makecurrent{#2}%
7830 \let\Hy@dth@currentHref\@currentHref
7831 \def\@tempa{%
7832 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]%
7833 }%
7834 \fi
7835 \@tempa
7836 }%
7837 \fi
7838 \dth@everypar={%
7839 \@minipagefalse
7840 \global\@newlistfalse
7841 \@noparitemfalse
7842 \if@inlabel
7843 \global\@inlabelfalse
7844 \begingroup
7845 \setbox\z@\lastbox
7846 \ifvoid\z@
7847 \kern-\itemindent
7848 \fi
7849 \endgroup
7850 \ifx\@empty\dth@counter
7851 \else
7852 \Hy@raisedlink{%
7853 \hyper@anchorstart{%
7854 \ltx@ifundefined{Hy@dth@currentHref}%
7855 \@currentHref\Hy@dth@currentHref
7856 }\hyper@anchorend
7857 }%
7858 \fi
7859 \unhbox\@labels
7860 \fi
7861 \if@nobreak
7862 \@nobreakfalse \clubpenalty\@M
7863 \else
7864 \clubpenalty\@clubpenalty \everypar{}%
7865 \fi
7866 }%
7867 }%

```

non `amsthm` case, remove final space on line before a theorem for githib issue 11.

```

7868 {%
7869 \let\Hy@savedthm\@thm
7870 \def\@thm{\ifhmode\unskip\fi\Hy@savedthm}%

```

```

7871 }%
7872 }%
7873 }

```

36 Footnotes

The footnote mark is a hypertext link, and the text is a target. We separately number the footnotes sequentially through the text, separately from whatever labels the text assigns. Too hard to keep track of markers otherwise. If the raw forms `\footnotemark` and `\footnotetext` are used, force them to use un-hyper original.

```

7874 \ifHy@hyperfootnotes
7875 \newcounter{Hfootnote}%
7876 \let\H@@footnotetext\@footnotetext
7877 \let\H@@footnotemark\@footnotemark
7878 \def\@xfootnotenext[#1]{%
7879 \begingroup
7880 \csname c@\@mpfn\endcsname #1\relax
7881 \unrestored@protected@xdef\@thefnmark{\thempfn}%
7882 \endgroup
7883 \ifx\@footnotetext\@mpfootnotetext
7884 \expandafter\H@\@mpfootnotetext
7885 \else
7886 \expandafter\H@\@footnotetext
7887 \fi
7888 }%
7889 \def\@xfootnotemark[#1]{%
7890 \begingroup
7891 \c@footnote #1\relax
7892 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7893 \endgroup
7894 \H@\@footnotemark
7895 }%
7896 \let\H@\@mpfootnotetext\@mpfootnotetext
7897 \long\def\@mpfootnotetext#1{%
7898 \H@\@mpfootnotetext{%
7899 \ifHy@nesting
7900 \expandafter\ltx@firstoftwo
7901 \else
7902 \expandafter\ltx@secondoftwo
7903 \fi
7904 {%
7905 \expandafter\hyper@@anchor\expandafter{%
7906 \Hy@footnote@currentHref
7907 }{\ignorespaces #1}%
7908 }{%
7909 \Hy@raisedlink{%
7910 \expandafter\hyper@@anchor\expandafter{%
7911 \Hy@footnote@currentHref
7912 }{\relax}%
7913 }\ignorespaces #1%
7914 }%
7915 }%
7916 }%
7917 \long\def\@footnotetext#1{%
7918 \H@\@footnotetext{%

```

```

7919 \ifHy@nesting
7920 \expandafter\ltx@firstoftwo
7921 \else
7922 \expandafter\ltx@secondoftwo
7923 \fi
7924 {%
7925 \expandafter\hyper@@anchor\expandafter{%
7926 \Hy@footnote@currentHref
7927 }\ignorespaces #1}%
7928 }{%
7929 \Hy@raisedlink{%
7930 \expandafter\hyper@@anchor\expandafter{%
7931 \Hy@footnote@currentHref
7932 }\relax}%
7933 }%
7934 \let\@currentHref\Hy@footnote@currentHref
7935 \let\@currentlabelname\@empty
7936 \ignorespaces #1%
7937 }%
7938 }%
7939 }%

```

Redefine `\@footnotemark`, borrowing its code (at the cost of getting out of sync with `latex.ltx`), to take advantage of its white space and hyphenation fudges. If we just overload it, we can get variant documents (the word before the footnote is treated differently). Thanks to David Carlisle and Brian Ripley for confusing and helping me on this.

```

7940 \def\@footnotemark{%
7941 \leavevmode
7942 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7943 \stepcounter{Hfootnote}%
7944 \global\let\Hy@saved@currentHref\@currentHref
7945 \hyper@makecurrent{Hfootnote}%
7946 \global\let\Hy@footnote@currentHref\@currentHref
7947 \global\let\@currentHref\Hy@saved@currentHref
7948 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7949 \@makefnmark
7950 \hyper@linkend
7951 \ifhmode\spacefactor\@x@sf\fi
7952 \relax
7953 }%

```

`Tabularx` causes footnote problems, disable the linking if that is loaded. Since v6.82i footnotes are only disabled inside the environment `'tabularx'`.

```

7954 \@ifpackageloaded{tabularx}{%
7955 \let\HyOrg@TX@endtabularx\TX@endtabularx
7956 \def\Hy@tabularx@hook{%
7957 \let\@footnotetext\H@@footnotetext
7958 \let\@footnotemark\H@@footnotemark
7959 \let\@mpfootnotetext\H@@mpfootnotetext
7960 }%
7961 \begingroup
7962 \toks@\expandafter{\TX@endtabularx}%
7963 \xdef\Hy@gtemp{%
7964 \noexpand\Hy@tabularx@hook
7965 \the\toks@
7966 }%
7967 \endgroup

```

```

7968 \let\TX@endtabularx\Hy@gtemp
7969 }{}%

```

Support for footnotes in p columns of longtable. Here `\footnote` commands are splitted into `\footnotemark` and a call of `\footnotetext` with the optional argument, that is not supported by hyperref. The result is a link by `\footnotemark` without valid anchor

```

7970 \@ifpackageloaded{longtable}{%
7971 \CheckCommand*\LT@p@ftntext}[1]{%
7972 \edef\@tempa{%
7973 \the\LT@p@ftn
7974 \noexpand\footnotetext[\the\c@footnote]%
7975 }%
7976 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
7977 }%
7978 \long\def\LT@p@ftntext#1{%
7979 \edef\@tempa{%
7980 \the\LT@p@ftn
7981 \begingroup
7982 \noexpand\c@footnote=\the\c@footnote\relax
7983 \noexpand\protected@xdef\noexpand\@thefnmark{%
7984 \noexpand\thempfn
7985 }%
7986 \noexpand\Hy@LT@footnotetext{%
7987 \Hy@footnote@currentHref
7988 }%
7989 }%
7990 \global\LT@p@ftn\expandafter{%
7991 \@tempa{#1}%
7992 \endgroup
7993 }%
7994 }%
7995 \long\def\Hy@LT@footnotetext#1#2{%
7996 \H@@@footnotetext{%
7997 \ifHy@nesting
7998 \hyper@@anchor{#1}{#2}%
7999 \else
8000 \Hy@raisedlink{%
8001 \hyper@@anchor{#1}{\relax}%
8002 }%
8003 \def\@currentHref{#1}%
8004 \let\@currentlabelname\@empty
8005 #2%
8006 \fi
8007 }%
8008 }%
8009 }{}%

```

Footnotes for fancyvrb (Fix by Manuel Pégourié-Gonnard).

```

8010 \@ifpackageloaded{fancyvrb}{%
8011 \def\V@@@footnotetext{%
8012 \insert\footins\bgroup
8013 \csname reset@font\endcsname
8014 \footnotesize
8015 \interlinepenalty\interfootnotelinepenalty
8016 \splittopskip\footnotesep
8017 \splitmaxdepth\dp\strutbox
8018 \floatingpenalty \@MM

```

```

8019 \hsize\columnwidth
8020 \@parboxrestore
8021 \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
8022 \@makefnrestext{%
8023 \rule{\z@}{\footnotesep}%
8024 \bgroup
8025 \aftergroup\V@@@footnotetext
8026 \Hy@raisedlink{%
8027 \expandafter\hyper@@anchor\expandafter{%
8028 \Hy@footnote@currentHref
8029 }\relax}%
8030 }%
8031 \let\@currentHref\Hy@footnote@currentHref
8032 \let\@currentlabelname\@empty
8033 \ignorespaces
8034 }%
8035 }{}%

```

KOMA-Script defines `\footref` that uses both `\ref` and `\@footnotemark` resulting in two links, one of them wrong.

```

8036 \def\Hy@temp#1{%
8037 \begingroup
8038 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
8039 \endgroup
8040 \@footnotemark
8041 }%
8042 \ifx\Hy@temp\footref
8043 \def\footref#1{%
8044 \begingroup
8045 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
8046 \endgroup
8047 \H@@@footnotemark
8048 }%
8049 \fi

```

But the special footnotes in `\maketitle` are much too hard to deal with properly. Let them revert to plain behaviour. The koma classes add an optional argument.

```

8050 \let\HyOrg@maketitle\maketitle
8051 \def\maketitle{%
8052 \let\Hy@saved@footnotemark\@footnotemark
8053 \let\Hy@saved@footnotetext\@footnotetext
8054 \let\@footnotemark\H@@@footnotemark
8055 \let\@footnotetext\H@@@footnotetext
8056 \@ifnextchar[\Hy@maketitle@optarg{% ]
8057 \HyOrg@maketitle
8058 \Hy@maketitle@end
8059 }%
8060 }%
8061 \def\Hy@maketitle@optarg[#1]{%
8062 \HyOrg@maketitle[#{#1}]%
8063 \Hy@maketitle@end
8064 }%
8065 \def\Hy@maketitle@end{%
8066 \ifx\@footnotemark\H@@@footnotemark
8067 \let\@footnotemark\Hy@saved@footnotemark
8068 \fi
8069 \ifx\@footnotetext\H@@@footnotetext

```

```

8070 \let\@footnotetext\Hy@saved@footnotetext
8071 \fi
8072 }%

```

`\realfootnote` Does anyone remember the function and purpose of `\realfootnote`?

```

8073 \def\realfootnote{%
8074 \@ifnextchar{\@xfootnote{%
8075 \stepcounter{\@mpfn}%
8076 \protected@xdef\@thefnmark{\thempfn}%
8077 \H@@@footnotemark\H@@@footnotetext
8078 }%
8079 }%

8080 \fi
8081 \Hy@DisableOption{hyperfootnotes}

8082 </package>
8083 <*check>
8084 \checklatex
8085 \checkcommand\def\@xfootnotenext[#1]{%
8086 \begingroup
8087 \csname c@\@mpfn\endcsname #1\relax
8088 \unrestored@protected@xdef\@thefnmark{\thempfn}%
8089 \endgroup
8090 \@footnotetext
8091 }
8092 \checkcommand\def\@xfootnotemark[#1]{%
8093 \begingroup
8094 \c@footnote #1\relax
8095 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
8096 \endgroup
8097 \@footnotemark
8098 }
8099 \checkcommand\def\@footnotemark{%
8100 \leavevmode
8101 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
8102 \@makefnmark
8103 \ifhmode\spacefactor\@x@sf\fi
8104 \relax
8105 }
8106 </check>
8107 <*package>

```

37 Float captions

Make the float caption the hypertext anchor; curiously enough, we can't just copy the definition of `\@caption`. Its all to do with expansion. It screws up. Sigh.

```

8108 \def\caption{%
8109 \ifx\@capttype\@undefined
8110 \@latex@error{\noexpand\caption outside float}\@ehd
8111 \expandafter\@gobble
8112 \else
8113 \H@refstepcounter\@capttype
8114 \let\Hy@tempa\@caption
8115 \@ifundefined{float@caption}{%
8116 }{%
8117 \expandafter\ifx\csname @float@c@\@capttype\endcsname

```



```

8118         \float@caption
8119     \let\Hy@tempa\Hy@float@caption
8120     \fi
8121 }%
8122 \expandafter\@firstofone
8123 \fi
8124 {\@dblarg{\Hy@tempa\@captype}}%
8125 }
8126 \long\def\@caption#1[#2]#3{%
8127 \expandafter\ifx\csname if@capstart\expandafter\endcsname
8128     \csname iftrue\endcsname
8129     \global\let\@currentHref\hc@currentHref
8130 \else
8131     \hyper@makecurrent{\@captype}%
8132 \fi
8133 \@ifundefined{NR@gettitle}{%
8134     \def\@currentlabelname{#2}%
8135 }{%
8136     \NR@gettitle{#2}%
8137 }%
8138 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
8139     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
8140 }%
8141 \begingroup
8142 \@parboxrestore
8143 \if@minipage
8144     \@setminipage
8145 \fi
8146 \normalsize
8147 \expandafter\ifx\csname if@capstart\expandafter\endcsname
8148     \csname iftrue\endcsname
8149     \global\@capstartfalse
8150     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
8151 \else
8152     \@makecaption{\csname fnum@#1\endcsname}{%
8153         \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

8154     \ifHy@nesting
8155         \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
8156     \else
8157         \Hy@raisedlink{%
8158             \expandafter\hyper@@anchor\expandafter{%
8159                 \@currentHref
8160                 }{\relax}%
8161         }%
8162     #3%
8163     \fi
8164 }%
8165 \fi
8166 \par
8167 \endgroup
8168 }

```

Compatibility with float.sty: anchor setting at the top of the float, if the float is controlled by float.sty. Several `\caption` commands inside one float are not supported.

`\HyNew@float@makebox` is introduced as feature request of Axel Sommerfeldt

to make the life easier for his package ‘caption’.

```
8169 \let\Hy@float@caption\@caption
8170 \newcommand{\HyNew@float@makebox}[1]{%
8171   \HyOrg@float@makebox{%
8172     #1\relax
8173     \ifx\Hy@float@currentHref\@undefined
8174     \else
8175       \expandafter\hyper@@anchor\expandafter{%
8176         \Hy@float@currentHref
8177       }\relax}%
8178     \global\let\Hy@float@currentHref\@undefined
8179   \fi
8180 }%
8181 }%
8182 \@ifpackageloaded{float}{%
8183   \def\Hy@float@caption{%
8184     \ifx\Hy@float@currentHref\@undefined
8185       \hyper@makecurrent{\@capttype}%
8186       \global\let\Hy@float@currentHref\@currentHref
8187     \else
8188       \let\@currentHref\Hy@float@currentHref
8189     \fi
8190     \float@caption
8191   }%
8192   \let\HyOrg@float@makebox\float@makebox
8193   \let\float@makebox\HyNew@float@makebox
8194 }{}

8195 </package>
8196 <*check>
8197 \checklatex[1999/06/01 - 2000/06/01]
8198 \checkcommand\def\caption{%
8199   \ifx\@capttype\@undefined
8200     \@latex@error{\noexpand\caption outside float}\@ehd
8201     \expandafter\@gobble
8202   \else
8203     \refstepcounter\@capttype
8204     \expandafter\@firstofone
8205     \fi
8206     {\@dblarg{\@caption\@capttype}}%
8207 }
8208 \checkcommand\long\def\@caption#1[#2]#3{%
8209   \par
8210   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
8211     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}}%
8212   }%
8213   \begingroup
8214     \@parboxrestore
8215     \if@minipage
8216       \@setminipage
8217     \fi
8218     \normalsize
8219     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
8220   \endgroup
8221 }
8222 </check>
8223 <*package>
```

38 Bibliographic references

This is not very robust, since many styles redefine these things. The package used to redefine `\@citex` and the like; then we tried adding the `hyperref` call explicitly into the `.aux` file. Now we redefine `\bibtex`; this still breaks some citation packages so we have to work around them. But this remains extremely dangerous. Any or all of *achemso* and *drftcite* may break.

However, lets make an attempt to get *natbib* right, because thats a powerful, important package. Patrick Daly (`daly@linmpi.mpg.de`) has provided hooks for us, so all we need to do is activate them.

```

8224 \def\hyper@natlinkstart#1{%
8225   \Hy@backout{#1}%
8226   \hyper@linkstart{cite}{cite.#1}%
8227   \def\hyper@nat@current{#1}%
8228 }
8229 \def\hyper@natlinkend{%
8230   \hyper@linkend
8231 }
8232 \def\hyper@natlinkbreak#1#2{%
8233   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
8234 }
8235 \def\hyper@natanchorstart#1{%
8236   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
8237 }
8238 \def\hyper@natanchorend{\hyper@anchorend}

```

Do not play games if we have *natbib* support. Macro `extra@binfo` added for chapterbib support. Chapterbib also wants `\@extra@binfo` in the hyper-link, but since the link tag is not expanded immediately, we use `\@extra@b@citeb`, so cites in a chapter will link to the bibliography in that chapter.

```

8239 \ltx@ifundefined{NAT@parse}{%
8240   \providecommand*\@extra@binfo{}%
8241   \providecommand*\@extra@b@citeb{}%
8242   \def\bibtex#1#2{%
8243     \@newl@bel{b}{#1\@extra@binfo}{%
8244       \hyper@@link{cite}{cite.#1\@extra@b@citeb}{#2}%
8245     }%
8246   }%
8247   \gdef\@extra@binfo{}%

```

Package *babel* redefines `\bibtex` with macro `\bbl@cite@choice`. It needs to be overwritten to avoid the warning “Label(s) may have changed.”.

```

8248 \let\Hy@bibtex\bibtex
8249 \begingroup
8250   \@ifundefined{bbl@cite@choice}{}{%
8251     \g@addto@macro\bbl@cite@choice{%
8252       \let\bibtex\Hy@bibtex
8253     }%
8254   }%
8255 \endgroup

```

`\@BIBLABEL` is working around a ‘feature’ of *RevTeX*.

```

8256 \providecommand*\@BIBLABEL{\@biblabel}%
8257 \def\@bibitem[#1]#2{%
8258   \@skiphyperreftrue
8259   \H@item[%
8260     \ifx\Hy@raisedlink\@empty

```

```

8261     \hyper@anchorstart{cite.#2\@extra@b@citeb}%
8262     \@BIBLABEL{#1}%
8263     \hyper@anchorend
8264   \else
8265     \Hy@raisedlink{%
8266       \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
8267     }%
8268     \@BIBLABEL{#1}%
8269   \fi
8270   \hfill
8271 ]%
8272 \@skiphyperreffalse
8273 \if@filesw
8274   \begingroup
8275     \let\protect\noexpand
8276     \immediate\write\@auxout{%
8277       \string\bibcite{#2}{#1}%
8278     }%
8279   \endgroup
8280 \fi
8281 \ignorespaces
8282 }%

```

Since `\bibitem` is doing its own labelling, call the raw version of `\item`, to avoid extra spurious labels

```

8283 \def\@bibitem#1{%
8284   \@skiphyperreftrue\H@item\@skiphyperreffalse
8285   \Hy@raisedlink{%
8286     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
8287   }%
8288   \if@filesw
8289     \begingroup
8290       \let\protect\noexpand
8291       \immediate\write\@auxout{%
8292         \string\bibcite{#1}{\the\value{\@listctr}}%
8293       }%
8294     \endgroup
8295   \fi
8296   \ignorespaces
8297 }%
8298 }{}

8299 \endpackage
8300 \check
8301 \checklatex
8302 \checkcommand\def\@lbibitem[#1]#2{%
8303   \item[\@biblabel{#1}\hfill]%
8304   \if@filesw
8305     {%
8306       \let\protect\noexpand
8307       \immediate\write\@auxout{%
8308         \string\bibcite{#2}{#1}%
8309       }%
8310     }%
8311   \fi
8312   \ignorespaces
8313 }
8314 \checkcommand\def\@bibitem#1{%

```

```

8315 \item
8316 \if@filesw
8317 \immediate\write\@auxout{%
8318 \string\bibcite{#1}{\the\value{\@listctr}}%
8319 }%
8320 \fi
8321 \ignorespaces
8322 }
8323 </check>
8324 <*package>

```

Revtex (bless its little heart) takes over `\bibcite` and looks at the result to measure something. Make this a hypertext link and it goes ape. Therefore, make an anodyne result first, call its business, then go back to the real thing.

```

8325 \ifclassloaded{revtex}{%
8326 \Hy@Info{*** compatibility with revtex **** }%
8327 \def\revtex@checking#1#2{%
8328 \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
8329 \expandafter\def\csname b@#1\endcsname{#2}%
8330 \@SetMaxRnhefLabel{#1}%
8331 \expandafter\let\csname b@#1\endcsname\T@temp
8332 }%

```

Tanmoy provided this replacement for CITE_X. Lord knows what it does. For chapterbib added: `extra@b@citeb`

```

8333 \@ifundefined{CITE}{\def\CITE{\cite}}{}%
8334 \providecommand*\@extra@b@citeb{}%
8335 \def\CITEX[#1]#2{%
8336 \let\@citea\@empty
8337 \leavevmode
8338 \unskip
8339 $\^{}%
8340 \scriptstyle
8341 \@CITE{%
8342 \for\@citeb:=#2\do{%
8343 \@citea
8344 \def\@citea{\penalty\@m }%
8345 \edef\@citeb{\expandafter\@firstofone\@citeb}%
8346 \if@filesw
8347 \immediate\write\@auxout{\string\citation{\@citeb}}%
8348 \fi
8349 \@ifundefined{b@\@citeb\extra@b@citeb}{%
8350 \mbox{\reset@font\bfseries ?}}%
8351 \G@refundefinedtrue
8352 \@latex@warning{%
8353 Citation `@\@citeb' on page \thepage \space undefined%
8354 }%
8355 }{%
8356 {\csname b@\@citeb\extra@b@citeb\endcsname}%
8357 }%
8358 }%
8359 }{#1}%
8360 }$%
8361 }%

```

No, life is too short. I am not going to understand the Revtex `\@collapse` macro, I shall just restore the original behaviour of `\@citex`; sigh. This is SO vile.

```

8362 \def\@citex[#1]#2{%

```

```

8363 \let\@citea\@empty
8364 \@cite{%
8365   \@for\@citeb:=#2\do{%
8366     \@citea
8367     \def\@citea{,\penalty\@m\ }%
8368     \edef\@citeb{\expandafter\@firstofone\@citeb}%
8369     \if@filesw
8370       \immediate\write\@auxout{\string\citation{\@citeb}}%
8371     \fi
8372     \@ifundefined{b@\@citeb\@extra@b@citeb}{%
8373       \mbox{\reset@font\bfseries ?}%
8374       \G@refundefinedtrue
8375       \@latex@warning{%
8376         Citation ` \@citeb' on page \thepage \space undefined%
8377       }%
8378     }{%
8379       \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
8380     }%
8381   }%
8382 }{#1}%
8383 }%
8384 }{}

```

38.1 Package harvard

Override Peter Williams' Harvard package; we have to a) make each of the citation types into a link; b) make each citation write a backref entry, and c) kick off a backreference section for each bibliography entry.

The redefinitions have to be deferred to `\begin{document}`, because if `harvard.sty` is loaded and `html.sty` is present and detects pdf \TeX , then `hyperref` is already loaded at the begin of `harvard.sty`, and the `\newcommand` macros causes error messages.

```

8385 \@ifpackageloaded{harvard}{%
8386   \Hy@AtBeginDocument{%
8387     \Hy@Info{*** compatibility with harvard **** }%
8388     \Hy@raiselinksfalse
8389     \def\harvardcite#1#2#3#4{%
8390       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{cite.#1}{#2}}%
8391       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{cite.#1}{#3}}%
8392       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{cite.#1}{#4}}%
8393       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
8394     }%
8395     \def\HAR@citetoaux#1{%
8396       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
8397     \ifHy@backref
8398       \ifx\@empty\@currentlabel
8399         \else
8400           \@bsphack
8401           \if@filesw
8402             \protected@write\@auxout{}{%
8403               \string\@writefile{brf}{%
8404                 \string\backcite{#1}{%
8405                   {\thepage}{\@currentlabel}{\@currentHref}%
8406                 }%
8407             }%
8408           }%

```

```

8409     \fi
8410     \@esphack
8411     \fi
8412     \fi
8413 }%
8414 \def\harvarditem{%
8415   \@ifnextchar{\@harvarditem}{\@harvarditem[\null]}%
8416 }%
8417 \def\@harvarditem[#1]#2#3#4#5\par{%
8418   \item[]%
8419   \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
8420   \if@filesw
8421     \begingroup
8422     \def\protect##1{\string ##1\space}%
8423     \ifthenelse{\equal{#1}{\null}}%
8424       {\def\next{{#4}{#2}{#2}{#3}}}%
8425       {\def\next{{#4}{#2}{#1}{#3}}}%
8426     \immediate\write\@auxout{\string\harvardcite\codeof\next}%
8427   \endgroup
8428   \fi
8429   \protect\hspace*{-\labelwidth}%
8430   \protect\hspace*{-\labelsep}%
8431   \ignorespaces
8432   #5%
8433   \ifHy@backref
8434     \newblock
8435     \backref{\csname br@#4\endcsname}%
8436   \fi
8437   \par
8438 }%

```

\HAR@checkcitations Package hyperref has added \hyper@@link, so the original test \HAR@checkcitations will fail every time and always will appear the “Changed labels” warning. So we have to redefine \Har@checkcitations:

```

8439 \long\def\HAR@checkcitations#1#2#3#4{%
8440   \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
8441   \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
8442   \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
8443   \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
8444   \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
8445   \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
8446   \else
8447     \@tempwatruel
8448     \fi
8449   \else
8450     \@tempwatruel
8451     \fi
8452   \else
8453     \@tempwatruel
8454     \fi
8455 }%
8456 }%
8457 }{}

```

38.2 Package chicago

The links by `\citeN` and `\shortciteN` should include the closing parentheses.

```
8458 \@ifpackageloaded{chicago}{%
```

```
\citeN
```

```
8459 \def\citeN{%
8460   \def\@citeseppen{-1000}%
8461   \def\@cite##1##2{##1}%
8462   \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
8463   \@citedata@opt
8464 }%
```

```
\shortciteN
```

```
8465 \def\shortciteN{%
8466   \def\@citeseppen{-1000}%
8467   \def\@cite##1##2{##1}%
8468   \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
8469   \@citedata@opt
8470 }%
```

```
\@citedata@opt
```

```
8471 \def\@citedata@opt{%
8472   \let\@cite@opt\@empty
8473   \@ifnextchar [{%
8474     \@tempswatrue
8475     \@citedatax@opt
8476   }{%
8477     \@tempswafalse
8478     \@citedatax[]%
8479   }%
8480 }%
```

```
\@citedatax@opt
```

```
8481 \def\@citedatax@opt[#1]{%
8482   \def\@cite@opt{, #1}%
8483   \@citedatax[{#1}]%
8484 }%
8485 }{}
```

39 Page numbers

The last page should not contain a `/Dur` key, because there is no page after the last page. Therefore at the last page there should be a command `\hypersetup{pdf-pageduration={}}`. This can be set with `\AtEndDocument`, but it can be too late, if the last page is already finished, or too early, if lots of float pages will follow. Therefore currently nothing is done by hyperref.

This where we supply a destination for each page.

```
8486 \ltx@ifclassloaded{slides}{%
8487   \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
8488   \def\Hy@PageAnchorSlidesPlain{%
8489     \advance\c@page\ltx@one
8490     \edef\Hy@TempPageAnchor{%
8491       \noexpand\hyper@@anchor{%
```



```

8492     page.\the\c@slide.\the\c@overlay.\the\c@note%
8493     \ifnum\c@page=\ltx@one
8494     \else
8495     .\the\c@page
8496     \fi
8497     }%
8498     }%
8499     \advance\c@page-\ltx@one
8500 }%
8501 \def\Hy@PageAnchorSlide{%
8502     \advance\c@page\ltx@one
8503     \ifnum\c@page>\ltx@one
8504     \ltx@ifundefined{theHpage}{%
8505         \protected@edef\Hy@TheSlideOptionalPage{%
8506             \Hy@SlidesFormatOptionalPage{theHpage}%
8507         }%
8508     }{%
8509         \protected@edef\Hy@TheSlideOptionalPage{%
8510             \Hy@SlidesFormatOptionalPage{theHpage}%
8511         }%
8512     }%
8513     \else
8514     \def\Hy@TheSlideOptionalPage{}%
8515     \fi
8516     \advance\c@page-\ltx@one
8517     \pdfstringdef\@the@H@page{%
8518         \csname
8519             the%
8520             \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
8521             \Hy@SlidesPage
8522         \endcsname
8523         \Hy@TheSlideOptionalPage
8524     }%
8525     \ltx@gobblethree
8526     }%
8527     \def\Hy@SlidesPage{slide}%
8528     \g@addto@macro\slide{%
8529         \def\Hy@SlidesPage{slide}%
8530     }%
8531     \g@addto@macro\overlay{%
8532         \def\Hy@SlidesPage{overlay}%
8533     }%
8534     \g@addto@macro\note{%
8535         \def\Hy@SlidesPage{note}%
8536     }%
8537 }{%
8538     \def\Hy@PageAnchorSlidesPlain{}%
8539     \def\Hy@PageAnchorSlide{}%
8540 }
8541 \def\Hy@EveryPageAnchor{%
8542     \Hy@DistillerDestFix
8543     \ifHy@pageanchor
8544     \ifHy@hypertextnames
8545     \ifHy@plainpages
8546     \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
8547     \Hy@PageAnchorSlidesPlain
8548     \else

```

```

8549     \begingroup
8550     \let\@number\@firstofone
8551     \Hy@unicodedefalse
8552     \Hy@PageAnchorSlide
8553     \pdfstringdef\@the@H@page{\thepage}%
8554     \endgroup
8555     \EdefUnescapeString\@the@H@page{\@the@H@page}%
8556     \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
8557     \fi
8558   \else
8559     \Hy@GlobalStepCount\Hy@pagecounter
8560     \def\Hy@TempPageAnchor{%
8561       \hyper@@anchor{page.\the\Hy@pagecounter}%
8562     }%
8563   \fi
8564   \vbox to 0pt{%
8565     \kern\voffset
8566     \kern\topmargin
8567     \kern-1bp\relax
8568     \hbox to 0pt{%
8569       \kern\hoffset
8570       \kern\ifodd\value{page}%
8571         \oddsidemargin
8572       \else
8573         \evensidemargin
8574       \fi
8575       \kern-1bp\relax
8576       \Hy@TempPageAnchor\relax
8577     \hss
8578   }%
8579   \vss
8580 }%
8581 \fi
8582 }
8583 \g@addto@macro\Hy@EveryPageBoxHook{%
8584   \Hy@EveryPageAnchor
8585 }

```

40 Table of contents

TV Raman noticed that people who add arbitrary material into the TOC generate a bad or null link. We avoid that by checking if the current destination is empty. But if ‘the most recent destination’ is not what you expect, you will be in trouble.

```

8586 % In newer \LaTeX\ releases this is defined to put a \verb|%| at the end of the
8587 % line in the \textt{toc}file.
8588 % \begin{macrocode}
8589 \providecommand\protected@file@percent{}
8590 \def\addcontentsline#1#2#3{% toc extension, type, tag
8591   \begingroup
8592     \let\label\@gobble
8593     \ifx\@currentHref\@empty
8594       \Hy@Warning{%
8595         No destination for bookmark of \string\addcontentsline,%
8596         \MessageBreak destination is added%
8597       }%
8598     \phantomsection

```

```

8599 \fi
8600 \expandafter\ifx\csname toplevel@#2\endcsname\relax
8601 \begingroup
8602 \def\Hy@tempa{#1}%
8603 \ifx\Hy@tempa\Hy@bookmarkstype
8604 \Hy@WarningNoLine{%
8605     bookmark level for unknown #2 defaults to 0%
8606 }%
8607 \else
8608 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
8609 \fi
8610 \endgroup
8611 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
8612 \fi
8613 \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%
8614 \Hy@writebookmark{\csname the#2\endcsname}%
8615 {#3}%
8616 {\@currentHref}%
8617 {\Hy@toclevel}%
8618 {#1}%
8619 \ifHy@verbose
8620 \begingroup
8621 \def\Hy@tempa{#3}%
8622 \@onelevel@sanitize\Hy@tempa
8623 \let\temp@online\on@line
8624 \let\on@line\@empty
8625 \Hy@Info{%
8626     bookmark\temp@online:\MessageBreak
8627     thecounter {\csname the#2\endcsname}\MessageBreak
8628     text {\Hy@tempa}\MessageBreak
8629     reference {\@currentHref}\MessageBreak
8630     toplevel {\Hy@toclevel}\MessageBreak
8631     type {#1}%
8632 }%
8633 \endgroup
8634 \fi
8635 \addtocontents{#1}{%
8636 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}\protected@file@per-
cent
8637 }%
8638 \endgroup
8639 }

```

`\contentsline` The page number might be empty. In this case the link for the page number is suppressed to avoid little link boxes.

```

8640 \def\contentsline#1#2#3#4{%
8641 \begingroup
8642 \Hy@safe@activestrue
8643 \edef\x{\endgroup
8644 \def\noexpand\Hy@tocdestname{#4}%
8645 }\x
8646 \ifx\Hy@tocdestname\ltx@empty
8647 \csname l@#1\endcsname{#2}{#3}%
8648 \else
8649 \ifcase\Hy@linktoc % none
8650 \csname l@#1\endcsname{#2}{#3}%
8651 \or % section

```

```

8652 \csname l@#1\endcsname{%
8653 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8654 }{#3}%
8655 \or % page
8656 \def\Hy@temp{#3}%
8657 \ifx\Hy@temp\ltx@empty
8658 \csname l@#1\endcsname{#2}{#3}%
8659 \else
8660 \csname l@#1\endcsname{#2}{#3}%
8661 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8662 }%
8663 \fi
8664 \else % all
8665 \def\Hy@temp{#3}%
8666 \ifx\Hy@temp\ltx@empty
8667 \csname l@#1\endcsname{%
8668 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8669 }{}%
8670 \else
8671 \csname l@#1\endcsname{%
8672 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8673 }{}%
8674 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8675 }%
8676 \fi
8677 \fi
8678 \fi
8679 }

8680 \end{package}
8681 \end{check}
8682 \end{checklatex}
8683 \checkcommand\def\addcontentsline#1#2#3{%
8684 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
8685 }
8686 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8687 \end{check}
8688 \end{package}

```

41 New counters

The whole theorem business makes up new counters on the fly; we are going to intercept this. Sigh. Do it at the level where new counters are defined.

```

8689 \let\H@definecounter\@definecounter
8690 \def\@definecounter#1{%
8691 \H@definecounter{#1}%
8692 \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8693 }

```

But what if they have used the optional argument to e.g. `\newtheorem` to determine when the numbering is reset? OK, we'll trap that too.

```

8694 \let\H@newctr\@newctr
8695 \def\@newctr#1[#2]{%
8696 \H@newctr#1[#{#2}]%
8697 \expandafter\gdef\csname theH#1\endcsname{%
8698 \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
8699 }%

```

8700 }

42 AMS¹TeX compatibility

Oh, no, they don't use anything as simple as `\refstepcounter` in the AMS! We need to intercept some low-level operations of theirs. Damned if we are going to try and work out what they get up to. Just stick a label of 'AMS' on the front, and use the label *they* worked out. If that produces something invalid, I give up. They'll change all the code again anyway, I expect (SR).

Version 6.77p uses a patch by Ross Moore.

```
8701 \@ifpackageloaded{amsmath}{%
8702   \def\Hy@make@anchor{%
8703     \Hy@MakeCurrentHrefAuto{AMS}%
8704     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8705   }%
8706   \def\Hy@make@df@tag@#1{%
8707     \gdef\df@tag{%
8708       \maketag@@@{\Hy@make@anchor#1}%
8709     \def\@currentlabel{#1}%
8710   }%
8711 }%
8712 \def\Hy@make@df@tag@@#1{%
8713   \gdef\df@tag{%
8714     \tagform@{\Hy@make@anchor#1}%
8715     \toks@\@xp{\p@equation{#1}}%
8716     \edef\@currentlabel{\the\toks@}%
8717   }%
8718 }%
8719 \let\HyOrg@make@df@tag@@\make@df@tag@@
8720 \let\HyOrg@make@df@tag@@@\make@df@tag@@@
8721 \let\make@df@tag@@\Hy@make@df@tag@@
8722 \let\make@df@tag@@@\Hy@make@df@tag@@@
8723 }{}
```

Only play with `\seteqlebal` if we are using `pdftex`. Other drivers cause problems; requested by Michael Downes (AMS).

```
8724 \@ifpackagewith{hyperref}{pdftex}{%
8725   \let\H@seteqlabel\@seteqlabel
8726   \def\@seteqlabel#1{%
8727     \H@seteqlabel{#1}%
8728     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
8729     \Hy@raisedlink{%
8730       \hyper@anchorstart{\@currentHref}\hyper@anchorend
8731     }%
8732   }%
8733 }{}
```

This code I simply cannot remember what I was trying to achieve. The final result seems to do nothing anyway.

```
\let\H@tagform@\tagform@
\def\tagform@#1{%
\maketag@@@{\hyper@@anchor{\@currentHref}%
{\ignorespaces#1\unskip}}%
}
\def\eqref#1{\textup{\H@tagform@\ref{#1}}}
```

42.1 \@addtoreset and \numberwithin patches

\@addtoreset puts a counter to the reset list of another counter. After a reset the counter starts again with perhaps already used values. Therefore the hyperref version of the counter print command \theHcounter is redefined in order to add the parent counter.

```

8734 \let\HyOrg@addtoreset\@addtoreset
8735 \def\@addtoreset#1#2{%
8736   \HyOrg@addtoreset{#1}{#2}%
8737   \expandafter\xdef\csname theH#1\endcsname{%
8738     \expandafter\noexpand
8739       \csname the\@ifundefined{theH#2}{}H#2\endcsname
8740     .\noexpand\the\noexpand\value{#1}%
8741   }%
8742 }
```

\numberwithin A appropriate definition of hyperref's companion counter (\theH...) is added for correct link names.

```

8743 </package>
8744 <*check>
8745 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8746 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8747   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8748     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8749       \@addtoreset{#2}{#3}%
8750       \@xp\xdef\csname the#2\endcsname{%
8751         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8752       }%
8753     }%
8754   }%
8755 }%
8756 </check>
8757 <*package>
8758 \@ifpackageloaded{amsmath}{%
8759   \@ifpackagelater{amsmath}{1999/12/14}{%
8760     \renewcommand*\numberwithin}[3][\arabic]{%
8761       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8762         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8763           \HyOrg@addtoreset{#2}{#3}%
8764           \@xp\xdef\csname the#2\endcsname{%
8765             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8766           }%
8767           \@xp\xdef\csname theH#2\endcsname{%
8768             \@xp\@nx
8769             \csname the\@ifundefined{theH#3}{}H#3\endcsname
8770             .\@nx#1{#2}%
8771           }%
8772         }%
8773       }%
8774     }%
8775   }%
8776   \Hy@WarningNoLine{%
8777     \string\numberwithin\space of package `amsmath' %
8778     only fixed\MessageBreak
8779     for version 2000/06/06 v2.12 or newer%
8780   }%
8781 }
```

```
8782 }{}
```

43 Included figures

Simply intercept the low level graphics package macro.

```
8783 \ifHy@hyperfigures
8784 \let\Hy@Gin@setfile\Gin@setfile
8785 \def\Gin@setfile#1#2#3{%
8786   \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8787 }%
8788 \fi
8789 \Hy@DisableOption{hyperfigures}
```

44 hyperindex entries

Internal command names are prefixed with `\HyInd@`.

Hyper-indexing works crudely, by forcing code onto the end of the index entry with the `|` feature; this puts a hyperlink around the printed page numbers. It will not proceed if the author has already used the `|` specifier for something like boldening entries. That would make `Makeindex` fail (cannot have two `|` specifiers). The solution is for the author to use generic coding, and put in the requisite `\hyperpage` in his/her own macros along with the boldness.

This section is poor stuff; it's open to all sorts of abuse. Sensible large projects will design their own indexing macros any bypass this.

```
8790 \ifHy@hyperindex
8791 \def\HyInd@ParenLeft{({}%
8792 \def\HyInd@ParenRight{)}}%
8793 \def\hyperindexformat#1#2{%
8794   \let\HyOrg@hyperpage\hyperpage
8795   \let\hyperpage\@firstofone
8796   #1{\HyOrg@hyperpage{#2}}%
8797   \let\hyperpage\HyOrg@hyperpage
8798 }%
8799 \Hy@nextfalse
8800 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8801 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8802 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8803 \begingroup
8804 \lccode`|= \expandafter`\HyInd@EncapChar\relax
8805 \lccode`\/= `\\ \relax
8806 \lowercase{\endgroup
8807 \ifHy@next
8808   \let\HyInd@org@wrindex\@wrindex
8809   \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2|\\}%
8810   \def\HyInd@@wrindex#1#2|#3|#4\\{%
8811     \ifx\|#3\\%
8812       \HyInd@org@wrindex{#1}{#2|hyperpage}%
8813     \else
8814       \HyInd@@@wrindex{#1}{#2}#3\\%
8815     \fi
8816   }%
8817   \def\HyInd@@@wrindex#1#2#3#4\\{%
8818     \def\Hy@temp@A{#3}%
8819     \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
```

```

8820         \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8821         \relax
8822     \HyInd@org@wrindex{#1}{%
8823     #2|hyperindexformat{/#3#4}%
8824     }%
8825 \else
8826     \ifx\#4\%
8827     \ifx\Hy@temp@A\HyInd@ParenRight
8828     \HyInd@org@wrindex{#1}{#2|#3}%
8829     \else
8830     \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8831     \fi
8832 \else
8833     \HyInd@org@wrindex{#1}{%
8834     #2|#3hyperindexformat{/#4}%
8835     }%
8836     \fi
8837 \fi
8838 }%
8839 \else
8840 \def\@wrindex#1{\@wrindex#1||\}%
8841 \def\@wrindex#1|#2|#3\{\%
8842 \if@filesw
8843 \ifx\#2\%
8844 \protected@write\@indexfile{}{%
8845 \string\indexentry{#1|hyperpage}{\thepage}%
8846 }%
8847 \else
8848 \HyInd@@@wrindex{#1}#2\%
8849 \fi
8850 \fi
8851 \endgroup
8852 \@esphack
8853 }%
8854 \def\HyInd@@@wrindex#1#2#3\{\%
8855 \def\Hy@temp@A{#2}%
8856 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8857 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8858 \relax
8859 \protected@write\@indexfile{}{%
8860 \string\indexentry{%
8861 #1|hyperindexformat{/#2#3}%
8862 }{\thepage}%
8863 }%
8864 \else
8865 \ifx\#3\%
8866 \ifx\Hy@temp@A\HyInd@ParenRight
8867 \HyInd@DefKey{#1}%
8868 \ltx@ifundefined{HyInd@(\HyInd@key)}{%
8869 \let\Hy@temp\ltx@empty
8870 }{%
8871 \expandafter\let\expandafter\Hy@temp
8872 \csname HyInd@(\HyInd@key)\endcsname
8873 }%
8874 \protected@write\@indexfile{}{%
8875 \string\indexentry{#1|#2\Hy@temp}{\thepage}%
8876 }%

```



```

8877     \else
8878     \protected@write\@indexfile{}{%
8879         \string\indexentry{#1|#2hyperpage}{\thepage}%
8880     }%
8881     \HyInd@DefKey{#1}%
8882     \expandafter
8883     \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8884         hyperpage%
8885     }%
8886     \fi
8887 \else
8888 \protected@write\@indexfile{}{%
8889     \string\indexentry{%
8890         #1|#2hyperindexformat{/#3}%
8891     }\thepage}%
8892 }%
8893 \ifx\Hy@temp@A\HyInd@ParenLeft
8894 \HyInd@DefKey{#1}%
8895 \expandafter
8896 \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8897     hyperindexformat{/#3}%
8898 }%
8899 \fi
8900 \fi
8901 \fi
8902 }%
8903 \def\HyInd@DefKey#1{%
8904     \begingroup
8905     \let\protect\@unexpandable@protect
8906     \edef\Hy@temp{#1}%
8907     \ltx@onelevel@sanitize\Hy@temp
8908     \global\let\HyInd@key\Hy@temp
8909     \endgroup
8910 }%
8911 \fi
8912 }%
8913 \fi
8914 \Hy@DisableOption{hyperindex}
8915 \Hy@DisableOption{encap}

```

`\nohyperpage` The definition of `\nohyperpage` is just a precaution. It is used to mark code that does not belong to a page number, but `\nohyperpage` is never executed.

```
8916 \def\nohyperpage#1{#1}
```

This again is quite flaky, but allow for the common situation of a page range separated by en-rule. We split this into two different hyperlinked pages.

```

8917 \def\hyperpage#1{%
8918     \HyInd@hyperpage#1\nohyperpage{}\@nil
8919 }
8920 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8921     \HyInd@hyperpage{#1}%
8922     #2%
8923     \def\Hy@temp{#3}%
8924     \ifx\Hy@temp@empty
8925     \else
8926     \ltx@ReturnAfterFi{%
8927         \HyInd@hyperpage#3\@nil

```

```

8928 }%
8929 \fi
8930 }
8931 \def\HyInd@hyperpage#1{\@hyperpage#1----\}
8932 \def\@hyperpage#1--#2--#3\{\%
8933 \ifx\#2\%
8934 \commahyperpage{#1}%
8935 \else
8936 \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8937 \fi
8938 }
8939 \def\@commahyperpage#1{\@commahyperpage#1, \}
8940 \def\@commahyperpage#1, #2, #3\{\%
8941 \ifx\#2\%
8942 \HyInd@pagelink{#1}%
8943 \else
8944 \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8945 \fi
8946 }

```

The argument of `\hyperpage` can be empty. And the line breaking algorithm of `Makeindex` can introduce spaces. So we have to remove them.

```

8947 \def\HyInd@pagelink#1{%
8948 \begingroup
8949 \toks@={}%
8950 \HyInd@removespaces#1 \@nil
8951 \endgroup
8952 }
8953 \def\HyInd@removespaces#1 #2\@nil{%
8954 \toks@=\expandafter{\the\toks@#1}%
8955 \ifx\#2\%
8956 \edef\x{\the\toks@}%
8957 \ifx\x\@empty
8958 \else
8959 \hyperlink{page.\the\toks@}{\the\toks@}%
8960 \fi
8961 \else
8962 \ltx@ReturnAfterFi{%
8963 \HyInd@removespaces#2\@nil
8964 }%
8965 \fi
8966 }

```

45 Compatibility with foiltex

```

8967 \@ifclassloaded{foils}{%
8968 \providecommand*\ext@table{lot}%
8969 \providecommand*\ext@figure{lof}%
8970 }-{}

```

46 Compatibility with seminar slide package

This requires `seminar.bg2`, version 1.6 or later. Contributions by Denis Girou (denis.girou@idris.fr).

```

8971 \@ifclassloaded{seminar}{%
8972 \Hy@seminarslidestrue

```

```

8973 \providecommand\theHslide{\arabic{slide}}%
8974 }{%
8975 \Hy@seminarslidesfalse
8976 }
8977 \ifpackageloaded{slidesec}{%
8978 \providecommand\theHslidesection {\arabic{slidesection}}%
8979 \providecommand\theHslidesubsection{%
8980 \theHslidesection.\arabic{slidesubsection}}%
8981 }%
8982 \def\slide@heading[#1]#2{%
8983 \H@refstepcounter{slidesection}%
8984 \@addtoreset{slidesubsection}{slidesection}%
8985 \addtocontents{los}{%
8986 \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
8987 {\@SCTR}{slideheading.\theslidesection}}%
8988 }%
8989 \def\Hy@tempa{#2}%
8990 \ifx\Hy@tempa\@empty
8991 \else
8992 {%
8993 \edef\@currentlabel{%
8994 \csname p@slidesection\endcsname\theslidesection
8995 }%
8996 \makeslideheading{#2}%
8997 }%
8998 \fi
8999 \gdef\theslideheading{#1}%
9000 \gdef\theslidesubheading{}%
9001 \ifHy@bookmarksnumbered
9002 \def\Hy@slidetitle{\theslidesection\space #1}%
9003 \else
9004 \def\Hy@slidetitle{#1}%
9005 \fi
9006 \ifHy@hypertextnames
9007 \ifHy@naturalnames
9008 \hyper@@anchor{slideheading.\theslidesection}{\relax}%
9009 \Hy@writebookmark
9010 {\theslidesection}%
9011 {\Hy@slidetitle}%
9012 {slideheading.\theslidesection}%
9013 {1}%
9014 {toc}%
9015 \else
9016 \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
9017 \Hy@writebookmark
9018 {\theslidesection}%
9019 {\Hy@slidetitle}%
9020 {slideheading.\theHslidesection}%
9021 {1}%
9022 {toc}%
9023 \fi
9024 \else
9025 \Hy@GlobalStepCount\Hy@linkcounter
9026 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
9027 \Hy@writebookmark
9028 {\theslidesection}%
9029 {\Hy@slidetitle}%

```

```

9030     {slideheading.\the\Hy@linkcounter}%
9031     {1}%
9032     {toc}%
9033   \fi
9034 }%
9035 \def\slide@subheading[#1]#2{%
9036   \H@refstepcounter{slidesubsection}%
9037   \addtocontents{los}{%
9038     \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
9039     {\@SCTR}{slideheading.\theslidesubsection}%
9040   }%
9041   \def\Hy@tempa{#2}%
9042   \ifx\Hy@tempa\@empty
9043   \else
9044     {%
9045       \edef\@currentlabel{%
9046         \csname p@slidesubsection\endcsname\theslidesubsection
9047       }%
9048       \makeslidesubheading{#2}%
9049     }%
9050   \fi
9051   \gdef\theslidesubheading{#1}%
9052   \ifHy@bookmarksnumbered
9053   \def\Hy@slidetitle{\theslidesubsection\space #1}%
9054   \else
9055     \def\Hy@slidetitle{#1}%
9056   \fi
9057   \ifHy@hypertextnames
9058   \ifHy@naturalnames
9059     \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
9060     \Hy@writebookmark
9061       {\theslidesubsection}%
9062       {\Hy@slidetitle}%
9063       {slideheading.\theslidesubsection}%
9064       {2}%
9065       {toc}%
9066   \else
9067     \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
9068     \Hy@writebookmark
9069       {\theslidesubsection}%
9070       {\Hy@slidetitle}%
9071       {slideheading.\theHslidesubsection}%
9072       {2}%
9073       {toc}%
9074   \fi
9075   \else
9076     \Hy@GlobalStepCount\Hy@linkcounter
9077     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
9078     \Hy@writebookmark
9079       {\theslidesubsection}%
9080       {\Hy@slidetitle}%
9081       {slideheading.\the\Hy@linkcounter}%
9082       {1}%
9083       {toc}%
9084   \fi
9085 }%
9086 \providecommand*{\listslidename}{List of Slides}%

```

```

9087 \def\listofslides{%
9088 \section*{%
9089 \listslidename
9090 \@mkboth{%
9091 \expandafter\MakeUppercase\listslidename
9092 }{%
9093 \expandafter\MakeUppercase\listslidename
9094 }%
9095 }%
9096 \def\l@slide###1##2###3###4{%
9097 \slide@undottedcline{%
9098 \slidenumberline{##3}{\hyperlink{##4}{##2}}%
9099 }{%}
9100 }%
9101 \let\l@subslide\l@slide
9102 \@startlos
9103 }%
9104 \def\slide@contents{%
9105 \def\l@slide###1##2###3###4{%
9106 \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
9107 }%
9108 \let\l@subslide\@gobblefour
9109 \@startlos
9110 }%
9111 \def\Slide@contents{%
9112 \def\l@slide###1##2###3###4{%
9113 \ifcase\lslide@flag
9114 \message{##1 ** \the\c@slidesection}%
9115 \ifnum##1>\c@slidesection
9116 \def\lslide@flag{1}%
9117 {%
9118 \large
9119 \slide@ccline{%
9120 \slidenumberline{\$ \Rightarrow \bullet}%
9121 {\hyperlink{##4}{##2}}%
9122 }{##3}%
9123 }%
9124 \else
9125 {%
9126 \large
9127 \slide@ccline{%
9128 \slidenumberline{\$ \surd \; \bullet}%
9129 {\hyperlink{##4}{##2}}%
9130 }{##3}%
9131 }%
9132 \fi
9133 \or
9134 \def\lslide@flag{2}%
9135 {%
9136 \large
9137 \slide@ccline{%
9138 \slidenumberline{\$ \bullet}%
9139 {\hyperlink{##4}{##2}}%
9140 }{##3}%
9141 }%
9142 \or
9143 {%

```

```

9144     \large
9145     \slide@cline{%
9146         \slidenumberline{$\bullet$}%
9147         {\hyperlink{##4}{##2}}%
9148         }{##3}%
9149     }%
9150     \fi
9151 }%
9152 \def\l@subslide##1##2##3##4{%
9153     \ifnum\lslide@flag=1 %
9154         \undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
9155     \fi
9156 }%
9157 \def\lslide@flag{0}%
9158 \@startlos
9159 }%
9160 }{}

```

This breaks TeX4ht, so leave it to last. Emend `\@setref` to put out a hypertext link as well as its normal text (which is used as an anchor). (`\endinput` have to be on the same line like `\fi`, or you have to use `\expandafter` before.)

```

9161 \ifHy@texht
9162 \expandafter\endinput
9163 \fi
9164 \let\real@setref\@setref
9165 \def\@setref#1#2#3{% csname, extract group, refname
9166     \ifx#1\relax
9167         \protect\G@refundefinedtrue
9168         \nfss@text{\reset@font\bfseries ??}%
9169         \@latex@warning{%
9170             Reference `#3' on page \thepage \space undefined%
9171         }%
9172     \else
9173         \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
9174     \fi
9175 }

```

`\Hy@setref@link` extracts the reference information entries, because `\hyper@@link` does not expand arguments for the automatic link type detection.

```

9176 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
9177     \begingroup
9178     \toks0={\hyper@@link{#5}{#4}}%
9179     \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
9180     \edef\x{\endgroup
9181         \the\toks0 {\the\toks1 }%
9182     }%
9183     \x
9184 }
9185 \def\@pagesetref#1#2#3{% csname, extract macro, ref
9186     \ifx#1\relax
9187         \protect\G@refundefinedtrue
9188         \nfss@text{\reset@font\bfseries ??}%
9189         \@latex@warning{%
9190             Reference `#3' on page \thepage \space undefined%
9191         }%
9192     \else
9193         \protect\hyper@@link
9194         {\expandafter\@fifthoffive#1}%

```

```

9195     {page.\expandafter\@secondoffive#1}%
9196     {\expandafter\@secondoffive#1}%
9197   \fi
9198 }

9199 </package>
9200 < *check>
9201 \checklatex
9202 \checkcommand\def\@setref#1#2#3{%
9203   \ifx#1\relax
9204     \protect\G@refundefinedtrue
9205     \nfss@text{\reset@font\bfseries ??}%
9206     \@latex@warning{%
9207       Reference `#3' on page \thepage\space undefined%
9208     }%
9209   \else
9210     \expandafter#2#1\null
9211   \fi
9212 }
9213 </check>
9214 < *package>

```

Now some extended referencing. `\ref*` and `\pageref*` are not linked, and `\autoref` prefixes with a tag based on the type.

```

9215 \def\HyRef@StarSetRef#1{%
9216   \begingroup
9217   \Hy@safe@activestru
9218   \edef\x{#1}%
9219   \@onelevel@sanitize\x
9220   \edef\x{\endgroup
9221     \noexpand\HyRef@@StarSetRef
9222     \expandafter\noexpand\csname r@\x\endcsname{\x}}%
9223   }%
9224   \x
9225 }
9226 \def\HyRef@@StarSetRef#1#2#3{%
9227   \ifx#1\@undefined
9228     \let#1\relax
9229   \fi
9230   \real@setref#1#3{#2}%
9231 }
9232 \def\@refstar#1{%
9233   \HyRef@StarSetRef{#1}\@firstoffive
9234 }
9235 \def\@pagerefstar#1{%
9236   \HyRef@StarSetRef{#1}\@secondoffive
9237 }
9238 \def\@namerefstar#1{%
9239   \HyRef@StarSetRef{#1}\@thirdoffive
9240 }
9241 \Hy@AtBeginDocument{%
9242   \@ifpackageloaded{varioref}{%
9243     \def\@Refstar#1{%
9244       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
9245     }%
9246     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
9247       \MakeUppercase#1%
9248     }%

```

```

9249 \DeclareRobustCommand*\Ref}{%
9250 \@ifstar\@Refstar\HyRef@Ref
9251 }%
9252 \def\HyRef@Ref#1{%
9253 \hyperref[#1]{\Ref*{#1}}%
9254 }%
9255 \def\Vr@f#1{%
9256 \leavevmode\unskip\vref@space
9257 \hyperref[#1]{%
9258 \Ref*{#1}%
9259 \let\vref@space\nobreakspace
9260 \@vpageref[\unskip]{#1}%
9261 }%
9262 }%
9263 \def\vr@f#1{%
9264 \leavevmode\unskip\vref@space
9265 \begingroup
9266 \let\T@pageref\@pagerefstar
9267 \hyperref[#1]{%
9268 \ref*{#1}%
9269 \vpageref[\unskip]{#1}%
9270 }%
9271 \endgroup
9272 }%
9273 }-}%
9274 }
9275 \DeclareRobustCommand*\autopageref}{%
9276 \@ifstar{%
9277 \HyRef@autopagerefname\pageref*%
9278 }\HyRef@autopageref
9279 }
9280 \def\HyRef@autopageref#1{%
9281 \hyperref[#1]{\HyRef@autopagerefname\pageref*{#1}}%
9282 }
9283 \def\HyRef@autopagerefname{%
9284 \ltx@ifundefined{pageautorefname}{%
9285 \ltx@ifundefined{pagename}{%
9286 \Hy@Warning{No autoref name for `page'}%
9287 }{%
9288 \pagename\nobreakspace
9289 }%
9290 }-}%
9291 \pageautorefname\nobreakspace
9292 }%
9293 }

```

\leavevmode is added to make package wrapfigure happy, if \autoref starts a paragraph.

```

9294 \DeclareRobustCommand*\autoref}{%
9295 \leavevmode
9296 \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
9297 }
9298 \def\HyRef@autoref#1#2{%
9299 \begingroup
9300 \Hy@safe@activetrue
9301 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
9302 \endgroup
9303 }

```



```

9304 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
9305 \HyRef@ShowKeysRef{#2}%
9306 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
9307 \edef\HyRef@thisref{%
9308 \expandafter\@fourthoffive#1\@empty\@empty\@empty
9309 }%
9310 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
9311 \Hy@safe@activesfalse
9312 #3{%
9313 \expandafter\@fifthoffive#1\@empty\@empty\@empty
9314 }{%
9315 \expandafter\@fourthoffive#1\@empty\@empty\@empty
9316 }{%
9317 \HyRef@currentHtag
9318 \expandafter\@firstoffive#1\@empty\@empty\@empty
9319 \null
9320 }%
9321 \else
9322 \protect\G@refundefinedtrue
9323 \nfss@text{\reset@font\bfseries ??}%
9324 \@latex@warning{%
9325 Reference `#2' on page \thepage\space undefined%
9326 }%
9327 \fi
9328 }
9329 \def\HyRef@testreftype#1.#2\{\%
9330 \ltx@ifundefined{#1autorefname}{%
9331 \ltx@ifundefined{#1name}{%
9332 \HyRef@StripStar#1\*\@nil{#1}%
9333 \ltx@ifundefined{\HyRef@name autorefname}{%
9334 \ltx@ifundefined{\HyRef@name name}{%
9335 \def\HyRef@currentHtag{%
9336 \Hy@Warning{No autoref name for `#1'}%
9337 }{%
9338 \edef\HyRef@currentHtag{%
9339 \expandafter\noexpand\csname\HyRef@name name\endcsname
9340 \noexpand~%
9341 }%
9342 }%
9343 }{%
9344 \edef\HyRef@currentHtag{%
9345 \expandafter\noexpand
9346 \csname\HyRef@name autorefname\endcsname
9347 \noexpand~%
9348 }%
9349 }%
9350 }{%
9351 \edef\HyRef@currentHtag{%
9352 \expandafter\noexpand\csname#1name\endcsname
9353 \noexpand~%
9354 }%
9355 }%
9356 }{%
9357 \edef\HyRef@currentHtag{%
9358 \expandafter\noexpand\csname#1autorefname\endcsname
9359 \noexpand~%
9360 }%

```

```

9361 }%
9362 }
9363 \def\HyRef@StripStar#1*\##2\@nil#3{%
9364 \def\HyRef@name{#2}%
9365 \ifx\HyRef@name\HyRef@CaseStar
9366 \def\HyRef@name{#1}%
9367 \else
9368 \def\HyRef@name{#3}%
9369 \fi
9370 }
9371 \def\HyRef@CaseStar{*\\}
9372 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

9373 \let\HyRef@ShowKeysRef@gobble
9374 \def\HyRef@ShowKeysInit{%
9375 \begingroup\expandafter\expandafter\expandafter\endgroup
9376 \expandafter\ifx\csname SK@@label\endcsname\relax
9377 \else
9378 \ifx\SK@ref\@empty
9379 \else
9380 \def\HyRef@ShowKeysRef{%
9381 \SK@\SK@@ref
9382 }%
9383 \fi
9384 \fi
9385 }
9386 \@ifpackageloaded{showkeys}{%
9387 \HyRef@ShowKeysInit
9388 }{%
9389 \Hy@AtBeginDocument{%
9390 \@ifpackageloaded{showkeys}{%
9391 \HyRef@ShowKeysInit
9392 }{}%
9393 }%
9394 }

```

Defaults for the names that \autoref uses.

```

9395 \providecommand*\AMSautorefname{\equationautorefname}
9396 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
9397 \providecommand*\Itemautorefname{\itemautorefname}
9398 \providecommand*\itemautorefname{item}
9399 \providecommand*\equationautorefname{Equation}
9400 \providecommand*\footnoteautorefname{footnote}
9401 \providecommand*\itemautorefname{item}
9402 \providecommand*\figureautorefname{Figure}
9403 \providecommand*\tableautorefname{Table}
9404 \providecommand*\partautorefname{Part}
9405 \providecommand*\appendixautorefname{Appendix}
9406 \providecommand*\chapterautorefname{chapter}
9407 \providecommand*\sectionautorefname{section}
9408 \providecommand*\subsectionautorefname{subsection}
9409 \providecommand*\subsubsectionautorefname{subsubsection}
9410 \providecommand*\paragraphautorefname{paragraph}
9411 \providecommand*\subparagraphautorefname{subparagraph}
9412 \providecommand*\FancyVerbLineautorefname{line}

```

```

9413 \providecommand*\theoremautorefname{Theorem}
9414 \providecommand*\pageautorefname{page}
9415 \end{package}

```

47 Configuration files

47.1 PS/PDF strings

Some drivers write PS or PDF strings. These strings are delimited by parentheses, therefore a lonely unmatched parenthesis must be avoided to avoid PS or PDF syntax errors. Also the backslash character itself has to be protected.

`\Hy@pstringdef` Therefore such strings should be passed through `\Hy@pstringdef`. The first argument holds a macro for the result, the second argument is the string that needs protecting. Since version 1.30.0 pdfTeX offers `\pdfescapestring`.

```

9416 (*pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo)
9417 \begingroup\expandafter\expandafter\expandafter\endgroup
9418 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
9419 \begingroup
9420 \catcode`\|=0 %
9421 \@makeother\|%
9422 |@firstofone{|endgroup
9423 |def|Hy@pstringdef#1#2{%
9424 |begingroup
9425 |edef~{|string~}%
9426 |xdef|Hy@gtemp{#2}%
9427 |endgroup
9428 |let#1|Hy@gtemp
9429 |@onelevel@sanitize#1%
9430 |edef#1{|expandafter|Hy@ExchangeBackslash#1|@nil}%
9431 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
9432 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
9433 }%
9434 |def|Hy@ExchangeBackslash#1\#2|@nil{%
9435 #1%
9436 |ifx|\#2|\%
9437 |else
9438 \|%
9439 |ltx@ReturnAfterFi{%
9440 |Hy@ExchangeBackslash#2|@nil
9441 }%
9442 |fi
9443 }%
9444 }%
9445 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
9446 #1%
9447 \ifx\#2\%
9448 \else
9449 \@backslashchar(%
9450 \ltx@ReturnAfterFi{%
9451 \Hy@ExchangeLeftParenthesis#2\@nil
9452 }%
9453 \fi
9454 }%
9455 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
9456 #1%

```

```

9457 \ifx\#2\%
9458 \else
9459 \@backslashchar)%
9460 \ltx@ReturnAfterFi{%
9461 \Hy@ExchangeRightParenthesis#2\@nil
9462 }%
9463 \fi
9464 }%
9465 \else
9466 \def\Hy@pstringdef#1#2{%
9467 \begingroup
9468 \edef~{\string~}%
9469 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
9470 \endgroup
9471 \let#1\Hy@gtemp
9472 }%
9473 \fi
9474 (/pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo)

```

47.2 pdfTeX

```

9475 (*pdfTeX)
9476 \providecommand*\XR@ext}{pdf}
9477 \Hy@setbreaklinks{true}
9478 \def\HyPat@ObjRef{%
9479 [0-9]*[1-9][0-9]* 0 R%
9480 }

```

This driver is for Han The Thanh's T_EX variant which produces PDF directly. This has new primitives to do PDF things, which usually translate almost directly to PDF code, so there is a lot of flexibility which we do not at present harness.

Set PDF version if requested by option pdfversion.

- pdfT_EX 1.10a, 2003-01-16: \pdfoptionpdfminorversion
- pdfT_EX 1.30, 2005-08-081: \pdfminorversion

```

9481 \let\Hy@pdfminorversion\relax
9482 \begingroup\expandafter\expandafter\expandafter\endgroup
9483 \expandafter\ifx\csname pdfminorversion\endcsname\relax
9484 \begingroup\expandafter\expandafter\expandafter\endgroup
9485 \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
9486 \else
9487 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
9488 \fi
9489 \else
9490 \def\Hy@pdfminorversion{\pdfminorversion}%
9491 \fi
9492 \@ifundefined{Hy@pdfminorversion}{%
9493 \PackageInfo{hyperref}{%
9494 PDF version is not set, because pdfTeX is too old (<1.10a)%
9495 }%
9496 }{%
9497 \ifHy@ocgcolorlinks
9498 \ifnum\Hy@pdfminorversion<5 %
9499 \kvsetkeys{Hyp}{pdfversion=1.5}%
9500 \fi
9501 \fi
9502 \ifHy@setpdfversion

```

```

9503 \ifnum\Hy@pdfversion<5 %
9504 \ltx@ifundefined{pdfobjcompresslevel}{%
9505 }{%
9506   \ifHy@verbose
9507     \Hy@InfoNoLine{%
9508       PDF object streams are disabled, because they are%
9509       \MessageBreak
9510       not supported in requested PDF version %
9511       1.\Hy@pdfversion
9512     }%
9513   \fi
9514   \pdfobjcompresslevel=\ltx@zero
9515 }%
9516 \fi
9517 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
9518 \else
9519   \let\Hy@temp\ltx@empty
9520   \def\Hy@temp@A#1#2{%
9521     \ifnum#1>\ltx@zero
9522       \edef\Hy@temp{%
9523         \Hy@temp
9524         \space\space
9525         \the#1\space #2%
9526         \ifnum#1=\ltx@one\else s\fi
9527         \MessageBreak
9528       }%
9529     \fi
9530   }%
9531   \Hy@temp@A\pdfflastobj{PDF object}%
9532   \Hy@temp@A\pdfflastxform{form XObject}%
9533   \Hy@temp@A\pdfflastximage{image XObject}%
9534   \Hy@temp@A\pdfflastannot{annotation}%
9535   \ltx@ifundefined{pdfflastlink}{%
9536   }{%
9537     \Hy@temp@A\pdfflastlink{link}%
9538   }%
9539   \ifx\Hy@temp\ltx@empty
9540     \Hy@pdfminorversion=\Hy@pdfversion\relax
9541   \else
9542     \let\Hy@temp@A\ltx@empty
9543     \ifnum\Hy@pdfversion=4 %
9544       \IfFileExists{pdf14.sty}{%
9545         \def\Hy@temp@A{%
9546           \MessageBreak
9547           Or \string\RequirePackage{pdf14} can be used%
9548           \MessageBreak
9549           before \string\documentclass\space as shortcut%
9550         }%
9551       }{}%
9552     \fi
9553     \Hy@WarningNoLine{%
9554       The PDF version number could not be set,\MessageBreak
9555       because some PDF objects are already written:%
9556       \MessageBreak
9557       \Hy@temp
9558       The version should be set as early as possible:%
9559       \MessageBreak

```

```

9560     \space\space
9561     \expandafter\string\Hy@pdfminorversion=\Hy@pdfversion
9562     \string\relax
9563     \ifnum\Hy@pdfversion<5 %
9564     \ltx@ifundefined{pdfobjcompresslevel}{%
9565     }{%
9566     \MessageBreak
9567     \space\space
9568     \string\pdfobjcompresslevel=0\string\relax
9569     }%
9570     \fi
9571     \Hy@temp@A
9572     }%
9573     \fi
9574     \fi
9575     \PackageInfo{hyperref}{%
9576     \expandafter\string\Hy@pdfminorversion
9577     :=\number\Hy@pdfversion\space
9578     }%
9579     \fi
9580     \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
9581     }
9582     \Hy@DisableOption{pdfversion}%

9583     \ifHy@ocgcolorlinks
9584     \pdf@ifdraftmode{}{%
9585     \immediate\pdfobj{%
9586     <<%
9587     /Type/OCG%
9588     /Name(View)%
9589     /Usage<<%
9590     /Print<<%
9591     /PrintState/OFF%
9592     >>%
9593     /View<<%
9594     /ViewState/ON%
9595     >>%
9596     >>%
9597     >>%
9598     }%
9599     \edef\OBJ@OCG@view{\the\pdfastobj\space 0 R}%
9600     \immediate\pdfobj{%
9601     <<%
9602     /Type/OCG%
9603     /Name(Print)%
9604     /Usage<<%
9605     /Print<<%
9606     /PrintState/ON%
9607     >>%
9608     /View<<%
9609     /ViewState/OFF%
9610     >>%
9611     >>%
9612     >>%
9613     }%
9614     \edef\OBJ@OCG@print{\the\pdfastobj\space 0 R}%
9615     \immediate\pdfobj{%
9616     [%

```

```

9617     \OBJ@OCG@view\space\OBJ@OCG@print
9618     ]%
9619   }%
9620   \edef\OBJ@OCGs{\the\pdfflastobj\space 0 R}%
9621   \pdfcatalog{%
9622     /OCProperties<<%
9623     /OCGs \OBJ@OCGs
9624     /D<<%
9625     /OFF[\OBJ@OCG@print]%
9626     /AS[%
9627     <<%
9628     /Event/View%
9629     /OCGs \OBJ@OCGs
9630     /Category[/View]%
9631     >>%
9632     <<%
9633     /Event/Print%
9634     /OCGs \OBJ@OCGs
9635     /Category[/Print]%
9636     >>%
9637     <<%
9638     /Event/Export%
9639     /OCGs \OBJ@OCGs
9640     /Category[/Print]%
9641     >>%
9642     ]%
9643     >>%
9644     >>%
9645   }%
9646   \beginngroup
9647   \edef\x{\endgroup
9648     \pdfpageresources{%
9649     \the\pdfpageresources
9650     /Properties<<%
9651     /OCView \OBJ@OCG@view
9652     /OCPrint \OBJ@OCG@print
9653     >>%
9654   }%
9655 }%
9656 \x
9657 }%
9658 \Hy@AtBeginDocument{%
9659   \def\Hy@colorlink#1{%
9660     \beginngroup
9661     \ifHy@ocgcolorlinks
9662     \def\Hy@ocgcolor{#1}%
9663     \setbox0=\hbox\bgroup\color@beginngroup
9664     \else
9665     \HyColor@UseColor#1%
9666     \fi
9667   }%
9668   \def\Hy@endcolorlink{%
9669     \ifHy@ocgcolorlinks
9670     \color@endgroup\egroup
9671     \mbox{%
9672     \pdfliteral page{/OC/OCPrint BDC}%
9673     \rlap{\copy0}}%

```

```

9674     \pdfiteral page{EMC/OC/OCView BDC}%
9675     \begingroup
9676     \expandafter\HyColor@UseColor\Hy@ocgcolor
9677     \box0 %
9678     \endgroup
9679     \pdfiteral page{EMC}%
9680     }%
9681     \fi
9682     \endgroup
9683     }%
9684     }%
9685 \else
9686 \Hy@DisableOption{ocgcolorlinks}%
9687 \fi

```

First, allow for some changes and additions to pdftex syntax:

```

9688 \def\setpdfinkmargin#1{%
9689 \begingroup
9690 \setlength{\dimen@}{#1}%
9691 \expandafter\endgroup
9692 \expandafter\pdfinkmargin\the\dimen@\relax
9693 }
9694 \ifx\pdfstartlink\@undefined% less than version 14
9695 \let\pdfstartlink\pdfannotlink
9696 \let\pdfinkmargin\@tempdima
9697 \let\pdfxform\pdfform
9698 \let\pdflastxform\pdfastform
9699 \let\pdfrefxform\pdfrefform
9700 \else
9701 \pdfinkmargin1pt %
9702 \fi

```

First set up the default linking

```

9703 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

9704 \Hy@WrapperDef\new@pdfink#1{%
9705 \ifhmode
9706 \@savsf\spacefactor
9707 \fi
9708 \Hy@SaveLastskip
9709 \Hy@VerboseAnchor{#1}%
9710 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9711 \Hy@DestName\Hy@pstringDest\@pdfview
9712 \Hy@RestoreLastskip
9713 \ifhmode
9714 \spacefactor\@savsf
9715 \fi
9716 }
9717 \let\pdf@endanchor\@empty

```

`\Hy@DestName` Wrap the call of `\pdfdest name` in `\Hy@DestName`. Then it can easier be caught by package `hypdestopt`.

```

9718 \def\Hy@DestName#1#2{%
9719 \pdfdest name{#1}#2\relax
9720 }

```

Now the links; the interesting part here is the set of attributes which define how the link looks. We probably want to add a border and color it, but there

are other choices. This directly translates to PDF code, so consult the manual for how to change this. We will add an interface at some point.

```

9721 \providecommand*\pdfborder{0 0 1}
9722 \providecommand*\pdfborderstyle{}
9723 \def\Hy@undefinedname{UNDEFINED}
9724 \def\find@pdfink#1#2{%
9725   \leavevmode
9726   \protected@edef\Hy@testname{#2}%
9727   \ifx\Hy@testname\@empty
9728     \Hy@Warning{%
9729       Empty destination name,\MessageBreak
9730       using `\'Hy@undefinedname'%
9731     }%
9732   \let\Hy@testname\Hy@undefinedname
9733   \else
9734     \Hy@pstringdef\Hy@testname{%
9735       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
9736     }%
9737   \fi
9738   \Hy@StartlinkName{%
9739     \ifHy@pdfa /F 4\fi
9740     \Hy@setpdfborder
9741     \Hy@setpdfhighlight
9742     \ifx\CurrentBorderColor\relax
9743       \else
9744         /C[\CurrentBorderColor]%
9745       \fi
9746   }\Hy@testname
9747   \expandafter\Hy@colorlink\csname @#1color\endcsname
9748 }
9749 \def\Hy@StartlinkName#1#2{%
9750   \pdfstartlink attr{#1}goto name{#2}\relax
9751 }
9752 \def\close@pdfink{%
9753   \Hy@endcolorlink
9754   \Hy@VerboseLinkStop
9755   \pdfendlink
9756 }
9757 \def\hyper@anchor#1{%
9758   \new@pdfink{#1}\anchor@spot\pdf@endanchor
9759 }
9760 \def\hyper@anchorstart#1{%
9761   \new@pdfink{#1}%
9762   \Hy@activeanchortrue
9763 }
9764 \def\hyper@anchorend{%
9765   \pdf@endanchor
9766   \Hy@activeanchorfalse
9767 }
9768 \def\hyper@linkstart#1#2{%
9769   \Hy@VerboseLinkStart{#1}{#2}%
9770   \ltx@ifundefined{#@#1bordercolor}{%
9771     \let\CurrentBorderColor\relax
9772   }{%
9773     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9774   }%
9775   \find@pdfink{#1}{#2}%

```

```

9776 }
9777 \def\hyper@linkend{\close@pdfink}
9778 \def\hyper@link#1#2#3{%
9779 \Hy@VerboseLinkStart{#1}{#2}%
9780 \ltx@ifundefined{#@#1bordercolor}{%
9781 \let\CurrentBorderColor\relax
9782 }{%
9783 \edef\CurrentBorderColor{\csname @#1bordercolor\endscname}%
9784 }%
9785 \find@pdfink{#1}{#2}#3\Hy@xspace@end
9786 \close@pdfink
9787 }
9788 \let\CurrentBorderColor\@linkbordercolor
9789 \def\hyper@linkurl#1#2{%
9790 \begingroup
9791 \Hy@pstringdef\Hy@pstringURI{#2}%
9792 \hyper@chars
9793 \leavevmode
9794 \pdfstartlink
9795 attr{%
9796 \Hy@setpdfborder
9797 \Hy@setpdfhighlight
9798 \ifx\@urlbordercolor\relax
9799 \else
9800 /C[\@urlbordercolor]%
9801 \fi
9802 }%
9803 user{%
9804 /Subtype/Link%
9805 \ifHy@pdfa /F 4\fi
9806 /A<<%
9807 /Type/Action%
9808 /S/URI%
9809 /URI(\Hy@pstringURI)%
9810 \ifHy@href@ismap
9811 /IsMap true%
9812 \fi
9813 \Hy@href@nextactionraw
9814 >>%
9815 }%
9816 \relax
9817 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9818 \close@pdfink
9819 \endgroup
9820 }
9821 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9822 \begingroup
9823 \def\Hy@pstringF{#2}%
9824 \Hy@CleanupFile\Hy@pstringF
9825 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9826 \Hy@pstringdef\Hy@pstringD{#3}%
9827 \Hy@MakeRemoteAction
9828 \leavevmode
9829 \pdfstartlink
9830 attr{%
9831 \Hy@setpdfborder
9832 \Hy@setpdfhighlight

```

```

9833     \ifx\@filebordercolor\relax
9834     \else
9835       /C[\@filebordercolor]%
9836     \fi
9837   }%
9838   user {%
9839     /Subtype/Link%
9840     \ifHy@pdfa /F 4\fi
9841     /A<<%
9842     /F(\Hy@pstringF)%
9843     /S/GoToR%
9844     \Hy@SetNewWindow

```

If #3 is empty, page 0; if its a number, Page number, otherwise a named destination.

```
\afterassignment\xxx\count@=0\foo!
```

```

\def\xxx#1!{%
  \ifx\xxx#1\xxx
    foo was an integer
  \else
    it wasnt
  \fi}

```

```

9845     \ifx\#3\%
9846       /D[\Hy@href@page\@pdfremotestartview]%
9847     \else
9848       /D(\Hy@pstringD)%
9849     \fi
9850     \Hy@href@nextactionraw
9851     >>%
9852   }%
9853   \relax
9854   \Hy@colorlink\@filecolor#1\Hy@xspace@end
9855   \close@pdfink
9856 \endgroup
9857 }
9858 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
9859 \begingroup
9860   \Hy@pstringdef\Hy@pstringF{#1}%
9861   \Hy@pstringdef\Hy@pstringP{#3}%
9862   \leavevmode
9863   \pdfstartlink
9864   attr{%
9865     \Hy@setpdfborder
9866     \Hy@setpdfhighlight
9867     \ifx\@runbordercolor\relax
9868     \else
9869       /C[\@runbordercolor]%
9870     \fi
9871   }%
9872   user {%
9873     /Subtype/Link%
9874     \ifHy@pdfa /F 4\fi
9875     /A<<%
9876     /F(\Hy@pstringF)%
9877     /S/Launch%

```

```

9878 \Hy@SetNewWindow
9879 \ifx\|#3\|%
9880 \else
9881 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9882 \fi
9883 \Hy@href@nextactionraw
9884 >>%
9885 }%
9886 \relax
9887 \Hy@colorlink\@runcolor#2\Hy@xspace@end
9888 \close@pdfink
9889 \endgroup
9890 }

```

\@pdfproducer

```

9891 \ifx\@pdfproducer\relax
9892 \begingroup\expandafter\expandafter\expandafter\endgroup
9893 \expandafter\ifx\csname luatexversion\endcsname\relax
9894 \def\@pdfproducer{pdfTeX}%
9895 \ifx\eTeXversion\@undefined
9896 \else
9897 \ifx\eTeXversion\relax
9898 \else
9899 \ifnum\eTeXversion>0 %
9900 \def\@pdfproducer{pdfeTeX}%
9901 \fi
9902 \fi
9903 \fi
9904 \ifx\pdfTeXversion\@undefined
9905 \else
9906 \ifnum\pdfTeXversion<100 %
9907 \edef\@pdfproducer{%
9908 \@pdfproducer
9909 \the\pdfTeXversion.\pdfTeXrevision
9910 }%
9911 \else
9912 \ifnum\pdfTeXversion<130 %
9913 \edef\@pdfproducer{%
9914 \@pdfproducer-%
9915 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
9916 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
9917 \pdfTeXrevision
9918 }%
9919 \else
9920 \ifnum\pdfTeXversion<140 %
9921 \else
9922 \def\@pdfproducer{pdfTeX}%
9923 \fi
9924 \edef\@pdfproducer{%
9925 \@pdfproducer-%
9926 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
9927 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
9928 \pdfTeXrevision
9929 }%
9930 \fi
9931 \fi
9932 \fi

```

```

9933 \else
9934 \begingroup
9935 \count@=\luatexversion
9936 \divide\count@ by 100 %
9937 \edef\x{\the\count@}%
9938 \count@=-\x\relax
9939 \multiply\count@ by 100 %
9940 \advance\count@ by \luatexversion
9941 \edef\x{\endgroup
9942 \def\noexpand\@pdfproducer{%
9943 LuaTeX-\x.\two@digits\count@.\luatexrevision
9944 }%
9945 }%
9946 \x
9947 \fi
9948 \fi

```

\PDF@SetupDox

```

9949 \def\PDF@SetupDoc{%
9950 \ifx\@pdfpagescrop\@empty
9951 \else
9952 \edef\process@me{%
9953 \pdfpagesattr={%
9954 /CropBox[\@pdfpagescrop]%
9955 \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
9956 \else
9957 ^^J\the\pdfpagesattr
9958 \fi
9959 }%
9960 }%
9961 \process@me
9962 \fi
9963 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9964 \pdfcatalog{%
9965 /PageMode/\@pdfpagemode
9966 \ifx\@baseurl\@empty
9967 \else
9968 /URI<</Base(\Hy@pstringB)>>%
9969 \fi
9970 }%
9971 \ifx\@pdfstartpage\@empty
9972 \else
9973 \ifx\@pdfstartview\@empty
9974 \else
9975 openaction goto page\@pdfstartpage{\@pdfstartview}%
9976 \fi
9977 \fi
9978 \edef\Hy@temp{%
9979 \ifHy@pdftoolbar\else /HideToolbar true\fi
9980 \ifHy@pdfmenubar\else /HideMenubar true\fi
9981 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9982 \ifHy@pdffitwindow /FitWindow true\fi
9983 \ifHy@pdfcenterwindow /CenterWindow true\fi
9984 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9985 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9986 \Hy@UseNameKey{Direction}\@pdfdirection
9987 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9988 \Hy@UseNameKey{ViewClip}\@pdfviewclip

```

```

9989 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9990 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9991 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9992 \Hy@UseNameKey{Duplex}\@pdfduplex
9993 \ifx\@pdfpicktraybypdfsize\@empty
9994 \else
9995 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9996 \fi
9997 \ifx\@pdfprintpagerange\@empty
9998 \else
9999 /PrintPageRange[\@pdfprintpagerange]%
10000 \fi
10001 \ifx\@pdfnumcopies\@empty
10002 \else
10003 /NumCopies \@pdfnumcopies
10004 \fi
10005 }%
10006 \pdfcatalog{%
10007 \ifx\Hy@temp\@empty
10008 \else
10009 /ViewerPreferences<<\Hy@temp>>%
10010 \fi
10011 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10012 \ifx\@pdflang\relax
10013 \else
10014 /Lang(\@pdflang)%
10015 \fi
10016 }%
10017 }

```

\PDF@FinishDoc

```

10018 \def\PDF@FinishDoc{%
10019 \pdf@ifdraftmode{}{%
10020 \Hy@UseMaketitleInfos
10021 \HyInfo@GenerateAddons
10022 \pdfinfo{%
10023 /Author(\@pdfauthor)%
10024 /Title(\@pdftitle)%
10025 /Subject(\@pdfsubject)%
10026 /Creator(\@pdfcreator)%
10027 \ifx\@pdfcreationdate\@empty
10028 \else
10029 /CreationDate(\@pdfcreationdate)%
10030 \fi
10031 \ifx\@pdfmoddate\@empty
10032 \else
10033 /ModDate(\@pdfmoddate)%
10034 \fi
10035 \ifx\@pdfproducer\relax
10036 \else
10037 /Producer(\@pdfproducer)%
10038 \fi
10039 /Keywords(\@pdfkeywords)%
10040 \ifx\@pdftrapped\@empty
10041 \else
10042 /Trapped/\@pdftrapped
10043 \fi
10044 \HyInfo@Addons

```

```

10045 }%
10046 }%
10047 \Hy@DisableOption{pdfauthor}%
10048 \Hy@DisableOption{pdftitle}%
10049 \Hy@DisableOption{pdfsubject}%
10050 \Hy@DisableOption{pdfcreator}%
10051 \Hy@DisableOption{addtopdfcreator}%
10052 \Hy@DisableOption{pdfcreationdate}%
10053 \Hy@DisableOption{pdfmoddate}%
10054 \Hy@DisableOption{pdfproducer}%
10055 \Hy@DisableOption{pdfkeywords}%
10056 \Hy@DisableOption{pdftrapped}%
10057 \Hy@DisableOption{pdfinfo}%
10058 }

```

`\hyper@pagetransition` `\@pdfpagetransition` is initialized with `\relax`. So it indicates, if option `pdfpagetransition` is used. First previous `/Trans` entries are removed. If a new `/Trans` key exists, it is appended to `\pdfpageattr`.

```

10059 \def\hyper@pagetransition{%
10060 \ifx\@pdfpagetransition\relax
10061 \else
10062 \expandafter\Hy@RemoveTransPageAttr
10063 \the\pdfpageattr^^J/Trans{}>>\END
10064 \ifx\@pdfpagetransition\@empty
10065 \else
10066 \edef\@processme{%
10067 \global\pdfpageattr{%
10068 \the\pdfpageattr
10069 ^^J/Trans << /S /\@pdfpagetransition\space >>%
10070 }%
10071 }%
10072 \@processme
10073 \fi
10074 \fi
10075 }

```

`\Hy@RemoveTransPageAttr` Macro `\Hy@RemoveTransPageAttr` removes a `/Trans` entry from `\pdfpageattr`. It is called with the end marker `^^J/Trans{}>>\END`. The trick is the empty group that does not appear in legal `\pdfpageattr` code. It appears in argument `#2` and shows, whether the parameter text catches a really `/Trans` object or the end marker.

```

10076 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
10077 \ifx\#2\%
10078 \global\pdfpageattr{#1}%
10079 \else
10080 \Hy@RemoveTransPageAttr#1#4\END
10081 \fi
10082 }

```

`\hyper@pageduration` `\@pdfpageduration` is initialized with `\relax`. So it indicates, if option `pdfpageduration` is used. First previous `/Dur` entries are removed. If a new `/Dur` key exists, it is appended to `\pdfpageattr`.

```

10083 \def\hyper@pageduration{%
10084 \ifx\@pdfpageduration\relax
10085 \else
10086 \expandafter

```

```

10087 \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
10088 \ifx\@pdfpageduration\@empty
10089 \else
10090 \edef\@processme{%
10091 \global\pdfpageattr{%
10092 \the\pdfpageattr
10093 ^^J/Dur \@pdfpageduration\space
10094 }%
10095 }%
10096 \@processme
10097 \fi
10098 \fi
10099 }

```

`\Hy@RemoveDurPageAttr` Macro `\Hy@RemoveDurPageAttr` removes a `/Dur` entry from `\pdfpageattr`. It is called with the end marker `^^J/Dur{} \END`. The trick is the empty group that does not appear in legal `\pdfpageattr` code. It appears in argument `#2` and shows, whether the parameter text catches a really `/Dur` object or the end marker.

```

10100 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
10101 \ifx\#2\%
10102 \global\pdfpageattr{#1}%
10103 \else
10104 \Hy@RemoveDurPageAttr#1#4\END
10105 \fi
10106 }

```

`\hyper@pagehidden` The boolean value of the key `/Hid` is stored in switch `\ifHy@pdfpagehidden`. First previous `/Hid` entries are removed, then the new one is appended, if the value is true (the PDF default is false).

```

10107 \def\hyper@pagehidden{%
10108 \ifHy@useHidKey
10109 \expandafter
10110 \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
10111 \ifHy@pdfpagehidden
10112 \edef\@processme{%
10113 \global\pdfpageattr{%
10114 \the\pdfpageattr
10115 ^^J/Hid true % SPACE
10116 }%
10117 }%
10118 \@processme
10119 \fi
10120 \fi
10121 }

```

`\Hy@RemoveHidPageAttr` Macro `\Hy@RemoveHidPageAttr` removes a `/Hid` entry from `\pdfpageattr`. It is called with the end marker `^^J/Hid{} \END`. The trick is the empty group that does not appear in legal `\pdfpageattr` code. It appears in argument `#2` and shows, whether the parameter text catches a really `/Hid` object or the end marker.

```

10122 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
10123 \ifx\#2\%
10124 \global\pdfpageattr{#1}%
10125 \else
10126 \Hy@RemoveHidPageAttr#1#4\END
10127 \fi
10128 }

```



```

10129 \pdf@ifdraftmode{}{%
10130 \g@addto@macro\Hy@EveryPageHook{%
10131   \hyper@pagetransition
10132   \hyper@pageduration
10133   \hyper@pagehidden
10134 }%
10135 }

```

Also XeTeX support `\pdfpagewidth` and `\pdfpageheight`, but it does not provide `\pdfhorigin` and `\pdfvorigin`.

```

10136 </pdfTeX>
10137 <{*pdfTeX | xetex>
10138 \Hy@AtBeginDocument{%
10139   \ifHy@setpagesize
10140     \expandafter\@firstofone
10141   \else
10142     \expandafter\@gobble
10143   \fi
10144 }%
10145   \@ifclassloaded{seminar}{%
10146 <{*pdfTeX>
10147   \setlength{\pdfhorigin}{1truein}%
10148   \setlength{\pdfvorigin}{1truein}%
10149 </pdfTeX>
10150   \ifportrait
10151     \ifdim\paperwidth=\z@
10152     \else
10153       \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
10154     \fi
10155     \ifdim\paperheight=\z@
10156     \else
10157       \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
10158     \fi
10159   \else
10160     \ifdim\paperheight=\z@
10161     \else
10162       \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
10163     \fi
10164     \ifdim\paperwidth=\z@
10165     \else
10166       \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
10167     \fi
10168   \fi
10169 }{%
10170   \ltx@ifundefined{stockwidth}{%
10171     \ifdim\paperwidth>\z@
10172     \setlength{\pdfpagewidth}{\paperwidth}%
10173     \fi
10174     \ifdim\paperheight>\z@
10175     \setlength{\pdfpageheight}{\paperheight}%
10176     \fi
10177   }{%
10178     \ifdim\stockwidth>\z@
10179     \setlength{\pdfpagewidth}{\stockwidth}%
10180     \fi
10181     \ifdim\stockheight>\z@
10182     \setlength{\pdfpageheight}{\stockheight}%
10183     \fi

```

```

10184 }%
10185 }%
10186 }%
10187 \Hy@DisableOption{setpagesize}%
10188 }
10189 </pdfTeX | xetex>
10190 <*pdfTeX>
10191 \def\Acrobatmenu#1#2{%
10192 \Hy@Acrobatmenu{#1}{#2}{%
10193 \leavevmode
10194 \EdefEscapeName\Hy@temp@menu{#1}%
10195 \pdfstartlink
10196 attr{%
10197 \Hy@setpdfborder
10198 \Hy@setpdfhighlight
10199 \ifx\@menubordercolor\relax
10200 \else
10201 /C[\@menubordercolor]%
10202 \fi
10203 }%
10204 user{%
10205 /Subtype/Link%
10206 \ifHy@pdfa /F 4\fi
10207 /A<<%
10208 /S/Named%
10209 /N/\Hy@temp@menu
10210 \Hy@href@nextactionraw
10211 >>%
10212 }%
10213 \relax
10214 \Hy@colorlink\@menucolor#2%
10215 \close@pdfink
10216 }%
10217 }

```

47.2.1 Fix for problem with different nesting levels

\AtBeginShipoutFirst adds an additional box layer around the first output page. This disturbs pdfTeX's low level link commands \pdfstartlink and \pdfendlink, if a link is broken across the first and second output page.

The problem could be fixed by replacing \AtBeginShipoutFirst, because the box layer is not necessary for pdfTeX- no \specials need to be inserted. However it's easier to add an additional box level for the pages after the first one. Also \AtBeginShipoutFirst could be invoked independently from hyperref.

Since version 2011/10/05 v1.16 of package 'atbegshi' \AtBeginShipoutFirst does not add a additional box layer.

```

10218 \def\Hy@FixNotFirstPage{%
10219 \gdef\Hy@FixNotFirstPage{%
10220 \setbox\AtBeginShipoutBox=\hbox{%
10221 \copy\AtBeginShipoutBox
10222 }%
10223 }%
10224 }
10225 \ltx@ifpackagelater{atbegshi}{2011/10/05}{%
10226 }{%
10227 \AtBeginShipout{\Hy@FixNotFirstPage}%

```

```
10228 }
10229 </pdfTeX>
```

47.3 hypertex

The HyperTeX specification (this is borrowed from an article by Arthur Smith) says that conformant viewers/translators must recognize the following set of `\special` commands:

```
href: html:<a href = "href_string">
name: html:<a name = "name_string">
end: html:</a>
image: html:<img src = "href_string">
base_name: html:<base href = "href_string">
```

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL's may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the TeX file — the TeX commands between the two ends of a pair form an *anchor* in the document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with a name command represents a possible location to which other hypertext links may refer, either as local references (of the form `href="#name_string"` with the *name_string* identical to the one in the name command) or as part of a URL (of the form `URL#name_string`). Here *href_string* is a valid URL or local identifier, while *name_string* could be any string at all: the only caveat is that “” characters should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

```
10230 (*hypertex)
10231 \providecommand*\XR@ext}{dvi}
10232 \let\PDF@FinishDoc\ltx@empty
10233 \def\PDF@SetupDoc{%
10234   \ifx\@baseurl\@empty
10235     \else
10236       \special{html:<base href="\@baseurl">}%
10237   \fi
10238 }
10239 \Hy@WrapperDef\hyper@anchor#1{%
10240   \Hy@SaveLastskip
10241   \Hy@VerboseAnchor{#1}%
10242   \begingroup
10243     \let\protect=\string
10244     \hyper@chars
10245     \special{html:<a name=%
10246       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10247   \endgroup
10248   \Hy@activeanchortrue
```

```

10249 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10250 \special{html:</a>}%
10251 \Hy@activeanchorfalse
10252 \Hy@RestoreLastskip
10253 }
10254 \Hy@WrapperDef\hyper@anchorstart#1{%
10255 \Hy@SaveLastskip
10256 \Hy@VerboseAnchor{#1}%
10257 \begingroup
10258 \hyper@chars
10259 \special{html:<a name=%
10260 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10261 \endgroup
10262 \Hy@activeanchortrue
10263 }
10264 \def\hyper@anchorend{%
10265 \special{html:</a>}%
10266 \Hy@activeanchorfalse
10267 \Hy@RestoreLastskip
10268 }
10269 \def\@urltype{url}
10270 \def\hyper@linkstart#1#2{%
10271 \Hy@VerboseLinkStart{#1}{#2}%
10272 \expandafter\Hy@colorlink\csname @#1color\endcsname
10273 \def\Hy@tempa{#1}%
10274 \ifx\Hy@tempa\@urltype
10275 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10276 \else
10277 \begingroup
10278 \hyper@chars
10279 \special{html:<a href=%
10280 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
10281 \endgroup
10282 \fi
10283 }
10284 \def\hyper@linkend{%
10285 \special{html:</a>}%
10286 \Hy@endcolorlink
10287 }
10288 \def\hyper@linkfile#1#2#3{%
10289 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi}%
10290 }
10291 \def\hyper@linkurl#1#2{%

```

If we want to raise up the final link `\special`, we need to get its height; ask me why `LATEX` constructs make this totally foul up, and make us revert to basic `TEX`. I do not know.

```

10292 \leavevmode
10293 \ifHy@raiselinks
10294 \Hy@SaveSpaceFactor
10295 \Hy@SaveSavedSpaceFactor
10296 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10297 \Hy@RestoreSavedSpaceFactor
10298 \@linkdim\dp\@tempboxa
10299 \lower\@linkdim\hbox{%
10300 \hyper@chars
10301 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10302 }%

```

```

10303 \Hy@colorlink\@urlcolor
10304 \Hy@RestoreSpaceFactor
10305 #1%
10306 \Hy@SaveSpaceFactor
10307 \@linkdim\ht\@tempboxa

```

Because of the interaction with the dvihps processor, we have to subtract a little from the height. This is not clean, or checked. Check with Mark Doyle about what gives here. It may not be needed with the new dvips (Jan 1997).

```

10308 \advance\@linkdim by -6.5\p@
10309 \raise\@linkdim\hbox{\special{html:</a>}}%
10310 \Hy@endcolorlink
10311 \Hy@RestoreSpaceFactor
10312 \else
10313 \begingroup
10314 \hyper@chars
10315 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10316 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
10317 \special{html:</a>}%
10318 \Hy@endcolorlink
10319 \endgroup
10320 \fi
10321 }

```

Very poor implementation of `\hyper@link` without considering `#1`.

```

10322 \def\hyper@link#1#2#3{%
10323 \Hy@VerboseLinkStart{#1}{#2}%
10324 \hyper@linkurl{#3}{\# \Hy@HyperDestNameFilter{#2}}%
10325 }

10326 \def\hyper@image#1#2{%
10327 \begingroup
10328 \hyper@chars
10329 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10330 \endgroup
10331 }
10332 </hypertex>
10333 < *dviwindo>

```

47.4 dviwindo

[This was developed by David Carlisle]. Within a file `dviwindo` hyperlinking is used, for external URL's a call to `\wwwbrowser` is made. (You can define this command before or after loading the `hyperref` package if the default `c:/netscape/netscape` is not suitable) `Dviwindo` could in fact handle external links to dvi files on the same machine without calling a web browser, but that would mean parsing the URL to recognise such, and this is currently not done.

This was more or less blindly copied from the `hypertex` `cfg`. For `dviwindo`, \LaTeX must specify the size of the active area for links. For some hooks this information is available but for some, the start and end of the link are specified separately in which case a fixed size area of `10000000sp` wide by `\baselineskip` high is used.

```

10334 \providecommand*\XR@ext{dvi}
10335 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
10336 \Hy@WrapperDef\hyper@anchor#1{%
10337 \Hy@SaveLastskip
10338 \Hy@VerboseAnchor{#1}%

```

```

10339 \begingroup
10340 \let\protect=\string
10341 \special{mark: #1}%
10342 \endgroup
10343 \Hy@activeanchortrue
10344 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10345 \Hy@activeanchorfalse
10346 \Hy@RestoreLastskip
10347 }
10348 \Hy@WrapperDef\hyper@anchorstart#1{%
10349 \Hy@SaveLastskip
10350 \Hy@VerboseAnchor{#1}%
10351 \special{mark: #1}%
10352 \Hy@activeanchortrue
10353 }
10354 \def\hyper@anchorend{%
10355 \Hy@activeanchorfalse
10356 \Hy@RestoreLastskip
10357 }
10358 \def\hyper@linkstart#1#2{%
10359 \Hy@VerboseLinkStart{#1}{#2}%
10360 \expandafter\Hy@colorlink\csname @#1color\endcsname
10361 \special{button: %
10362 10000000 %
10363 \number\baselineskip\space
10364 #2%
10365 }%
10366 }
10367 \def\hyper@linkend{%
10368 \Hy@endcolorlink
10369 }
10370 \def\hyper@link#1#2#3{%
10371 \Hy@VerboseLinkStart{#1}{#2}%
10372 \leavevmode
10373 \ifHy@raiselinks
10374 \Hy@SaveSpaceFactor
10375 \Hy@SaveSavedSpaceFactor
10376 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
10377 \Hy@RestoreSavedSpaceFactor
10378 \@linkdim\dp\@tempboxa
10379 \lower\@linkdim\hbox{%
10380 \special{button: %
10381 \number\wd\@tempboxa\space
10382 \number\ht\@tempboxa\space
10383 #2%
10384 }%
10385 \expandafter\Hy@colorlink\csname @#1color\endcsname
10386 \Hy@RestoreSpaceFactor
10387 #3\Hy@xspace@end
10388 \Hy@SaveSpaceFactor
10389 \Hy@endcolorlink
10390 }%
10391 \@linkdim\ht\@tempboxa
10392 \advance\@linkdim by -6.5\p@
10393 \raise\@linkdim\hbox{}}%
10394 \Hy@RestoreSpaceFactor
10395 \else

```

```

10396 \special{button: %
10397 \number\wd\@tempboxa\space
10398 \number\ht\@tempboxa\space
10399 #2%
10400 }%
10401 \expandafter\Hy@colorlink\csname @#1color\endcsname
10402 #3\Hy@xspace@end
10403 \Hy@endcolorlink
10404 \fi
10405 }
10406 \def\hyper@linkurl#1#2{%
10407 \begingroup
10408 \hyper@chars
10409 \leavevmode
10410 \ifHy@raiselinks
10411 \Hy@SaveSpaceFactor
10412 \Hy@SaveSavedSpaceFactor
10413 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10414 \Hy@RestoreSavedSpaceFactor
10415 \@linkdim\dp\@tempboxa
10416 \lower\@linkdim\hbox{%
10417 \special{button: %
10418 \number\wd\@tempboxa\space
10419 \number\ht\@tempboxa\space
10420 launch: \wwwbrowser\space
10421 #2%
10422 }%
10423 \Hy@colorlink\@urlcolor
10424 \Hy@RestoreSpaceFactor
10425 #1\Hy@xspace@end
10426 \Hy@SaveSpaceFactor
10427 \Hy@endcolorlink
10428 }%
10429 \@linkdim\ht\@tempboxa
10430 \advance\@linkdim by -6.5\p@
10431 \raise\@linkdim\hbox{%
10432 \Hy@RestoreSpaceFactor
10433 \else
10434 \special{button: %
10435 \number\wd\@tempboxa\space
10436 \number\ht\@tempboxa\space
10437 launch: \wwwbrowser\space
10438 #2%
10439 }%
10440 \Hy@colorlink\@urlcolor
10441 #1\Hy@xspace@end
10442 \Hy@endcolorlink
10443 \fi
10444 \endgroup
10445 }
10446 \def\hyper@linkfile#1#2#3{%
10447 \begingroup
10448 \hyper@chars
10449 \leavevmode
10450 \ifHy@raiselinks
10451 \Hy@SaveSpaceFactor
10452 \Hy@SaveSavedSpaceFactor

```

```

10453 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10454 \Hy@RestoreSavedSpaceFactor
10455 \@linkdim\dp\@tempboxa
10456 \lower\@linkdim\hbox{%
10457 \special{button: %
10458 \number\wd\@tempboxa\space
10459 \number\ht\@tempboxa\space
10460 #3,%
10461 file: #2%
10462 }%
10463 \Hy@colorlink\@filecolor
10464 \Hy@RestoreSpaceFactor
10465 #1\Hy@xspace@end
10466 \Hy@SaveSpaceFactor
10467 \Hy@endcolorlink
10468 }%
10469 \@linkdim\ht\@tempboxa
10470 \advance\@linkdim by -6.5\p@
10471 \raise\@linkdim\hbox{}%
10472 \Hy@RestoreSpaceFactor
10473 \else
10474 \special{button: %
10475 \number\wd\@tempboxa\space
10476 \number\ht\@tempboxa\space
10477 #3,%
10478 file: #2%
10479 }%
10480 \Hy@colorlink\@filecolor
10481 #1\Hy@xspace@end
10482 \Hy@endcolorlink
10483 \fi
10484 \endgroup
10485 }
10486 \ifx\@pdfproducer\relax
10487 \def\@pdfproducer{dviwindo + Distiller}%
10488 \fi
10489 \HyInfo@AddonUnsupportedtrue
10490 \def\PDF@FinishDoc{%
10491 \Hy@UseMaketitleInfos
10492 \HyInfo@TrappedUnsupported
10493 \special{PDF: Keywords \@pdfkeywords}%
10494 \special{PDF: Title \@pdftitle}%
10495 \special{PDF: Creator \@pdfcreator}%
10496 \ifx\@pdfcreationdate\@empty
10497 \else
10498 \special{PDF: CreationDate \@pdfcreationdate}%
10499 \fi
10500 \ifx\@pdfmoddate\@empty
10501 \else
10502 \special{PDF: ModDate \@pdfmoddate}%
10503 \fi
10504 \special{PDF: Author \@pdfauthor}%
10505 \ifx\@pdfproducer\relax
10506 \else
10507 \special{PDF: Producer \@pdfproducer}%
10508 \fi
10509 \special{PDF: Subject \@pdfsubject}%

```



```

10510 \Hy@DisableOption{pdfauthor}%
10511 \Hy@DisableOption{pdftitle}%
10512 \Hy@DisableOption{pdfsubject}%
10513 \Hy@DisableOption{pdfcreator}%
10514 \Hy@DisableOption{addtopdfcreator}%
10515 \Hy@DisableOption{pdfcreationdate}%
10516 \Hy@DisableOption{pdfcreationdate}%
10517 \Hy@DisableOption{pdfmoddate}%
10518 \Hy@DisableOption{pdfproducer}%
10519 \Hy@DisableOption{pdfkeywords}%
10520 \Hy@DisableOption{pdftrapped}%
10521 \Hy@DisableOption{pdfinfo}%
10522 }
10523 \def\PDF@SetupDoc{%
10524 \ifx\@baseurl\@empty
10525 \else
10526 \special{PDF: Base \@baseurl}%
10527 \fi
10528 \ifx\@pdfpagescrop\@empty\else
10529 \special{PDF: BBox \@pdfpagescrop}%
10530 \fi
10531 \def\Hy@temp{}%
10532 \ifx\@pdfstartpage\@empty
10533 \else
10534 \ifx\@pdfstartview\@empty
10535 \else
10536 \edef\Hy@temp{%
10537 ,Page=\@pdfstartpage
10538 ,View=\@pdfstartview
10539 }%
10540 \fi
10541 \fi
10542 \edef\Hy@temp{%
10543 \noexpand\pdfmark{%
10544 pdfmark=/DOCVIEW,%
10545 PageMode=/\@pdfpagemode
10546 \Hy@temp
10547 }%
10548 }%
10549 \Hy@temp
10550 \ifx\@pdfpagescrop\@empty
10551 \else
10552 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10553 \fi
10554 \edef\Hy@temp{%
10555 \ifHy@pdftoolbar\else /HideToolbar true\fi
10556 \ifHy@pdfmenubar\else /HideMenubar true\fi
10557 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10558 \ifHy@pdffitwindow /FitWindow true\fi
10559 \ifHy@pdfcenterwindow /CenterWindow true\fi
10560 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10561 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10562 \Hy@UseNameKey{Direction}\@pdfdirection
10563 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10564 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10565 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10566 \Hy@UseNameKey{PrintClip}\@pdfprintclip

```

```

10567 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10568 \Hy@UseNameKey{Duplex}\@pdfduplex
10569 \ifx\@pdfpicktraybypdfsize\@empty
10570 \else
10571 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10572 \fi
10573 \ifx\@pdfprintpagerange\@empty
10574 \else
10575 /PrintPageRange[\@pdfprintpagerange]%
10576 \fi
10577 \ifx\@pdfnumcopies\@empty
10578 \else
10579 /NumCopies \@pdfnumcopies
10580 \fi
10581 }%
10582 \pdfmark{pdfmark=/PUT,%
10583 Raw={%
10584 \string{Catalog\string}<<%
10585 \ifx\Hy@temp\@empty
10586 \else
10587 /ViewerPreferences<<\Hy@temp>>%
10588 \fi
10589 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10590 \ifx\@pdflang\relax
10591 \else
10592 /Lang(\@pdflang)%
10593 \fi
10594 >>%
10595 }%
10596 }%
10597 }
10598 </dviwindo>
10599 <*/dvi pdfm | xetex>

```

47.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

10600 \providecommand*\XR@ext}{pdf}
10601 \Hy@setbreaklinks{true}
10602 \def\HyPat@ObjRef{%
10603 @[\ ]+%
10604 }
10605 \newsavebox{\pdfm@box}
10606 \def\@pdfm@mark#1{\special{pdf:#1}}
10607 \Hy@WrapperDef\@pdfm@dest#1{%
10608 \Hy@SaveLastskip
10609 \Hy@VerboseAnchor{#1}%
10610 \begingroup
10611 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10612 \def\x{XYZ}%
10613 \ifx\x\@pdfview
10614 \def\x{XYZ @xpos @ypos null}%
10615 \else
10616 \def\x{FitH}%
10617 \ifx\x\@pdfview
10618 \def\x{FitH @ypos}%
10619 \else

```

```

10620     \def\x{FitBH}%
10621     \ifx\x\@pdfview
10622         \def\x{FitBH @ypos}%
10623     \else
10624         \def\x{FitV}%
10625         \ifx\x\@pdfview
10626             \def\x{FitV @xpos}%
10627         \else
10628             \def\x{FitBV}%
10629             \ifx\x\@pdfview
10630                 \def\x{FitBV @xpos}%
10631             \else
10632                 \def\x{Fit}%
10633                 \ifx\x\@pdfview
10634                     \let\x\@pdfview
10635                 \else
10636                     \def\x{FitB}%
10637                     \ifx\x\@pdfview
10638                         \let\x\@pdfview
10639                     \else
10640                         \def\x{FitR}%
10641                         \ifx\x\@pdfview
10642                             \Hy@Warning{\`pdfview=FitR' is not supported}%
10643                             \def\x{XYZ @xpos @ypos null}%
10644                         \else
10645                             \@onelevel@sanitize\@pdfview
10646                             \Hy@Warning{%
10647                                 Unknown value `\'@pdfview' for pdfview%
10648                             }%
10649                             \def\x{XYZ @xpos @ypos null}%
10650                         \fi
10651                     \fi
10652                 \fi
10653             \fi
10654         \fi
10655     \fi
10656 \fi
10657 \fi
10658 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
10659 \endgroup
10660 \Hy@RestoreLastskip
10661 }
10662 \providecommand*\@pdfview{XYZ}
10663 \providecommand*\@pdfborder{0 0 1}
10664 \providecommand*\@pdfborderstyle{}
10665 \def\hyper@anchor#1{%
10666     \@pdfm@dest{#1}%
10667 }
10668 \def\hyper@anchorstart#1{%
10669     \Hy@activeanchortrue
10670     \@pdfm@dest{#1}%
10671 }
10672 \def\hyper@anchorend{%
10673     \Hy@activeanchorfalse
10674 }
10675 \newcounter{Hy@AnnotLevel}
10676 \ifHy@ocgcolorlinks

```

```

10677 \def\OBJ@OCG@view{@OCG@view}%
10678 \@pdfm@mark{%
10679   obj \OBJ@OCG@view <<%
10680     /Type/OCG%
10681     /Name(View)%
10682     /Usage<<%
10683     /Print<<%
10684     /PrintState/OFF%
10685     >>%
10686     /View<<%
10687     /ViewState/ON%
10688     >>%
10689     >>%
10690     >>%
10691   }%
10692 \@pdfm@mark{close \OBJ@OCG@view}%
10693 \def\OBJ@OCG@print{@OCG@print}%
10694 \@pdfm@mark{%
10695   obj \OBJ@OCG@print <<%
10696     /Type/OCG%
10697     /Name(Print)%
10698     /Usage<<%
10699     /Print<<%
10700     /PrintState/ON%
10701     >>%
10702     /View<<%
10703     /ViewState/OFF%
10704     >>%
10705     >>%
10706     >>%
10707   }%
10708 \@pdfm@mark{close \OBJ@OCG@print}%
10709 \def\OBJ@OCGs{@OCGs}%
10710 \@pdfm@mark{%
10711   obj \OBJ@OCGs [%
10712     \OBJ@OCG@view\space\OBJ@OCG@print
10713   ]%
10714 }%
10715 \@pdfm@mark{close \OBJ@OCGs}%
10716 \@pdfm@mark{%
10717   put @catalog <<%
10718     /OCProperties<<%
10719     /OCGs \OBJ@OCGs
10720     /D<<%
10721     /OFF[\OBJ@OCG@print]%
10722     /AS[%
10723       <<%
10724         /Event/View%
10725         /OCGs \OBJ@OCGs
10726         /Category[/View]%
10727       >>%
10728       <<%
10729         /Event/Print%
10730         /OCGs \OBJ@OCGs
10731         /Category[/Print]%
10732       >>%
10733       <<%

```

```

10734         /Event/Export%
10735         /OCGs \OBJ@OCGs
10736         /Category[/Print]%
10737     >>%
10738     ]%
10739     >>%
10740     >>%
10741     >>%
10742 }%
10743 \AtBeginShipout{%
10744     \setbox\AtBeginShipoutBox=\hbox{%
10745         \copy\AtBeginShipoutBox
10746         \@pdfm@mark{%
10747             put @resources <<%
10748                 /Properties<<%
10749                 /OCView \OBJ@OCG@view
10750                 /OCPrint \OBJ@OCG@print
10751             >>%
10752             >>%
10753         }%
10754     }%
10755 }%
10756 \Hy@AtBeginDocument{%
10757     \def\Hy@colorlink#1{%
10758         \begingroup
10759         \ifHy@ocgcolorlinks
10760             \def\Hy@ocgcolor{#1}%
10761             \setbox0=\hbox\bgroup\color@begingroup
10762         \else
10763             \HyColor@UseColor#1%
10764         \fi
10765     }%
10766     \def\Hy@endcolorlink{%
10767         \ifHy@ocgcolorlinks
10768             \color@endgroup\egroup
10769             \mbox{%
10770                 \@pdfm@mark{content /OC/OCPrint BDC}%
10771                 \rlap{\copy0}%
10772                 \@pdfm@mark{content EMC/OC/OCView BDC}%
10773                 \begingroup
10774                 \expandafter\HyColor@UseColor\Hy@ocgcolor
10775                 \box0 %
10776                 \endgroup
10777                 \@pdfm@mark{content EMC}%
10778             }%
10779         \fi
10780     \endgroup
10781 }%
10782 }%
10783 \else
10784     \Hy@DisableOption{ocgcolorlinks}%
10785 \fi

```

Use primitive counter arithmetic here to avoid amsmath redefining `\stepcounter` (github issue/13)

```

10786 \def\Hy@BeginAnnot#1{%
10787     \global\advance\c@Hy@AnnotLevel\@ne
10788     \ifnum\c@Hy@AnnotLevel=\@ne

```

```

10789   #1%
10790   \fi
10791 }
10792 \def\Hy@EndAnnot{%
10793   \ifnum\value{Hy@AnnotLevel}=\@ne
10794     \Hy@endcolorlink
10795     \@pdfm@mark{eann}%
10796   \fi
10797   \global\advance\c@Hy@AnnotLevel\m@ne
10798 }

10799 \def\Hy@undefinedname{UNDEFINED}
10800 \def\hyper@linkstart#1#2{%
10801   \Hy@VerboseLinkStart{#1}{#2}%
10802   \leavevmode
10803   \Hy@BeginAnnot{%
10804     \protected@edef\Hy@testname{#2}%
10805     \ifx\Hy@testname\@empty
10806       \Hy@Warning{%
10807         Empty destination name,\MessageBreak
10808         using ``\Hy@undefinedname'%
10809       }%
10810     \let\Hy@testname\Hy@undefinedname
10811   \else
10812     \Hy@pstringdef\Hy@testname{%
10813       \expandafter\HyperDestNameFilter\expandafter{%
10814         \Hy@testname
10815       }%
10816     }%
10817   \fi
10818   \@pdfm@mark{%
10819     bann<<%
10820     /Type/Annot%
10821     /Subtype/Link%
10822     \ifHy@pdfa /F 4\fi
10823     \Hy@setpdfborder
10824     \Hy@setpdfhighlight
10825     \expandafter\ifx\csname @#1bordercolor\endcsname\relax
10826     \else
10827       /C[\csname @#1bordercolor\endcsname]%
10828     \fi
10829     /A<<%
10830     /S/GoTo%
10831     /D(\Hy@testname)%
10832     \Hy@href@nextactionraw
10833     >>%
10834     >>%
10835   }%
10836   \expandafter\Hy@colorlink\csname @#1color\endcsname
10837 }%
10838 }
10839 \def\hyper@linkend{\Hy@EndAnnot}%
10840 \def\hyper@link#1#2#3{%
10841   \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10842 }
10843 \def\hyper@linkfile#1#2#3{%
10844   \leavevmode
10845   \Hy@BeginAnnot{%

```

```

10846 \def\Hy@pstringF{#2}%
10847 \Hy@CleanupFile\Hy@pstringF
10848 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10849 \Hy@pstringdef\Hy@pstringD{#3}%
10850 \Hy@MakeRemoteAction
10851 \@pdfm@mark{%
10852   bann<<%
10853   /Type/Annot%
10854   /Subtype/Link%
10855   \ifHy@pdfa /F 4\fi
10856   \Hy@setpdfborder
10857   \Hy@setpdfhighlight
10858   \ifx\@filebordercolor\relax
10859   \else
10860     /C[\@filebordercolor]%
10861   \fi
10862   /A<<%
10863   /S/GoToR%
10864   /F(\Hy@pstringF)%
10865   /D%
10866   \ifx\#3\%
10867     [\Hy@href@page\@pdfremotestartview]%
10868   \else
10869     (\Hy@pstringD)%
10870   \fi
10871   \Hy@SetNewWindow
10872   \Hy@href@nextactionraw
10873   >>%
10874   >>%
10875   }%
10876   \Hy@colorlink\@filecolor
10877 }%
10878 #1\Hy@xspace@end
10879 \Hy@endAnnot
10880 }
10881 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
10882 \leavevmode
10883 \Hy@BeginAnnot{%
10884 \Hy@pstringdef\Hy@pstringF{#1}%
10885 \Hy@pstringdef\Hy@pstringP{#3}%
10886 \@pdfm@mark{%
10887   bann<<%
10888   /Type/Annot%
10889   /Subtype/Link%
10890   \ifHy@pdfa /F 4\fi
10891   \Hy@setpdfborder
10892   \Hy@setpdfhighlight
10893   \ifx\@runbordercolor\relax
10894   \else
10895     /C[\@runbordercolor]%
10896   \fi
10897   /A<<%
10898   /F(\Hy@pstringF)%
10899   /S/Launch%
10900   \Hy@SetNewWindow
10901   \ifx\#3\%
10902   \else

```

```

10903         /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10904         \fi
10905         \Hy@href@nextactionraw
10906         >>%
10907         >>%
10908     }%
10909     \Hy@colorlink\@runcolor
10910 }%
10911 #2\Hy@xspace@end
10912 \Hy@EndAnnot
10913 }
10914 \def\hyper@linkurl#1#2{%
10915     \leavevmode
10916     \Hy@BeginAnnot{%
10917         \Hy@pstringdef\Hy@pstringURI{#2}%
10918         \@pdfm@mark{%
10919             bann<<%
10920             /Type/Annot%
10921             /Subtype/Link%
10922             \ifHy@pdfa /F 4\fi
10923             \Hy@setpdfborder
10924             \Hy@setpdfhighlight
10925             \ifx\@urlbordercolor\relax
10926                 \else
10927                 /C[\@urlbordercolor]%
10928             \fi
10929             /A<<%
10930             /S/URI%
10931             /URI(\Hy@pstringURI)%
10932             \ifHy@href@ismap
10933             /IsMap true%
10934             \fi
10935             \Hy@href@nextactionraw
10936             >>%
10937             >>%
10938         }%
10939         \Hy@colorlink\@urlcolor
10940     }%
10941     #1\Hy@xspace@end
10942     \Hy@EndAnnot
10943 }
10944 \def\Acrobatmenu#1#2{%
10945     \Hy@Acrobatmenu{#1}{#2}{%
10946         \Hy@BeginAnnot{%
10947             \EdefEscapeName\Hy@temp@menu{#1}%
10948             \@pdfm@mark{%
10949                 bann<<%
10950                 /Type/Annot%
10951                 /Subtype/Link%
10952                 \ifHy@pdfa /F 4\fi
10953                 \Hy@setpdfborder
10954                 \Hy@setpdfhighlight
10955                 \ifx\@menubordercolor\relax
10956                     \else
10957                     /C[\@menubordercolor]%
10958                 \fi
10959                 /A<<%

```



```

10960         /S/Named%
10961         /N/\Hy@temp@menu
10962         \Hy@href@nextactionraw
10963         >>%
10964         >>%
10965     }%
10966     \Hy@colorlink@\@menucolor
10967 }%
10968 #2\Hy@xspace@end
10969 \Hy@endAnnot
10970 }%
10971 }
10972 \ifx\@pdfproducer\relax
10973 \def\@pdfproducer{dvi.pdfm}%

```

Detect XeTeX. However, but xdvipdfmx will overwrite it in the final PDF file.

```

10974 \begingroup\expandafter\expandafter\expandafter\endgroup
10975 \expandafter\ifx\csname XeTeXversion\endcsname\relax
10976 \else
10977 \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
10978 \fi
10979 \fi
10980 \def\PDF@FinishDoc{%
10981 \Hy@UseMaketitleInfos
10982 \HyInfo@GenerateAddons
10983 \@pdfm@mark{%
10984 docinfo<<%
10985 /Title(\@pdftitle)%
10986 /Subject(\@pdfsubject)%
10987 /Creator(\@pdfcreator)%
10988 \ifx\@pdfcreationdate\@empty
10989 \else
10990 /CreationDate(\@pdfcreationdate)%
10991 \fi
10992 \ifx\@pdfmoddate\@empty
10993 \else
10994 /ModDate(\@pdfmoddate)%
10995 \fi
10996 /Author(\@pdfauthor)%
10997 \ifx\@pdfproducer\relax
10998 \else
10999 /Producer(\@pdfproducer)%
11000 \fi
11001 /Keywords(\@pdfkeywords)%
11002 \ifx\@pdftrapped\@empty
11003 \else
11004 /Trapped/\@pdftrapped
11005 \fi
11006 \HyInfo@Addons
11007 >>%
11008 }%
11009 \Hy@DisableOption{pdfauthor}%
11010 \Hy@DisableOption{pdftitle}%
11011 \Hy@DisableOption{pdfsubject}%
11012 \Hy@DisableOption{pdfcreator}%
11013 \Hy@DisableOption{addtopdfcreator}%
11014 \Hy@DisableOption{pdfcreationdate}%
11015 \Hy@DisableOption{pdfcreationdate}%

```

```

11016 \Hy@DisableOption{pdfmoddate}%
11017 \Hy@DisableOption{pdfproducer}%
11018 \Hy@DisableOption{pdfkeywords}%
11019 \Hy@DisableOption{pdftrapped}%
11020 \Hy@DisableOption{pdfinfo}%
11021 }

11022 \def\PDF@SetupDoc{%
11023 \edef\Hy@temp{%
11024 \ifHy@pdftoolbar\else /HideToolbar true\fi
11025 \ifHy@pdfmenubar\else /HideMenubar true\fi
11026 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11027 \ifHy@pdffitwindow /FitWindow true\fi
11028 \ifHy@pdfcenterwindow /CenterWindow true\fi
11029 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11030 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11031 \Hy@UseNameKey{Direction}\@pdfdirection
11032 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11033 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11034 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11035 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11036 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11037 \Hy@UseNameKey{Duplex}\@pdfduplex
11038 \ifx\@pdfpicktraybypdfsize\@empty
11039 \else
11040 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11041 \fi
11042 \ifx\@pdfprintpagerange\@empty
11043 \else
11044 /PrintPageRange[\@pdfprintpagerange]%
11045 \fi
11046 \ifx\@pdfnumcopies\@empty
11047 \else
11048 /NumCopies \@pdfnumcopies
11049 \fi
11050 }%
11051 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11052 \@pdfm@mark{%
11053 docview<<%
11054 \ifx\@pdfstartpage\@empty
11055 \else
11056 \ifx\@pdfstartview\@empty
11057 \else
11058 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
11059 \fi
11060 \fi
11061 \ifx\@baseurl\@empty
11062 \else
11063 /URI<</Base(\Hy@pstringB)>>%
11064 \fi
11065 /PageMode/\@pdfpagemode
11066 \ifx\Hy@temp\@empty
11067 \else
11068 /ViewerPreferences<<\Hy@temp>>%
11069 \fi
11070 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11071 \ifx\@pdflang\relax
11072 \else

```

```

11073     /Lang(\@pdflang)%
11074     \fi
11075     >>%
11076   }%
11077   \ifx \@pdfpagescrop \@empty
11078   \else
11079     \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
11080   \fi
11081 }
11082 </dvi pdfm | xetex>
11083 <*dvi pdfm | xetex>

```

\hyper@pagetransition

```

11084 \def\hyper@pagetransition{%
11085   \ifx \@pdfpagetransition \relax
11086   \else
11087     \ifx \@pdfpagetransition \@empty
11088     \else
11089       \special{pdf:put @thispage %
11090         <</Trans<</S/\@pdfpagetransition>>>>%
11091       }%
11092     \fi
11093   \fi
11094 }

```

\hyper@pageduration

```

11095 \def\hyper@pageduration{%
11096   \ifx \@pdfpageduration \relax
11097   \else
11098     \ifx \@pdfpageduration \@empty
11099     \else
11100       \special{pdf:put @thispage %
11101         <</Dur \@pdfpageduration>>>%
11102       }%
11103     \fi
11104   \fi
11105 }

```

\hyper@pagehidden

```

11106 \def\hyper@pagehidden{%
11107   \ifHy@useHidKey
11108     \special{pdf:put @thispage %
11109       <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11110     }%
11111   \fi
11112 }

11113 \g@addto@macro\Hy@EveryPageBoxHook{%
11114   \hyper@pagetransition
11115   \hyper@pageduration
11116   \hyper@pagehidden
11117 }

11118 </dvi pdfm | xetex>

```

XeTeX uses pdfTeX's method `\pdfpagewidth` and `\pdfpageheight` for setting the paper size.

```

11119 ⟨*dvipdfm)
11120 \AtBeginShipoutFirst{%
11121 \ifHy@setpagesize
11122 \begingroup
11123 \@ifundefined{stockwidth}{%
11124 \ifdim\paperwidth>\z@
11125 \ifdim\paperheight>\z@
11126 \special{papersize=\the\paperwidth,\the\paperheight}%
11127 \fi
11128 \fi
11129 }{%
11130 \ifdim\stockwidth>\z@
11131 \ifdim\stockheight>\z@
11132 \special{papersize=\the\stockwidth,\the\stockheight}%
11133 \fi
11134 \fi
11135 }%
11136 \endgroup
11137 \fi
11138 \Hy@DisableOption{setpagesize}%
11139 }
11140 ⟨/dvipdfm)

```

47.6 VTeX typesetting system

Provided by MicroPress, May 1998. They require VTeX version 6.02 or newer; see <http://www.micropress-inc.com/> for details.

```

11141 ⟨*vtexhtml)
11142 \providecommand*\XR@ext}{htm}
11143 \RequirePackage{vtexhtml}
11144 \newif\if@Localurl
11145 \let\PDF@FinishDoc\ltx@empty
11146 \def\PDF@SetupDoc{%
11147 \ifx\@baseurl\@empty
11148 \else
11149 \special{!direct <base href="\@baseurl">}%
11150 \fi
11151 }
11152 \def\@urltype{url}
11153 \def\hyper@link#1#2#3{%
11154 \Hy@VerboseLinkStart{#1}{#2}%
11155 \leavevmode
11156 \special{!direct <a href=%
11157 \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
11158 #3\Hy@xspace@end
11159 \special{!direct </a>}%
11160 }
11161 \def\hyper@linkurl#1#2{%
11162 \begingroup
11163 \hyper@chars
11164 \leavevmode
11165 \MathBSuppress=1\relax
11166 \special{!direct <a href=%
11167 \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
11168 #1\Hy@xspace@end
11169 \MathBSuppress=0\relax
11170 \special{!direct </a>}%

```

```

11171 \endgroup
11172 }
11173 \def\hyper@linkfile#1#2#3{%
11174 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
11175 }
11176 \def\hyper@linkstart#1#2{%
11177 \Hy@VerboseLinkStart{#1}{#2}%
11178 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urlytype
11179 \@Localurltrue
11180 \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
11181 \else
11182 \@Localurlfalse
11183 \begingroup
11184 \hyper@chars
11185 \special{!aref \HyperDestNameFilter{#2}}%
11186 \endgroup
11187 \fi
11188 }
11189 \def\hyper@linkend{%
11190 \if@Localurl
11191 \special{!endaref}%
11192 \else
11193 \special{!direct </a>}%
11194 \fi
11195 }
11196 \Hy@WrapperDef\hyper@anchorstart#1{%
11197 \Hy@SaveLastskip
11198 \Hy@VerboseAnchor{#1}%
11199 \begingroup
11200 \hyper@chars
11201 \special{!aname #1}%
11202 \special{!direct <a name=%
11203 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11204 \endgroup
11205 \Hy@activeanchortrue
11206 }
11207 \def\hyper@anchorend{%
11208 \special{!direct </a>}%
11209 \Hy@activeanchorfalse
11210 \Hy@RestoreLastskip
11211 }
11212 \Hy@WrapperDef\hyper@anchor#1{%
11213 \Hy@SaveLastskip
11214 \Hy@VerboseAnchor{#1}%
11215 \begingroup
11216 \let\protect=\string
11217 \hyper@chars
11218 \leavevmode
11219 \special{!aname #1}%
11220 \special{!direct <a name=%
11221 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11222 \endgroup
11223 \Hy@activeanchortrue
11224 \bgroup\anchor@spot\egroup
11225 \special{!direct </a>}%
11226 \Hy@activeanchorfalse
11227 \Hy@RestoreLastskip

```

```

11228 }
11229 \def\@Form[#1]{%
11230 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11231 }
11232 \let\@endForm\ltx@empty
11233 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11234 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
11235 }
11236 \def\@TextField[#1]#2{% parameters, label
11237 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
11238 }
11239 \def\@CheckBox[#1]#2{% parameters, label
11240 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
11241 }
11242 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11243 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
11244 }
11245 \def\@PushButton[#1]#2{% parameters, label
11246 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
11247 }
11248 \def\@Reset[#1]#2{%
11249 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11250 }
11251 \def\@Submit[#1]#2{%
11252 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11253 }
11254 </vtexhtml>
11255 <*vtex>

```

VTex version 6.68 supports `\mediawidth` and `\mediaheight`. The `\ifx` construct is better than a `\csname`, because it avoids the definition and the hash table entry of a previous undefined macro.

```

11256 \ifx\mediaheight\@undefined
11257 \else
11258 \ifx\mediaheight\relax
11259 \else
11260 \ifHy@setpagesize
11261 \providecommand*\VTeXInitMediaSize{%
11262 \ltx@ifundefined{stockwidth}{%
11263 \ifdim\paperheight>0pt %
11264 \setlength\mediaheight\paperheight
11265 \fi
11266 \ifdim\paperheight>0pt %
11267 \setlength\mediawidth\paperwidth
11268 \fi
11269 }{%
11270 \ifdim\stockheight>0pt %
11271 \setlength\mediaheight\stockheight
11272 \fi
11273 \ifdim\stockwidth>0pt %
11274 \setlength\mediawidth\stockwidth
11275 \fi
11276 }%
11277 }%
11278 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
11279 \fi
11280 \Hy@DisableOption{setpagesize}%

```

```

11281 \fi
11282 \fi
Older versions of VTeX require xyz in lower case.
11283 \providecommand*\@pdfview{xyz}
11284 \providecommand*\@pdfborder{0 0 1}
11285 \providecommand*\@pdfborderstyle{}
11286 \let\CurrentBorderColor\@linkbordercolor
11287 \Hy@WrapperDef\hyper@anchor#1{%
11288   \Hy@SaveLastskip
11289   \Hy@VerboseAnchor{#1}%
11290   \begingroup
11291     \let\protect=\string
11292     \hyper@chars
11293     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11294   \endgroup
11295   \Hy@activeanchortrue
11296   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11297   \Hy@activeanchorfalse
11298   \Hy@RestoreLastskip
11299 }
11300 \Hy@WrapperDef\hyper@anchorstart#1{%
11301   \Hy@SaveLastskip
11302   \Hy@VerboseAnchor{#1}%
11303   \begingroup
11304     \hyper@chars
11305     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11306   \endgroup
11307   \Hy@activeanchortrue
11308 }
11309 \def\hyper@anchorend{%
11310   \Hy@activeanchorfalse
11311   \Hy@RestoreLastskip
11312 }
11313 \def\@urltype{url}
11314 \def\Hy@undefinedname{UNDEFINED}
11315 \def\hyper@linkstart#1#2{%
11316   \Hy@VerboseLinkStart{#1}{#2}%
11317   \Hy@pstringdef\Hy@pstringURI{#2}%
11318   \expandafter\Hy@colorlink\csname @#1color\endcsname
11319   \ltx@ifundefined{#1bordercolor}{%
11320     \let\CurrentBorderColor\relax
11321   }{%
11322     \edef\CurrentBorderColor{%
11323       \csname @#1bordercolor\endcsname
11324     }%
11325   }%
11326   \def\Hy@tempa{#1}%
11327   \ifx\Hy@tempa\@urltype
11328     \special{!%
11329       aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11330         \ifHy@href@ismap
11331           /IsMap true%
11332         \fi
11333         \Hy@href@nextactionraw
11334         >,%
11335         a=<%
11336         \ifHy@pdfa /F 4\fi

```

```

11337 \Hy@setpdfborder
11338 \ifx\CurrentBorderColor\relax
11339 \else
11340 /C [\CurrentBorderColor]%
11341 \fi
11342 >%
11343 }%
11344 \else
11345 \protected@edef\Hy@testname{#2}%
11346 \ifx\Hy@testname\@empty
11347 \Hy@Warning{%
11348 Empty destination name,\MessageBreak
11349 using \Hy@undefinedname'%
11350 }%
11351 \let\Hy@testname\Hy@undefinedname
11352 \fi
11353 \special{!%
11354 aref \expandafter\HyperDestNameFilter
11355 \expandafter{\Hy@testname};%
11356 a=<%
11357 \ifHy@pdfa /F 4\fi
11358 \Hy@setpdfborder
11359 \ifx\CurrentBorderColor\relax
11360 \else
11361 /C [\CurrentBorderColor]%
11362 \fi
11363 >%
11364 }%
11365 \fi
11366 }
11367 \def\hyper@linkend{%
11368 \special{!endaref}%
11369 \Hy@endcolorlink
11370 }
11371 \def\hyper@linkfile#1#2#3{%
11372 \leavevmode
11373 \def\Hy@pstringF{#2}%
11374 \Hy@CleanupFile\Hy@pstringF
11375 \special{!%
11376 aref <%
11377 \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
11378 f=\Hy@pstringF>#3;%
11379 a=<%
11380 \ifHy@pdfa /F 4\fi
11381 \Hy@setpdfborder
11382 \ifx\@filebordercolor\relax
11383 \else
11384 /C [\@filebordercolor]%
11385 \fi
11386 >%
11387 }%
11388 \Hy@colorlink\@filecolor
11389 #1\Hy@xspace@end
11390 \Hy@endcolorlink
11391 \special{!endaref}%
11392 }
11393 \def\hyper@linkurl#1#2{%

```



```

11394 \begingroup
11395   \Hy@pstringdef\Hy@pstringURI{#2}%
11396   \hyper@chars
11397   \leavevmode
11398   \special{!%
11399     aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11400       \ifHy@href@ismap
11401         /IsMap true%
11402       \fi
11403       \Hy@href@nextactionraw
11404     >,%
11405     a=<%
11406       \ifHy@pdfa /F 4\fi
11407       \Hy@setpdfborder
11408       \ifx\@urlbordercolor\relax
11409       \else
11410         /C [\@urlbordercolor]%
11411       \fi
11412     >%
11413   }%
11414   \Hy@colorlink\@urlcolor
11415   #1\Hy@xspace@end
11416   \Hy@endcolorlink
11417   \special{!endaref}%
11418 \endgroup
11419 }
11420 \def\hyper@link#1#2#3{%
11421   \Hy@VerboseLinkStart{#1}{#2}%
11422   \ltx@ifundefined{@#1bordercolor}{%
11423     \let\CurrentBorderColor\relax
11424   }{%
11425     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
11426   }%
11427   \leavevmode
11428   \protected@edef\Hy@testname{#2}%
11429   \ifx\Hy@testname\@empty
11430     \Hy@Warning{%
11431       Empty destination name,\MessageBreak
11432       using ` \Hy@undefinedname'%
11433     }%
11434     \let\Hy@testname\Hy@undefinedname
11435   \fi
11436   \special{!%
11437     aref \expandafter\HyperDestNameFilter
11438       \expandafter{\Hy@testname};%
11439     a=<%
11440       \ifHy@pdfa /F 4\fi
11441       \Hy@setpdfborder
11442       \ifx\CurrentBorderColor\relax
11443       \else
11444         /C [\CurrentBorderColor]%
11445       \fi
11446     >%
11447   }%
11448   \expandafter
11449   \Hy@colorlink\csname @#1color\endcsname
11450   #3\Hy@xspace@end

```

```

11451 \Hy@endcolorlink
11452 \special{!endaref}%
11453 }
11454 \def\hyper@image#1#2{%
11455 \hyper@linkurl{#2}{#1}%
11456 }
11457 \def\@hyper@launch run:#1\#2#3{%
11458 \Hy@pstringdef\Hy@pstringF{#1}%
11459 \Hy@pstringdef\Hy@pstringP{#3}%
11460 \leavevmode
11461 \special{!aref %
11462 <u=%
11463 /Type/Action%
11464 /S/Launch%
11465 /F(\Hy@pstringF)%
11466 \Hy@SetNewWindow
11467 \ifx\#3\%
11468 \else
11469 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
11470 \fi
11471 \Hy@href@nextactionraw
11472 >:%
11473 a=<%
11474 \ifHy@pdfa /F 4\fi
11475 \Hy@setpdfborder
11476 \ifx\@runbordercolor\relax
11477 \else
11478 /C[\@runbordercolor]%
11479 \fi
11480 >%
11481 }%
11482 \Hy@colorlink\@runcolor
11483 #2\Hy@xspace@end
11484 \Hy@endcolorlink
11485 \special{!endaref}%
11486 }
11487 \def\Acrobatmenu#1#2{%
11488 \EdefEscapeName\Hy@temp@menu{#1}%
11489 \Hy@Acrobatmenu{#1}{#2}{%
11490 \special{!%
11491 aref <u=/S /Named /N /\Hy@temp@menu>;%
11492 a=<%
11493 \ifHy@pdfa /F 4\fi
11494 \Hy@setpdfborder
11495 \ifx\@menubordercolor\relax
11496 \else
11497 /C[\@menubordercolor]%
11498 \fi
11499 >%
11500 }%
11501 \Hy@colorlink\@menucolor
11502 #2\Hy@xspace@end
11503 \Hy@endcolorlink
11504 \special{!endaref}%
11505 }%
11506 }

```

The following code (transition effects) is made by Alex Kostin.

The code below makes sense for \TeX 7.02 or later.

Please never use $\text{\@ifundefined{VTeXversion}}{\dots}\dots$ globally.

```
11507 \ifnum\Hy@VTeXversion<702 %
11508 \else
11509 \def\hyper@pagetransition{%
11510 \ifx\@pdfpagetransition\relax
11511 \else
11512 \ifx\@pdfpagetransition\@empty
```

Standard incantation.

1. Does an old entry have to be deleted? 2. If 1=yes, how to delete?

```
11513 \else
11514 \hvtex@parse@trans\@pdfpagetransition
11515 \fi
11516 \fi
11517 }%
```

I have to write an “honest” parser to convert raw PDF code into \TeX \special .
(AVK)

Syntax of \TeX $\text{\special}{!trans <transition_effect>}$:

```
<transition\_effect> ::= <transition\_style>[,<transition\_duration>]
<transition\_style> ::= <Blinds\_effect> | <Box\_effect> |
    <Dissolve\_effect> | <Glitter\_effect> |
    <Split\_effect> | <Wipe\_effect>
<Blinds\_effect> ::= B[<effect\_dimension>]
<Box\_effect> ::= X[<effect\_motion>]
<Dissolve\_effect> ::= D
<Glitter\_effect> ::= G[<effect\_direction>]
<Split\_effect> ::= S[<effect\_motion>][<effect\_dimension>]
<Wipe\_effect> ::= W[<effect\_direction>]
<Replace\_effect> ::= R
<effect\_direction> ::= <number>
<effect\_dimension> ::= H | V
<effect\_motion> ::= I | O
<transition\_duration> ::= <number>
```

Transition codes:

```
11518 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
11519 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
11520 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
11521 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
11522 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
11523 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
11524 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%
```

Optional parameters:

```
11525 \def\hvtex@par@dimension{/Dm}%
11526 \def\hvtex@par@direction{/Di}%
11527 \def\hvtex@par@duration{/D}%
11528 \def\hvtex@par@motion{/M}%
```

Tokenizer:

```
11529 \def\hvtex@gettoken{%
11530 \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
11531 }%
```

Notice that tokens in the input buffer must be space delimited.

```
11532 \def\hvtex@gettoken@#1 #2\@nil{%
```

```

11533 \edef\hvtex@token{#1}%
11534 \edef\hvtex@buffer{#2}%
11535 }%
11536 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

11537 \let\hvtex@trans@code\@empty
11538 \let\hvtex@param@dimension\@empty
11539 \let\hvtex@param@direction\@empty
11540 \let\hvtex@param@duration\@empty
11541 \let\hvtex@param@motion\@empty
11542 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

11543 \hvtex@gettoken
11544 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

11545 \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

11546 \else
11547 \hvtex@gettoken
11548 \fi
11549 \fi
11550 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

11551 \hvtex@trans@params
11552 }%

```

Reentrant macro to parse optional parameters.

```

11553 \def\hvtex@trans@params{%
11554 \ifx\hvtex@buffer\@empty
11555 \else
11556 \hvtex@gettoken
11557 \let\hvtex@trans@par\hvtex@token
11558 \ifx\hvtex@buffer\@empty
11559 \else
11560 \hvtex@gettoken
11561 \ifx\hvtex@trans@par\hvtex@par@duration

```

/D is the effect duration in seconds. $\text{V}\text{T}\text{E}\text{X}$ special takes it in milliseconds.

```

11562 \let\hvtex@param@duration\hvtex@token
11563 \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

11564 \expandafter\edef\expandafter\hvtex@param@motion
11565 \expandafter{\expandafter\@gobble\hvtex@token}%
11566 \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

11567 \expandafter\edef\expandafter\hvtex@param@dimension
11568 \expandafter{\expandafter\@gobble\hvtex@token}%
11569 \else \ifx\hvtex@trans@par\hvtex@par@direction

```

Valid values for /Di are 0, 270, 315 (the Glitter effect) or 0, 90, 180, 270 (the Wipe effect).

```

11570 \let\hvtex@param@direction\hvtex@token
11571 \fi\fi\fi\fi
11572 \fi

```

```

11573   \fi
11574   \ifx\hvtex@buffer\@empty
11575     \let\next\hvtex@produce@trans
11576   \else
11577     \let\next\hvtex@trans@params
11578   \fi
11579   \next
11580 }%

```

Merge <transition_effect> and issue the special when possible. Too lazy to validate optional parameters.

```

11581 \def\hvtex@produce@trans{%
11582   \let\vtex@trans@special\@empty
11583   \if S\hvtex@trans@code
11584     \edef\vtex@trans@special{\hvtex@trans@code
11585       \hvtex@param@dimension\hvtex@param@motion}%
11586   \else\if B\hvtex@trans@code
11587     \edef\vtex@trans@special{%
11588       \hvtex@trans@code\hvtex@param@dimension
11589     }%
11590   \else\if X\hvtex@trans@code
11591     \edef\vtex@trans@special{%
11592       \hvtex@trans@code\hvtex@param@motion
11593     }%
11594   \else\if W\hvtex@trans@code
11595     \edef\vtex@trans@special{%
11596       \hvtex@trans@code\hvtex@param@direction
11597     }%
11598   \else\if D\hvtex@trans@code
11599     \let\vtex@trans@special\hvtex@trans@code
11600   \else\if R\hvtex@trans@code
11601     \let\vtex@trans@special\hvtex@trans@code
11602   \else\if G\hvtex@trans@code
11603     \edef\vtex@trans@special{%
11604       \hvtex@trans@code\hvtex@param@direction
11605     }%
11606   \fi\fi\fi\fi\fi\fi
11607   \ifx\vtex@trans@special\@empty
11608   \else
11609     \ifx\hvtex@param@duration\@empty
11610     \else
11611       \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

11612     \multiply\dimen@\@m
11613     \edef\vtex@trans@special{%
11614       \vtex@trans@special,\strip@pt\dimen@
11615     }%
11616   \fi

```

And all the mess is just for this.

```

11617   \special{!trans \vtex@trans@special}%
11618   \fi
11619 }%

11620 \def\hyper@pageduration{%
11621   \ifx\@pdfpageduration\relax
11622   \else
11623     \ifx\@pdfpageduration\@empty

```

```

11624     \special{!duration-}%
11625     \else
11626     \special{!duration \@pdfpageduration}%
11627     \fi
11628     \fi
11629 }%
11630 \def\hyper@pagehidden{%
11631   \ifHy@useHidKey
11632     \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
11633   \fi
11634 }%
11635 \g@addto@macro\Hy@EveryPageBoxHook{%
11636   \hyper@pagetransition
11637   \hyper@pageduration
11638   \hyper@pagehidden
11639 }%
11640 \fi

```

Caution: In opposite to the other drivers, the argument of `\special{!onopen #1}` is a reference name. The VTeX's postscript mode will work with a version higher than 7.0x.

The command `\VTeXOS` is defined since version 7.45. Magic values encode the operating system:

- 1: WinTel
- 2: Linux
- 3: OS/2
- 4: MacOS
- 5: MacOS/X

```

11641 \ifx\@pdfproducer\relax
11642   \def\@pdfproducer{VTeX}%
11643   \ifnum\Hy@VTeXversion>\z@
11644     \count@\VTeXversion
11645     \divide\count@ 100 %
11646     \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
11647     \multiply\count@ -100 %
11648     \advance\count@\VTeXversion
11649     \edef\@pdfproducer{%
11650       \@pdfproducer
11651       .\ifnum\count@<10 0\fi\the\count@
11652       \ifx\VTeXOS\@undefined\else
11653         \ifnum\VTeXOS>0 %
11654           \ifnum\VTeXOS<6 %
11655             \space(%
11656             \ifcase\VTeXOS
11657             \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
11658             \fi
11659             )%
11660           \fi
11661         \fi
11662         ,\space
11663         \ifnum\OpMode=\@ne PDF\else PS\fi
11664         \space backend%
11665         \ifx\gexmode\@undefined\else
11666           \ifnum\gexmode>\z@\space with GeX\fi
11667         \fi
11668       }%

```

11670 \fi
 11671 \fi

Current `!pdfinfo` key syntax:

Key	Field	Type
a	A uthor	String
b	C rop B ox	String
c	C reator	String
k	K eywords	String
l	P age L ayout	PS
p	P age M ode	PS
r	P roducer	String
s	S ubject	String
t	T itle	String
u	U RI	PS
v	V iew P references	PS

Note: PS objects that are dicts are in <<<.>>> (yuck; no choice).

```

11672 \def\PDF@SetupDoc{%
11673   \ifx\@pdfpagescrop\@empty
11674   \else
11675     \special{!pdfinfo b=<\@pdfpagescrop>}%
11676   \fi
11677   \ifx\@pdfstartpage\@empty
11678   \else
11679     \ifx\@pdfstartview\@empty
11680     \else
11681       \special{!onopen Page\@pdfstartpage}%
11682     \fi
11683   \fi
11684   \special{!pdfinfo p=</\@pdfpagemode>}%
11685   \ifx\@baseurl\@empty
11686   \else
11687     \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
11688   \fi
11689   \special{!pdfinfo v=<<<%
11690     \ifHy@pdftoolbar\else /HideToolbar true\fi
11691     \ifHy@pdfmenubar\else /HideMenubar true\fi
11692     \ifHy@pdfwindowui\else /HideWindowUI true\fi
11693     \ifHy@pdfwindow /FitWindow true\fi
11694     \ifHy@pdfcenterwindow /CenterWindow true\fi
11695     \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11696     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11697     \Hy@UseNameKey{Direction}\@pdfdirection
11698     \Hy@UseNameKey{ViewArea}\@pdfviewarea
11699     \Hy@UseNameKey{ViewClip}\@pdfviewclip
11700     \Hy@UseNameKey{PrintArea}\@pdfprintarea
11701     \Hy@UseNameKey{PrintClip}\@pdfprintclip
11702     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11703     \Hy@UseNameKey{Duplex}\@pdfduplex
11704     \ifx\@pdfpicktraybypdfsize\@empty
11705     \else
11706       /PickTrayByPDFSize \@pdfpicktraybypdfsize
11707     \fi
11708     \ifx\@pdfprintpagerange\@empty
11709     \else
11710       /PrintPageRange[\@pdfprintpagerange]%
11711     \fi

```

```

11712 \ifx\@pdfnumcopies\@empty
11713 \else
11714 /NumCopies \@pdfnumcopies
11715 \fi
11716 >>>}%
11717 \ifx\@pdfpagelayout\@empty
11718 \else
11719 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
11720 \fi
11721 }%
11722 \HyInfo@AddonUnsupportedtrue
11723 \define@key{Hyp}{pdfcreationdate}{%
11724 \Hy@Warning{%
11725 VTeX does not support pdfcreationdate.\MessageBreak
11726 Therefore its setting is ignored%
11727 }%
11728 }
11729 \define@key{Hyp}{pdfmoddate}{%
11730 \Hy@Warning{%
11731 VTeX does not support pdfmoddate.\MessageBreak
11732 Therefore its setting is ignored%
11733 }%
11734 }
11735 \def\PDF@FinishDoc{%
11736 \Hy@UseMaketitleInfos
11737 \HyInfo@TrappedUnsupported
11738 \special{!pdfinfo a=<\@pdfauthor>}%
11739 \special{!pdfinfo t=<\@pdftitle>}%
11740 \special{!pdfinfo s=<\@pdfsubject>}%
11741 \special{!pdfinfo c=<\@pdfcreator>}%
11742 \ifx\@pdfproducer\relax
11743 \else
11744 \special{!pdfinfo r=<\@pdfproducer>}%
11745 \fi
11746 \special{!pdfinfo k=<\@pdfkeywords>}%
11747 \Hy@DisableOption{pdfauthor}%
11748 \Hy@DisableOption{pdftitle}%
11749 \Hy@DisableOption{pdfsubject}%
11750 \Hy@DisableOption{pdfcreator}%
11751 \Hy@DisableOption{adftopdfcreator}%
11752 \Hy@DisableOption{pdfcreationdate}%
11753 \Hy@DisableOption{pdfcreationdate}%
11754 \Hy@DisableOption{pdfmoddate}%
11755 \Hy@DisableOption{pdfproducer}%
11756 \Hy@DisableOption{pdfkeywords}%
11757 \Hy@DisableOption{pdftrapped}%
11758 \Hy@DisableOption{pdfinfo}%
11759 }
11760 </vtex>

```

47.7 Fix for Adobe bug number 466320

If a destination occurs at the very begin of a page, the destination is moved to the previous page by Adobe Distiller 5. As workaround Adobe suggests:

```

/showpage {
  //showpage
  clippath stroke erasepage

```



```
} bind def
```

But unfortunately this fix generates an empty page at the end of the document. Therefore another fix is used by writing some clipped text.

```
11761 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
11762 <package>\providecommand*\Hy@DistillerDestFix{}
11763 <*pdfmark | dviwindo>
11764 \def\Hy@DistillerDestFix{%
11765   \begingroup
11766   \let\x\literalps@out
```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```
11767   \ifnum \@ifundefined{OpMode}{0}{-%
11768     \@ifundefined{gexmode}{0}{-%
11769       \ifnum\gexmode>0 \OpMode\else 0\fi
11770     }>1 %
11771   \def\x##1{%
11772     \immediate\special{!=##1}%
11773   }%
11774   \fi
11775   \x{%
11776     /product where{%
11777       pop %
11778       product(Distiller)search{%
11779         pop pop pop %
11780         version(.)search{%
11781           exch pop exch pop%
11782           (3011)eq{%
11783             gsave %
11784             newpath 0 0 moveto closepath clip%
11785             /Courier findfont 10 scalefont setfont %
11786             72 72 moveto(.)show %
11787             grestore%
11788           }if%
11789         }{pop}ifelse%
11790       }{pop}ifelse%
11791     }if%
11792   }%
11793 \endgroup
11794 }
11795 </pdfmark | dviwindo>
```

47.8 Direct pdfmark support

Drivers that load pdfmark.def have to provide the correct macro definitions of

```
\@pdfproducer   for document information
\literalps@out  PostScript output
\headerps@out   PostScript output that goes in the header area
```

and the correct definitions of the following PostScript procedures:

```
H.S           start of anchor, link or rect
#1 H.A        end of anchor, argument=baselineskip in pt
#1 H.L        end of link, argument=baselineskip in pt
H.R           end of rect
H.B           raw rect code
```

```

11796 (*pdfmark)
11797 \Hy@breaklinks@unsupported
11798 \def\HyPat@ObjRef{%
11799 \[~{}+\}%
11800 }
11801 \Hy@WrapperDef\hyper@anchor#1{%
11802 \Hy@SaveLastskip
11803 \Hy@VerboseAnchor{#1}%
11804 \begingroup
11805 \pdfmark[\anchor@spot]{%
11806 pdfmark=/DEST,%
11807 linktype=anchor,%
11808 View=/\@pdfview \@pdfviewparams,%
11809 DestAnchor={#1}%
11810 }%
11811 \endgroup
11812 \Hy@RestoreLastskip
11813 }
11814 \ltx@ifundefined{hyper@anchorstart}{-}{\endinput}
11815 \Hy@WrapperDef\hyper@anchorstart#1{%
11816 \Hy@SaveLastskip
11817 \Hy@VerboseAnchor{#1}%
11818 \literalps@out{H.S}%
11819 \Hy@AllowHyphens
11820 \xdef\hyper@currentanchor{#1}%
11821 \Hy@activeanchortrue
11822 }
11823 \def\hyper@anchorend{%
11824 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
11825 \pdfmark{%
11826 pdfmark=/DEST,%
11827 linktype=anchor,%
11828 View=/\@pdfview \@pdfviewparams,%
11829 DestAnchor=\hyper@currentanchor,%
11830 }%
11831 \Hy@activeanchorfalse
11832 \Hy@RestoreLastskip
11833 }
11834 \def\hyper@linkstart#1#2{%
11835 \Hy@VerboseLinkStart{#1}{#2}%
11836 \ifHy@breaklinks
11837 \else
11838 \leavevmode
11839 \ifmmode
11840 \def\Hy@LinkMath{${}}%
11841 \else
11842 \let\Hy@LinkMath\ltx@empty
11843 \fi
11844 \Hy@SaveSpaceFactor
11845 \hbox\bgroup
11846 \Hy@RestoreSpaceFactor
11847 \Hy@LinkMath
11848 \fi
11849 \expandafter\Hy@colorlink\csmame @#1color\endcsname
11850 \literalps@out{H.S}%
11851 \Hy@AllowHyphens
11852 \xdef\hyper@currentanchor{#2}%

```

```

11853 \gdef\hyper@currentlinktype{#1}%
11854 }
11855 \def\hyper@linkend{%
11856 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
11857 \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
11858 \let\Hy@tempcolor\relax
11859 }{%
11860 \edef\Hy@tempcolor{%
11861 \csname @\hyper@currentlinktype bordercolor\endcsname
11862 }%
11863 }%
11864 \pdfmark{%
11865 pdfmark=/ANN,%
11866 linktype=link,%
11867 Subtype=/Link,%
11868 PDFAFflags=4,%
11869 Dest=\hyper@currentanchor,%
11870 AcroHighlight=\@pdfhighlight,%
11871 Border=\@pdfborder,%
11872 BorderStyle=\@pdfborderstyle,%
11873 Color=\Hy@tempcolor,%
11874 Raw=H.B%
11875 }%
11876 \Hy@endcolorlink
11877 \ifHy@breaklinks
11878 \else
11879 \Hy@LinkMath
11880 \Hy@SaveSpaceFactor
11881 \egroup
11882 \Hy@RestoreSpaceFactor
11883 \fi
11884 }

```

We have to allow for `\baselineskip` having an optional stretch and shrink (you meet this in slide packages, for instance), so we need to strip off the junk. David Carlisle, of course, wrote this bit of code.

```

11885 \begingroup
11886 \catcode`P=12 %
11887 \catcode`T=12 %
11888 \lowercase{\endgroup
11889 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11890 }
11891 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

11892 \def\hyper@pagetransition{%
11893 \ifx\@pdfpagetransition\relax
11894 \else
11895 \ifx\@pdfpagetransition\@empty
11896 % 1. Does an old entry have to be deleted?
11897 % 2. If 1=yes, how to delete?
11898 \else
11899 \pdfmark{%
11900 pdfmark=/PUT,%
11901 Raw={%
11902 \string{ThisPage\string}%
11903 <</Trans << /S /\@pdfpagetransition\space >> >>%

```

```

11904     }%
11905     }%
11906   \fi
11907 \fi
11908 }

```

\hyper@pageduration

```

11909 \def\hyper@pageduration{%
11910   \ifx\@pdfpageduration\relax
11911   \else
11912     \ifx\@pdfpageduration\@empty
11913       % 1. Does an old entry have to be deleted?
11914       % 2. If 1=yes, how to delete?
11915     \else
11916       \pdfmark{%
11917         pdfmark=/PUT,%
11918         Raw={%
11919           \string{ThisPage\string}%
11920           <</Dur \@pdfpageduration>>%
11921         }%
11922       }%
11923     \fi
11924 \fi
11925 }

```

\hyper@pagehidden

```

11926 \def\hyper@pagehidden{%
11927   \ifHy@useHidKey
11928     \pdfmark{%
11929       pdfmark=/PUT,%
11930       Raw={%
11931         \string{ThisPage\string}%
11932         <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11933       }%
11934     }%
11935 \fi
11936 }

11937 \g@addto@macro\Hy@EveryPageBoxHook{%
11938   \hyper@pagetransition
11939   \hyper@pageduration
11940   \hyper@pagehidden
11941 }

11942 \def\hyper@image#1#2{%
11943   \hyper@linkurl{#2}{#1}%
11944 }
11945 \def\Hy@undefinedname{UNDEFINED}
11946 \def\hyper@link#1#2#3{%
11947   \Hy@VerboseLinkStart{#1}{#2}%
11948   \ltx@ifundefined{@#1bordercolor}{%
11949     \let\Hy@tempcolor\relax
11950   }{%
11951     \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11952   }%
11953   \begingroup
11954     \protected@edef\Hy@testname{#2}%
11955     \ifx\Hy@testname\@empty

```

```

11956 \Hy@Warning{%
11957   Empty destination name,\MessageBreak
11958   using ` \Hy@undefinedname'%
11959 }%
11960 \let\Hy@testname\Hy@undefinedname
11961 \fi
11962 \pdfmark[#{#3}]{%
11963   Color=\Hy@tempcolor,%
11964   linktype=#{#1},%
11965   AcroHighlight=\@pdfhighlight,%
11966   Border=\@pdfborder,%
11967   BorderStyle=\@pdfborderstyle,%
11968   pdfmark=/ANN,%
11969   Subtype=/Link,%
11970   PDFAFlags=4,%
11971   Dest=\Hy@testname
11972 }%
11973 \endgroup
11974 }
11975 \newtoks\pdf@docset
11976 \def\PDF@FinishDoc{%
11977   \Hy@UseMaketitleInfos
11978   \HyInfo@GenerateAddons
11979   \let\Hy@temp\@empty
11980   \ifx\@pdfcreationdate\@empty
11981   \else
11982     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11983   \fi
11984   \ifx\@pdfmoddate\@empty
11985   \else
11986     \expandafter\def\expandafter\Hy@temp\expandafter{%
11987       \Hy@temp
11988       ModDate=\@pdfmoddate,%
11989     }%
11990   \fi
11991   \ifx\@pdfproducer\relax
11992   \else
11993     \expandafter\def\expandafter\Hy@temp\expandafter{%
11994       \Hy@temp
11995       Producer=\@pdfproducer,%
11996     }%
11997   \fi
11998   \expandafter
11999   \pdfmark\expandafter{%
12000     \Hy@temp
12001     pdfmark=/DOCINFO,%
12002     Title=\@pdftitle,%
12003     Subject=\@pdfsubject,%
12004     Creator=\@pdfcreator,%
12005     Author=\@pdfauthor,%
12006     Keywords=\@pdfkeywords,%
12007     Trapped=\@pdftrapped
12008   }%
12009   \ifx\HyInfo@Addons\@empty
12010   \else
12011     \pdfmark{%
12012       pdfmark=/DOCINFO,%

```

```

12013     Raw={\HyInfo@Addons}%
12014   }%
12015 \fi
12016 \Hy@DisableOption{pdfauthor}%
12017 \Hy@DisableOption{pdftitle}%
12018 \Hy@DisableOption{pdfsubject}%
12019 \Hy@DisableOption{pdfcreator}%
12020 \Hy@DisableOption{addtopdfcreator}%
12021 \Hy@DisableOption{pdfcreationdate}%
12022 \Hy@DisableOption{pdfcreationdate}%
12023 \Hy@DisableOption{pdfmoddate}%
12024 \Hy@DisableOption{pdfproducer}%
12025 \Hy@DisableOption{pdfkeywords}%
12026 \Hy@DisableOption{pdftrapped}%
12027 \Hy@DisableOption{pdfinfo}%
12028 }
12029 \def\PDF@SetupDoc{%
12030   \def\Hy@temp{}%
12031   \ifx\@pdfstartpage\@empty
12032   \else
12033     \ifx\@pdfstartview\@empty
12034     \else
12035       \edef\Hy@temp{%
12036         ,Page=\@pdfstartpage
12037         ,View=\@pdfstartview
12038       }%
12039     \fi
12040   \fi
12041   \edef\Hy@temp{%
12042     \noexpand\pdfmark{%
12043       pdfmark=/DOCVIEW,%
12044       PageMode=/\@pdfpagemode
12045     }\Hy@temp
12046   }%
12047 }%
12048 \Hy@temp
12049 \ifx\@pdfpagescrop\@empty
12050 \else
12051   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12052 \fi
12053 \edef\Hy@temp{%
12054   \ifHy@pdftoolbar\else /HideToolbar true\fi
12055   \ifHy@pdfmenubar\else /HideMenubar true\fi
12056   \ifHy@pdfwindowui\else /HideWindowUI true\fi
12057   \ifHy@pdfwindow /FitWindow true\fi
12058   \ifHy@pdfcenterwindow /CenterWindow true\fi
12059   \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12060   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12061   \Hy@UseNameKey{Direction}\@pdfdirection
12062   \Hy@UseNameKey{ViewArea}\@pdfviewarea
12063   \Hy@UseNameKey{ViewClip}\@pdfviewclip
12064   \Hy@UseNameKey{PrintArea}\@pdfprintarea
12065   \Hy@UseNameKey{PrintClip}\@pdfprintclip
12066   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12067   \Hy@UseNameKey{Duplex}\@pdfduplex
12068   \ifx\@pdfpicktraybypdfsize\@empty
12069   \else

```

```

12070 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12071 \fi
12072 \ifx\@pdfprintpagerange\@empty
12073 \else
12074 /PrintPageRange[\@pdfprintpagerange]%
12075 \fi
12076 \ifx\@pdfnumcopies\@empty
12077 \else
12078 /NumCopies \@pdfnumcopies
12079 \fi
12080 }%
12081 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12082 \pdfmark{%
12083 pdfmark=/PUT,%
12084 Raw={%
12085 \string{Catalog\string}<<%
12086 \ifx\Hy@temp\@empty
12087 \else
12088 /ViewerPreferences<<\Hy@temp>>%
12089 \fi
12090 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12091 \ifx\@pdflang\relax
12092 \else
12093 /Lang(\@pdflang)%
12094 \fi
12095 \ifx\@baseurl\@empty
12096 \else
12097 /URI<</Base(\Hy@pstringB)>>%
12098 \fi
12099 >>%
12100 }%
12101 }%
12102 }
12103 \pdfmark
12104 \pdfmarkbase

```

We define a single macro, pdfmark, which uses the ‘keyval’ system to define the various allowable keys; these are *exactly* as listed in the pdfmark reference for Acrobat 3.0. The only addition is pdfmark which specifies the type of pdfmark to create (like ANN, LINK etc). The surrounding round and square brackets in the pdfmark commands are supplied, but you have to put in / characters as needed for the values.

```

12105 \newif\ifHy@pdfmarkerror
12106 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
12107 \def\pdfmark@[#1]#2{%
12108 \Hy@pdfmarkerrorfalse
12109 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
12110 \@processme
12111 \let\pdf@type\relax
12112 \let\pdf@objdef\ltx@empty
12113 \kvsetkeys{PDF}{#2}%
12114 \ifHy@pdfmarkerror
12115 \else
12116 \ifx\pdf@type\relax
12117 \Hy@WarningNoLine{no pdfmark type specified in #2!}%
12118 \ifx\#1\%
12119 \else

```

```

12120     \pdf@rect{#1}%
12121     \fi
12122   \else
12123     \ifx\#1\%
12124     \literalps@out{%
12125       [%
12126       \ifx\pdf@objdef\ltx@empty
12127       \else
12128         /_objdef\string{\pdf@objdef\string}%
12129       \fi
12130       \the\pdf@toks\space\pdf@type\space pdfmark%
12131     }%
12132   \else
12133     \ltx@ifundefined{@\pdf@linktype color}{%
12134       \Hy@colorlink\@linkcolor
12135     }{%
12136       \expandafter\Hy@colorlink
12137         \csname @\pdf@linktype color\endcsname
12138     }%
12139     \pdf@rect{#1}%
12140     \literalps@out{%
12141       [%
12142       \ifx\pdf@objdef\ltx@empty
12143       \else
12144         /_objdef\string{\pdf@objdef\string}%
12145       \fi
12146       \the\pdf@toks\space\pdf@type\space pdfmark%
12147     }%
12148     \Hy@endcolorlink
12149   \fi
12150 \fi
12151 \fi
12152 }

```

The complicated bit is working out the right enclosing rectangle of some piece of T_EX text, needed by the /Rect key. This solution originates with Toby Thain (toby@netspace.net.au).

For the case `breaklinks` is enabled, I have added two hooks, the first one for package `setouterhbox`, it provides a hopefully better method without setting the text twice.

```
\usepackage[hyperref]{setouterhbox}
```

With the second hook, also you can set the text twice, e.g.:

```
\long\def\Hy@setouterhbox#1#2{\long\def\my@temp{#2}}
\def\Hy@breaklinksunhbox#1{\my@temp}
```

```

12153 \newsavebox{\pdf@box}
12154 \providecommand*\Hy@setouterhbox{\sbox}
12155 \providecommand*\Hy@breaklinksunhbox{\unhbox}
12156 \def\Hy@DEST{/DEST}
12157 \def\pdf@rect#1{%
12158   \begingroup
12159   \chardef\x=1 %
12160   \def\Hy@temp{#1}%
12161   \ifx\Hy@temp\ltx@empty
12162     \chardef\x=0 %
12163   \else

```



```

12164 \def\y{\anchor@spot}%
12165 \ifx\Hy@temp\y
12166 \def\y{\relax}%
12167 \ifx\anchor@spot\y
12168 \chardef\x=0 %
12169 \fi
12170 \fi
12171 \fi
12172 \expandafter\endgroup
12173 \ifcase\x
12174 \literalps@out{H.S}%
12175 \literalps@out{H.R}%
12176 \else
12177 \leavevmode
12178 \Hy@SaveSpaceFactor
12179 \ifmmode
12180 \def\Hy@LinkMath{$}%
12181 \else
12182 \let\Hy@LinkMath\ltx@empty
12183 \fi
12184 \ifHy@breaklinks
12185 \Hy@setouterhbox\pdf@box{%
12186 \Hy@RestoreSpaceFactor
12187 \Hy@LinkMath
12188 \Hy@AllowHyphens#1\Hy@xspace@end
12189 \Hy@LinkMath
12190 \Hy@SaveSpaceFactor
12191 }%
12192 \else
12193 \sbox\pdf@box{%
12194 \Hy@RestoreSpaceFactor
12195 \Hy@LinkMath
12196 #1\Hy@xspace@end
12197 \Hy@LinkMath
12198 \Hy@SaveSpaceFactor
12199 }%
12200 \fi
12201 \dimen@ht\pdf@box
12202 \ifdim\dp\pdf@box=\z@
12203 \literalps@out{H.S}%
12204 \else
12205 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
12206 \fi

```

If the text has to be horizontal mode stuff then just unbox the saved box like this, which saves executing it twice, which can mess up counters etc (thanks DPC...).

```

12207 \ifHy@breaklinks
12208 \ifhmode
12209 \Hy@breaklinksunhbox\pdf@box
12210 \else
12211 \box\pdf@box
12212 \fi
12213 \else
12214 \expandafter\box\pdf@box
12215 \fi

```

but if it can have multiple paragraphs you'd need one of these, but in that case the measured box size would be wrong anyway.

```

\ifHy@breaklinks#1\else\box\pdf@box\fi
\ifHy@breaklinks{#1}\else\box\pdf@box\fi

12216 \ifdim\dimen@=\z@
12217 \literalps@out{H.R.}%
12218 \else
12219 \raise\dimen@\hbox{\literalps@out{H.R.}}%
12220 \fi
12221 \Hy@RestoreSpaceFactor
12222 \fi
12223 \ifx\pdf@type\Hy@DEST
12224 \else
12225 \pdf@addtoksx{H.B}%
12226 \fi
12227 }

```

All the supplied material is stored in a token list; since I do not feel sure I quite understand these, things may not work as expected with expansion. We'll have to experiment.

```

12228 \newtoks\pdf@toks
12229 \newtoks\pdf@defaulttoks
12230 \pdf@defaulttoks={}%
12231 \def\pdf@addtoks#1#2{%
12232 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
12233 \@processme
12234 }
12235 \def\pdf@addtoksx#1{%
12236 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
12237 \@processme
12238 }
12239 \def\PDFdefaults#1{%
12240 \pdf@defaulttoks={#1}%
12241 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

12242 % what is the type of pdfmark?
12243 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
12244 % what is the link type?
12245 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
12246 \def\pdf@linktype{link}
12247 % named object?
12248 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
12249 \let\pdf@objdef\ltx@empty
12250 % parameter is a stream of PDF
12251 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
12252 % parameter is a name
12253 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
12254 % parameter is a array
12255 \define@key{PDF}{Border}{%
12256 \edef\Hy@temp{#1}%
12257 \ifx\Hy@temp\@empty
12258 \else
12259 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
12260 \fi
12261 }
12262 \let\Hy@BorderArrayPatch\@empty
12263 % parameter is a dictionary
12264 \define@key{PDF}{BorderStyle}{%

```

```

12265 \edef\Hy@temp{#1}%
12266 \ifx\Hy@temp\@empty
12267 \else
12268 \pdf@addtoks{<<#1>>}{BS}%
12269 \fi
12270 }
12271 % parameter is a array
12272 \define@key{PDF}{Color}{%
12273 \ifx\relax#1\relax
12274 \else
12275 \pdf@addtoks{[#1]}{Color}% hash-ok
12276 \fi
12277 }
12278 % parameter is a string
12279 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
12280 % parameter is a integer
12281 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
12282 % parameter is a array
12283 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
12284 % parameter is a string
12285 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
12286 % parameter is a string or file
12287 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
12288 % parameter is a destination
12289 \define@key{PDF}{Dest}{%
12290 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12291 \ifx\Hy@pstringDest\@empty
12292 \Hy@pdfmarkerrortrue
12293 \Hy@Warning{Destination with empty name ignored}%
12294 \else
12295 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12296 \fi
12297 }
12298 \define@key{PDF}{DestAnchor}{%
12299 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12300 \ifx\Hy@pstringDest\@empty
12301 \Hy@pdfmarkerrortrue
12302 \Hy@Warning{Destination with empty name ignored}%
12303 \else
12304 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12305 \fi
12306 }
12307 % parameter is a string
12308 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
12309 % parameter is a string
12310 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
12311 % parameter is a int
12312 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
12313 \define@key{PDF}{PDFAFlags}{%
12314 \ifHy@pdfa
12315 \pdf@addtoks{#1}{F}%
12316 \fi
12317 }
12318 % parameter is a name
12319 \define@key{PDF}{AcroHighlight}{%
12320 \begingroup
12321 \edef\x{#1}%

```

```

12322 \expandafter\endgroup\ifx\x\@empty
12323 \else
12324 \pdf@addtoks{#1}{H}%
12325 \fi
12326 }
12327 % parameter is a string
12328 \define@key{PDF}{ID}{\pdf@addtoks{#1}{ID}}% hash-ok
12329 % parameter is a string
12330 \define@key{PDF}{MacFile}{\pdf@addtoks{#1}{MacFile}}
12331 % parameter is a string
12332 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
12333 % parameter is a string
12334 \define@key{PDF}{Op}{\pdf@addtoks{#1}{Op}}
12335 % parameter is a Boolean
12336 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
12337 % parameter is a integer or name
12338 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
12339 % parameter is a name
12340 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
12341 % parameter is a string
12342 \define@key{PDF}{Params}{\pdf@addtoks{#1}{Params}}
12343 % parameter is a array
12344 \define@key{PDF}{Rect}{\pdf@addtoks{#1}{Rect}}% hash-ok
12345 % parameter is a integer
12346 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
12347 % parameter is a name
12348 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
12349 % parameter is a string
12350 \define@key{PDF}{Title}{\pdf@addtoks{#1}{Title}}
12351 % parameter is a string
12352 \define@key{PDF}{Unix}{\pdf@addtoks{#1}{Unix}}
12353 % parameter is a string
12354 \define@key{PDF}{UnixFile}{\pdf@addtoks{#1}{UnixFile}}
12355 % parameter is an array
12356 \define@key{PDF}{View}{\pdf@addtoks{#1}{View}}% hash-ok
12357 % parameter is a string
12358 \define@key{PDF}{WinFile}{\pdf@addtoks{#1}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

12359 \define@key{PDF}{Author}{\pdf@addtoks{#1}{Author}}
12360 \define@key{PDF}{Creator}{\pdf@addtoks{#1}{Creator}}
12361 \define@key{PDF}{CreationDate}{\pdf@addtoks{#1}{CreationDate}}
12362 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
12363 \define@key{PDF}{Producer}{\pdf@addtoks{#1}{Producer}}
12364 \define@key{PDF}{Subject}{\pdf@addtoks{#1}{Subject}}
12365 \define@key{PDF}{Keywords}{\pdf@addtoks{#1}{Keywords}}
12366 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
12367 \define@key{PDF}{Base}{\pdf@addtoks{#1}{Base}}
12368 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
12369 \define@key{PDF}{Trapped}{%
12370 \edef\Hy@temp{#1}%
12371 \ifx\Hy@temp\@empty
12372 \else
12373 \pdf@addtoks{/#1}{Trapped}%
12374 \fi
12375 }
12376
12377 </pdfmarkbase>

```

```

12378 (*pdfmark)
12379 \def\Acrobatmenu#1#2{%
12380 \EdefEscapeName\Hy@temp@menu{#1}%
12381 \Hy@Acrobatmenu{#1}{#2}{%
12382 \pdfmark[{#2}]{%
12383 linktype=menu,%
12384 pdfmark=/ANN,%
12385 AcroHighlight=\@pdfhighlight,%
12386 Border=\@pdfborder,%
12387 BorderStyle=\@pdfborderstyle,%
12388 Color=\@menubordercolor,%
12389 Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
12390 Subtype=/Link,%
12391 PDFAFlags=4%
12392 }%
12393 }%
12394 }

```

And now for some useful examples:

```

12395 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
12396 \def\PDFNextPage@[#1]#2{%
12397 \pdfmark[{#2}]{%
12398 #1,%
12399 Border=\@pdfborder,%
12400 BorderStyle=\@pdfborderstyle,%
12401 Color=.2 .1 .5,%
12402 pdfmark=/ANN,%
12403 Subtype=/Link,%
12404 PDFAFlags=4,%
12405 Page=/Next%
12406 }%
12407 }
12408 \def\PDFPreviousPage{%
12409 \@ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
12410 }
12411 \def\PDFPreviousPage@[#1]#2{%
12412 \pdfmark[{#2}]{%
12413 #1,%
12414 Border=\@pdfborder,%
12415 BorderStyle=\@pdfborderstyle,%
12416 Color=.4 .4 .1,%
12417 pdfmark=/ANN,%
12418 Subtype=/Link,%
12419 PDFAFlags=4,%
12420 Page=/Prev%
12421 }%
12422 }
12423 \def\PDFOpen#1{%
12424 \pdfmark{#1,pdfmark=/DOCVIEW}%
12425 }

```

This will only work if you use Distiller 2.1 or higher.

```

12426 \def\hyper@linkurl#1#2{%
12427 \begingroup
12428 \Hy@pstringdef\Hy@pstringURI{#2}%
12429 \hyper@chars
12430 \leavevmode
12431 \pdfmark[{#1}]{%

```

```

12432 pdfmark=/ANN,%
12433 linktype=url,%
12434 AcroHighlight=\@pdfhighlight,%
12435 Border=\@pdfborder,%
12436 BorderStyle=\@pdfborderstyle,%
12437 Color=\@urlbordercolor,%
12438 Action={<<%
12439 /Subtype/URI%
12440 /URI(\Hy@pstringURI)%
12441 \ifHy@href@ismap
12442 /IsMap true%
12443 \fi
12444 >>},%
12445 Subtype=/Link,%
12446 PDFAFlags=4%
12447 }%
12448 \endgroup
12449 }
12450 \def\hyper@linkfile#1#2#3{%
12451 \begingroup
12452 \def\Hy@pstringF{#2}%
12453 \Hy@CleanupFile\Hy@pstringF
12454 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
12455 \Hy@pstringdef\Hy@pstringD{#3}%
12456 \Hy@MakeRemoteAction
12457 \leavevmode
12458 \pdfmark[#{#1}]{%
12459 pdfmark=/ANN,%
12460 Subtype=/Link,%
12461 PDFAFlags=4,%
12462 AcroHighlight=\@pdfhighlight,%
12463 Border=\@pdfborder,%
12464 BorderStyle=\@pdfborderstyle,%
12465 linktype=file,%
12466 Color=\@filebordercolor,%
12467 Action={%
12468 <<%
12469 /S/GoToR%
12470 \Hy@SetNewWindow
12471 /F(\Hy@pstringF)%
12472 /D%
12473 \ifx\#3\%
12474 [\Hy@href@page\@pdfremotestartview]%
12475 \else
12476 (\Hy@pstringD)cvn%
12477 \fi
12478 \Hy@href@nextactionraw
12479 >>%
12480 }%
12481 }%
12482 \endgroup
12483 }
12484 \def\@hyper@launch run:#1\#2#3{%
12485 \begingroup
12486 \Hy@pstringdef\Hy@pstringF{#1}%
12487 \Hy@pstringdef\Hy@pstringP{#3}%
12488 \leavevmode

```

```

12489 \pdfmark[#{#2}]{%
12490 pdfmark=/ANN,%
12491 Subtype=/Link,%
12492 PDFAFlags=4,%
12493 AcroHighlight=\@pdfhighlight,%
12494 Border=\@pdfborder,%
12495 BorderStyle=\@pdfborderstyle,%
12496 linktype=run,%
12497 Color=\@runbordercolor,%
12498 Action={%
12499 <<%
12500 /S/Launch%
12501 \Hy@SetNewWindow
12502 /F(\Hy@pstringF)%
12503 \ifx\#3\%
12504 \else
12505 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
12506 \fi
12507 \Hy@href@nextactionraw
12508 >>%
12509 }%
12510 }%
12511 \endgroup
12512 }
12513 </pdfmark>

```

Unfortunately, some parts of the pdfmark PostScript code depend on vagaries of the dvi driver. We isolate here all the problems.

47.9 Rokicki's dvips

dvips thinks in 10ths of a big point, its coordinate space is resolution dependent, and its *y* axis starts at the top of the page. Other drivers can and will be different!

The work is done in SDict, because we add in some header definitions in a moment.

```

12514 <{*dvips}
12515 \providecommand*\XR@ext}{pdf}
12516 \let\Hy@raisedlink\ltx@empty
12517 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
12518 \def\headerps@out#1{\special{! #1}}%
12519 \input{pdfmark.def}%
12520 \ifx\@pdfproducer\relax
12521 \def\@pdfproducer{dvips + Distiller}%
12522 \fi
12523 \providecommand*\@pdfborder{0 0 1}
12524 \providecommand*\@pdfborderstyle{}
12525 \providecommand*\@pdfview{XYZ}
12526 \providecommand*\@pdfviewparams{ H.V}
12527 \def\Hy@BorderArrayPatch{BorderArrayPatch}
12528 \g@addto@macro\Hy@FirstPageHook{%
12529 \headerps@out{%

```

Unless I am going mad, this *appears* to be the relationship between the default coordinate system (PDF), and dvips;

```

/DvipsToPDF { .01383701 div Resolution div } def
/PDFToDvips { .01383701 mul Resolution mul } def

```

the latter's coordinates are resolution dependent, but what that .01383701 is, who knows? well, almost everyone except me, I expect...And yes, Maarten Gelderman <mgelderman@econ.vu.nl> points out that its $1/72.27$ (the number of points to an inch, big points to inch is $1/72$). This also suggests that the code would be more understandable (and exact) if 0.013 div would be replaced by 72.27 mul, so here we go. If this isn't right, I'll revert it.

```
12530 /DvipsToPDF{72.27 mul Resolution div} def%
12531 /PDFToDvips{72.27 div Resolution mul} def%
12532 /BPToDvips{72 div Resolution mul}def%
```

The values inside the /Boder array are not taken literally, but interpreted by ghostscript using the resolution of the dvi driver. I don't know how other distiller programs behaves in this manner.

```
12533 /BorderArrayPatch{%
12534   [exch{%
12535     dup dup type/integertype eq exch type/realtype eq or%
12536     {BPToDvips}if%
12537   }forall]%
12538 }def%
```

The rectangle around the links starts off *exactly* the size of the box; we will to make it slightly bigger, 1 point on all sides.

```
12539 /HyperBorder {1 PDFToDvips} def%
12540 /H.V {pdf@hoff pdf@voff null} def%
12541 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%
```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates

```
12542 /H.S {%
12543   currentpoint %
12544   HyperBorder add /pdf@lly exch def %
12545   dup DvipsToPDF 72 add /pdf@hoff exch def %
12546   HyperBorder sub /pdf@llx exch def%
12547 } def%
```

The calculation of upper left y is done without raising the point in \TeX , by simply adding on the current \backslash baselineskip to the current y . This is usually too much, so we remove a notional 2 points.

We have to see what the current baselineskip is, and convert it to the dvips coordinate system.

Argument: baselineskip in pt. The x and y coordinates of the current point, minus the baselineskip

```
12548 /H.L {%
12549   2 sub dup%
12550   /HyperBasePt exch def %
12551   PDFToDvips /HyperBaseDvips exch def %
12552   currentpoint %
12553   HyperBaseDvips sub /pdf@ury exch def%
12554   /pdf@urx exch def%
12555 } def%
12556 /H.A {%
12557   H.L %
12558 % |pdf@voff| = the distance from the top of the page to a point
12559 % |\baselineskip| above the current point in PDF coordinates
12560   currentpoint exch pop %
12561   vsize 72 sub exch DvipsToPDF %
12562   HyperBasePt sub % baseline skip
```



```

12563   sub /pdf@voff exch def%
12564   } def%
12565   /H.R {%
12566     currentpoint %
12567     HyperBorder sub /pdf@ury exch def %
12568     HyperBorder add /pdf@urx exch def %
12569 % | /pdf@voff| = the distance from the top of the page to the current point, in
12570 % PDF coordinates
12571     currentpoint exch pop vsize 72 sub %
12572     exch DvipsToPDF sub /pdf@voff exch def%
12573   } def%
12574 }%
12575 }
12576 \AtBeginShipoutFirst{%
12577 \ifHy@setpagesize
12578 \begingroup
12579 \@ifundefined{stockwidth}{%
12580 \ifdim\paperwidth>\z@
12581 \ifdim\paperheight>\z@
12582 \special{papersize=\the\paperwidth,\the\paperheight}%
12583 \fi
12584 \fi
12585 }{%
12586 \ifdim\stockwidth>\z@
12587 \ifdim\stockheight>\z@
12588 \special{papersize=\the\stockwidth,\the\stockheight}%
12589 \fi
12590 \fi
12591 }%
12592 \endgroup
12593 \fi
12594 \Hy@DisableOption{setpagesize}%
12595 }

12596 \def\setpdfinkmargin#1{%
12597 \begingroup
12598 \setlength{\dimen@}{#1}%
12599 \literalps@out{%
12600 /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12601 }%
12602 \endgroup
12603 }

12604 </dvips>

```

47.10 VTeX's vtexpdfmark driver

This part is derived from the dvips (many names reflect this).

The origin seems to be the same as TeX's origin, 1 in from the left and 1 in downwards from the top. The direction of the y axis is downwards, the opposite of the dvips case. Units seems to be pt or bp.

```

12605 (*vtexpdfmark)
12606 \providecommand*\XR@ext}{pdf}
12607 \let\Hy@raisedlink\ltx@empty
12608 \def\literalps@out#1{\special{pS:#1}}%
12609 \def\headerps@out#1{\immediate\special{pS:#1}}%
12610 \input{pdfmark.def}%
12611 \ifx\@pdfproducer\relax

```

```

12612 \ifnum\OpMode=\@ne
12613 \def\@pdfproducer{VTeX}%
12614 \else
12615 \def\@pdfproducer{VTeX + Distiller}%
12616 \fi
12617 \fi
12618 \providecommand*\@pdfborder{0 0 1}
12619 \providecommand*\@pdfborderstyle{}
12620 \providecommand*\@pdfview{XYZ}
12621 \providecommand*\@pdfviewparams{ H.V}

12622 \g@addto@macro\Hy@FirstPageHook{%
12623 \headerps@out{%
12624 /vsize {\Hy@pageheight} def%

```

The rectangle around the links starts off *exactly* the size of the box; we will to make it slightly bigger, 1 point on all sides.

```

12625 /HyperBorder {1} def%
12626 /H.V {pdf@hoff pdf@voff null} def%
12627 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

12628 /H.S {%
12629 currentpoint %
12630 HyperBorder sub%
12631 /pdf@lly exch def %
12632 dup 72 add /pdf@hoff exch def %
12633 HyperBorder sub%
12634 /pdf@llx exch def%
12635 } def%

```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

12636 /H.L {%
12637 2 sub%
12638 /HyperBasePt exch def %
12639 currentpoint %
12640 HyperBasePt add HyperBorder add%
12641 /pdf@ury exch def %
12642 HyperBorder add%
12643 /pdf@urx exch def%
12644 } def%
12645 /H.A {%
12646 H.L %
12647 currentpoint exch pop %
12648 vsize 72 sub exch %
12649 HyperBasePt add add%
12650 /pdf@voff exch def%
12651 } def%

```

$\text{pdf@ury} = Y_c + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

12652 /H.R {%
12653 currentpoint %
12654 HyperBorder add%
12655 /pdf@ury exch def %
12656 HyperBorder add%
12657 /pdf@urx exch def %

```

```

12658     currentpoint exch pop vsize 72 sub add%
12659     /pdf@voff exch def%
12660   } def%
12661 }%
12662 }

12663 \def\setpdfinkmargin#1{%
12664   \begingroup
12665     \setlength{\dimen@}{#1}%
12666     \literalps@out{%
12667       /HyperBorder{\strip@pt\dimen@}def%
12668     }%
12669   \endgroup
12670 }

12671 </vtexpdfmark>

```

47.11 Textures

```

12672 <*textures>
12673 \providecommand*\XR@ext}{pdf}

```

At the suggestion of Jacques Distler (distler@golem.ph.utexas.edu), try to derive a suitable driver for Textures. This was initially a copy of dvips, with some guesses about Textures behaviour. Ross Moore (ross@maths.mq.edu.au) has added modifications for better compatibility, and to support use of pdfmark.

Start by defining a macro that expands to the end-of-line character. This will be used to format the appearance of PostScript code, to enhance readability, and avoid excessively long lines which might otherwise become broken to bad places.

`\Hy@ps@CR`. The macro `\Hy@ps@CR` contains the end-of-line character.

```

12674 \begingroup
12675   \obeylines %
12676   \gdef\Hy@ps@CR{\noexpand
12677   }%
12678 \endgroup %

```

Textures has two types of `\special` command for inserting PostScript code directly into the dvi output. The ‘postscript’ way preserves TeX’s idea of where on the page the `\special` occurred, but it wraps the contents with a `save-restore` pair, and adjusts the user-space coordinate system for local drawing commands. The ‘rawpostscript’ way simply inserts code, without regard for the location on the page.

Thus, to put arbitrary PostScript coding at a fixed location requires using *both* `\special` constructions. It works by pushing the device-space coordinates onto the operand stack, where they can be used to transform back to the correct user-space coordinates for the whole page, within a ‘rawpostscript’ `\special`.

```

12679 \def\literalps@out#1{%
12680   \special{postscript 0 0 transform}%
12681   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
12682 }%
12683 %

```

The ‘prepostscript’ is a 3rd kind of `\special`, used for inserting definitions into the dictionaries, before page-building begins. These are to be available for use on all pages.

```

12684 \def\headerps@out#1{%
12685   \special{%

```

```

12686   prepostscript TeXdict begin\Hy@ps@CR
12687     #1\Hy@ps@CR
12688   end%
12689 }%
12690 }%
12691 %

```

To correctly support the `pdfmark` method, for embedding PDF definitions with `.ps` files in a non-intrusive way, an appropriate definition needs to be made *before* the file `pdfmark.def` is read. Other parameters are best set afterwards.

```

12692 \g@addto@macro\Hy@FirstPageHook{%
12693   \headerps@out{%
12694     /betterpdfmark {%
12695       systemdict begin %
12696         dup /BP eq%
12697         {cleartomark gsave nulldevice []%
12698           {dup /EP eq%
12699             {cleartomark cleartomark grestore}%
12700             {cleartomark}%
12701             ifelse%
12702           }ifelse %
12703         end%
12704       }def\Hy@ps@CR
12705     ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
12706   }% end of \headerps@out
12707 }% end of \AtBeginShipoutFirst
12708 %
12709 \input{pdfmark.def}%
12710 %
12711 \ifx\@pdfproducer\relax
12712   \def\@pdfproducer{Textures + Distiller}%
12713 \fi
12714 \providecommand*\@pdfborder{0 0 1}
12715 \providecommand*\@pdfborderstyle{}
12716 \providecommand*\@pdfview{XYZ}
12717 \providecommand*\@pdfviewparams{ H.V}
12718 %

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called `pdf@llx pdf@lly pdf@urx pdf@ury`, which are the coordinates of the bounding rectangle of the link, and `pdf@hoff pdf@voff` which are the PDF page offsets. The `Rect` pair are called at the LL and UR corners of a box known to \TeX .

```

12719 \Hy@AtBeginDocument{%
12720   \headerps@out{%

```

`Textures` lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

12721     /vsize {\Hy@pageheight} def%
12722     /DvipsToPDF {} def%
12723     /PDFToDvips {} def%
12724     /BPToDvips {} def%
12725     /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
12726     /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
12727     /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
12728     /H.S {}%
12729     currentpoint %

```

```

12730   HyperBorder add /pdf@lly exch def %
12731   dup DvipsToPDF 72 add /pdf@hoff exch def %
12732   HyperBorder sub /pdf@llx exch def%
12733   } def\Hy@ps@CR
12734   /H.L {%
12735     2 sub %
12736     PDFToDvips /HyperBase exch def %
12737     currentpoint %
12738     HyperBase sub /pdf@ury exch def%
12739     /pdf@urx exch def%
12740   } def\Hy@ps@CR
12741   /H.A {%
12742     H.L %
12743     currentpoint exch pop %
12744     vsize 72 sub exch DvipsToPDF %
12745     HyperBase sub % baseline skip
12746     sub /pdf@voff exch def%
12747   } def\Hy@ps@CR
12748   /H.R {%
12749     currentpoint %
12750     HyperBorder sub /pdf@ury exch def %
12751     HyperBorder add /pdf@urx exch def %
12752     currentpoint exch pop vsize 72 sub %
12753     exch DvipsToPDF sub /pdf@voff exch def%
12754   } def\Hy@ps@CR
12755 }%
12756 }

12757 \def\setpdfinkmargin#1{%
12758   \begingroup
12759   \setlength{\dimen@}{#1}%
12760   \literalps@out{%
12761     /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12762   }%
12763   \endgroup
12764 }

12765 \Hy@AtBeginDocument{%
12766   \ifHy@colorlinks
12767     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
12768   \fi
12769 }

Textures provides built-in support for HyperTeX specials so this part combines
code from hypertex.def with what is established by loading pdfmark.def, or any
other driver.

12770 \expandafter\let\expandafter\keepPDF@SetupDoc
12771   \csname PDF@SetupDoc\endcsname
12772 \def\PDF@SetupDoc{%
12773   \ifx\@baseurl\@empty
12774   \else
12775     \special{html:<base href="\@baseurl">}%
12776   \fi
12777   \keepPDF@SetupDoc
12778 }
12779 \Hy@WrapperDef\hyper@anchor#1{%
12780   \Hy@SaveLastskip
12781   \Hy@VerboseAnchor{#1}%
12782   \begingroup

```

```

12783 \let\protect=\string
12784 \special{html:<a name=%
12785 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12786 \endgroup
12787 \Hy@activeanchortrue
12788 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12789 \special{html:</a>}%
12790 \Hy@activeanchorfalse
12791 \Hy@RestoreLastskip
12792 }
12793 \Hy@WrapperDef\hyper@anchorstart#1{%
12794 \Hy@SaveLastskip
12795 \Hy@VerboseAnchor{#1}%
12796 \begingroup
12797 \hyper@chars
12798 \special{html:<a name=%
12799 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12800 \endgroup
12801 \Hy@activeanchortrue
12802 }
12803 \def\hyper@anchorend{%
12804 \special{html:</a>}%
12805 \Hy@activeanchorfalse
12806 \Hy@RestoreLastskip
12807 }
12808 \def\@urltype{url}
12809 \def\hyper@linkstart#1#2{%
12810 \Hy@VerboseLinkStart{#1}{#2}%
12811 \expandafter\Hy@colorlink\csname @#1color\endcsname
12812 \def\Hy@tempa{#1}%
12813 \ifx\Hy@tempa\@urltype
12814 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12815 \else
12816 \begingroup
12817 \hyper@chars
12818 \special{%
12819 html:<a href=%
12820 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>%
12821 }%
12822 \endgroup
12823 \fi
12824 }
12825 \def\hyper@linkend{%
12826 \special{html:</a>}%
12827 \Hy@endcolorlink
12828 }
12829 \def\hyper@linkfile#1#2#3{%
12830 \hyper@linkurl{#1}{%
12831 \Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi
12832 }%
12833 }
12834 \def\hyper@linkurl#1#2{%
12835 \leavevmode
12836 \ifHy@raiselinks
12837 \Hy@SaveSpaceFactor
12838 \Hy@SaveSavedSpaceFactor
12839 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%

```

```

12840 \Hy@RestoreSavedSpaceFactor
12841 \@linkdim\dp\@tempboxa
12842 \lower\@linkdim\hbox{%
12843 \hyper@chars
12844 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12845 }%
12846 \Hy@colorlink\@urlcolor
12847 \Hy@RestoreSpaceFactor
12848 #1\Hy@xspace@end
12849 \Hy@SaveSpaceFactor
12850 \@linkdim\ht\@tempboxa
12851 \advance\@linkdim by -6.5\p@
12852 \raise\@linkdim\hbox{\special{html:</a>}}%
12853 \Hy@endcolorlink
12854 \Hy@RestoreSpaceFactor
12855 \else
12856 \begingroup
12857 \hyper@chars
12858 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12859 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12860 \special{html:</a>}%
12861 \Hy@endcolorlink
12862 \endgroup
12863 \fi
12864 }

```

Very poor implementation of \hyper@link without considering #1.

```

12865 \def\hyper@link#1#2#3{%
12866 \Hy@VerboseLinkStart{#1}{#2}%
12867 \hyper@linkurl{#3}{\# \Hy@HyperDestNameFilter{#2}}%
12868 }
12869 \def\hyper@image#1#2{%
12870 \begingroup
12871 \hyper@chars
12872 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
12873 \endgroup
12874 }
12875 </textures>

```

47.12 dvipsone

```

12876 % \subsection{dvipsone driver}
12877 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12878 % |\special| commands.
12879 (*dvipsone)
12880 \providecommand*\XR@ext}{pdf}
12881 \let\Hy@raisedlink\tx@empty
12882 \providecommand*\@pdfborder{0 0 1}
12883 \providecommand*\@pdfborderstyle{}
12884 \def\literalps@out#1{\special{ps:#1}}%
12885 \def\headerps@out#1{\special{headertext=#1}}%
12886 \input{pdfmark.def}%
12887 \ifx\@pdfproducer\relax
12888 \def\@pdfproducer{dvipsone + Distiller}%
12889 \fi
12890 \HyInfo@AddonUnsupportedtrue
12891 \def\PDF@FinishDoc{%
12892 \Hy@UseMaketitleInfos

```

```

12893 \HyInfo@TrappedUnsupported
12894 \special{PDF: Keywords \@pdfkeywords}%
12895 \special{PDF: Title \@pdftitle}%
12896 \special{PDF: Creator \@pdfcreator}%
12897 \ifx\@pdfcreationdate\@empty
12898 \else
12899 \special{PDF: CreationDate \@pdfcreationdate}%
12900 \fi
12901 \ifx\@pdfmoddate\@empty
12902 \else
12903 \special{PDF: ModDate \@pdfmoddate}%
12904 \fi
12905 \special{PDF: Author \@pdfauthor}%
12906 \ifx\@pdfproducer\relax
12907 \else
12908 \special{PDF: Producer \@pdfproducer}%
12909 \fi
12910 \special{PDF: Subject \@pdfsubject}%
12911 \Hy@DisableOption{pdfauthor}%
12912 \Hy@DisableOption{pdftitle}%
12913 \Hy@DisableOption{pdfsubject}%
12914 \Hy@DisableOption{pdfcreator}%
12915 \Hy@DisableOption{addtopdfcreator}%
12916 \Hy@DisableOption{pdfcreationdate}%
12917 \Hy@DisableOption{pdfcreationdate}%
12918 \Hy@DisableOption{pdfmoddate}%
12919 \Hy@DisableOption{pdfproducer}%
12920 \Hy@DisableOption{pdfkeywords}%
12921 \Hy@DisableOption{pdftrapped}%
12922 \Hy@DisableOption{pdfinfo}%
12923 }
12924 \def\PDF@SetupDoc{%
12925 \def\Hy@temp{}%
12926 \ifx\@pdfstartpage\@empty
12927 \else
12928 \ifx\@pdfstartview\@empty
12929 \else
12930 \edef\Hy@temp{%
12931 ,Page=\@pdfstartpage
12932 ,View=\@pdfstartview
12933 }%
12934 \fi
12935 \fi
12936 \edef\Hy@temp{%
12937 \noexpand\pdfmark{%
12938 pdfmark=/DOCVIEW,%
12939 PageMode=/\@pdfpagemode
12940 \Hy@temp
12941 }%
12942 }%
12943 \Hy@temp
12944 \ifx\@pdfpagescrop\@empty
12945 \else
12946 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12947 \fi
12948 \edef\Hy@temp{%
12949 \ifHy@pdftoolbar\else /HideToolbar true\fi

```



```

12950 \ifHy@pdfmenubar\else /HideMenubar true\fi
12951 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12952 \ifHy@pdffitwindow /FitWindow true\fi
12953 \ifHy@pdfcenterwindow /CenterWindow true\fi
12954 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12955 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12956 \Hy@UseNameKey{Direction}\@pdfdirection
12957 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12958 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12959 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12960 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12961 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12962 \Hy@UseNameKey{Duplex}\@pdfduplex
12963 \ifx\@pdfpicktraybypdfsize\@empty
12964 \else
12965 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12966 \fi
12967 \ifx\@pdfprintpagerange\@empty
12968 \else
12969 /PrintPageRange[\@pdfprintpagerange]%
12970 \fi
12971 \ifx\@pdfnumcopies\@empty
12972 \else
12973 /NumCopies \@pdfnumcopies
12974 \fi
12975 }%
12976 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12977 \pdfmark{%
12978 pdfmark=/PUT,%
12979 Raw={%
12980 \string{Catalog\string}<<%
12981 \ifx\Hy@temp\@empty
12982 \else
12983 /ViewerPreferences<<\Hy@temp>>%
12984 \fi
12985 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12986 \ifx\@pdflang\relax
12987 \else
12988 /Lang(\@pdflang)%
12989 \fi
12990 \ifx\@baseurl\@empty
12991 \else
12992 /URI<</Base(\Hy@pstringB)>>%
12993 \fi
12994 >>%
12995 }%
12996 }%
12997 }
12998 \providecommand*\@pdfview{XYZ}
12999 \providecommand*\@pdfviewparams{ %
13000 gsave revscl currentpoint grestore %
13001 72 add exch pop null exch null%
13002 }
13003 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called pdf@llx pdf@lly pdf@urx pdf@ury, which are the coordinates of the bounding rectangle of the link, and pdf@hoff pdf@voff which are the PDF

page offsets. These latter are currently not used in the dvipsone setup. The Rect pair are called at the LL and UR corners of a box known to T_EX.

```
13004 \g@addto@macro\Hy@FirstPageHook{%
13005 \headerps@out{%
```

dvipsone lives in scaled points; does this mean 65536 or 65781?

```
13006 /DvipsToPDF { 65781 div } def%
13007 /PDFToDvips { 65781 mul } def%
13008 /BPToDvips{65781 mul}def%
13009 /HyperBorder { 1 PDFToDvips } def%
13010 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%
```

The values inside the /Boder array are not taken literally, but interpreted by ghostscript using the resolution of the dvi driver. I don't know how other distiller programs behaves in this manner.

```
13011 /BorderArrayPatch{%
13012 [exch{%
13013   dup dup type/integertype eq exch type/realtype eq or%
13014   {BPToDvips}if%
13015 }forall]%
13016 }def%

13017 /H.S {%
13018   currentpoint %
13019   HyperBorder add /pdf@lly exch def %
13020   dup DvipsToPDF 72 add /pdf@hoff exch def %
13021   HyperBorder sub /pdf@llx exch def%
13022 } def%
13023 /H.L {%
13024   2 sub %
13025   PDFToDvips /HyperBase exch def %
13026   currentpoint %
13027   HyperBase sub /pdf@ury exch def%
13028   /pdf@urx exch def%
13029 } def%
13030 /H.A {%
13031   H.L %
13032   currentpoint exch pop %
13033   HyperBase sub % baseline skip
13034   DvipsToPDF /pdf@voff exch def%
13035 } def%
13036 /H.R {%
13037   currentpoint %
13038   HyperBorder sub /pdf@ury exch def %
13039   HyperBorder add /pdf@urx exch def %
13040   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
13041 } def%
13042 }%
13043 }

13044 \def\setpdfinkmargin#1{%
13045 \begingroup
13046 \setlength{\dimen@}{#1}%
13047 \literalps@out{%
13048 /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
13049 }%
13050 \endgroup
13051 }

13052 </dvipsone>
```

47.13 TeX4ht

```
13053 (*tex4ht)
13054 \providecommand*\XR@ext}{html}
13055 \let\Hy@raisedlink\ltx@empty
13056 \@ifpackageloaded{tex4ht}{%
13057   \Hy@InfoNoLine{tex4ht is already loaded}%
13058 }{%
13059   \RequirePackage[htex4ht]{tex4ht}%
13060 }
13061 \hyperlinkfileprefix{}
13062 \let\PDF@FinishDoc\ltx@empty
13063 \def\PDF@SetupDoc{%
13064   \ifx\@baseurl\@empty
13065     \else
13066     \special{t4ht=<base href="\@baseurl">}%
13067   \fi
13068 }
13069 \Hy@WrapperDef\hyper@anchor#1{%
13070   \Hy@SaveLastskip
13071   \Hy@VerboseAnchor{#1}%
13072   \begingroup
13073     \let\protect=\string
13074     \special{t4ht=<a name=%
13075       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13076   \endgroup
13077   \Hy@activeanchortrue
13078   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
13079   \special{t4ht=</a>}%
13080   \Hy@activeanchorfalse
13081   \Hy@RestoreLastskip
13082 }
13083 \Hy@WrapperDef\hyper@anchorstart#1{%
13084   \Hy@SaveLastskip
13085   \Hy@VerboseAnchor{#1}%
13086   \begingroup
13087     \hyper@chars\special{t4ht=<a name=%
13088       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13089   \endgroup
13090   \Hy@activeanchortrue
13091 }
13092 \def\hyper@anchorend{%
13093   \special{t4ht=</a>}%
13094   \Hy@activeanchorfalse
13095   \Hy@RestoreLastskip
13096 }
13097 \def\@urltype{url}
13098 \def\hyper@linkstart#1#2{%
13099   \Hy@VerboseLinkStart{#1}{#2}%
13100   \expandafter\Hy@colorlink\csname @#1color\endcsname
13101   \def\Hy@tempa{#1}%
13102   \ifx\Hy@tempa\@urltype
13103     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
13104   \else
13105     \begingroup
13106       \hyper@chars
13107       \special{t4ht=<a href=%
13108         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
```

```

13109 \endgroup
13110 \fi
13111 }
13112 \def\hyper@linkend{%
13113 \special{t4ht=</a>}}%
13114 \Hy@endcolorlink
13115 }
13116 \def\hyper@linkfile#1#2#3{%
13117 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}}%
13118 }
13119 \def\hyper@linkurl#1#2{%
13120 \leavevmode
13121 \ifHy@raiselinks
13122 \Hy@SaveSpaceFactor
13123 \Hy@SaveSavedSpaceFactor
13124 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}}%
13125 \Hy@RestoreSavedSpaceFactor
13126 \@linkdim\dp\@tempboxa
13127 \lower\@linkdim\hbox{%
13128 \beginngroup
13129 \hyper@chars
13130 \special{%
13131 t4ht=<a href=\hyper@quote#2\hyper@quote>%
13132 }%
13133 \endngroup
13134 }%
13135 \Hy@colorlink\@urlcolor
13136 \Hy@RestoreSpaceFactor
13137 #1\Hy@xspace@end
13138 \Hy@SaveSpaceFactor
13139 \Hy@endcolorlink
13140 \@linkdim\ht\@tempboxa
13141 \advance\@linkdim by -6.5\p@
13142 \raise\@linkdim\hbox{\special{t4ht=</a>}}}%
13143 \Hy@RestoreSpaceFactor
13144 \else
13145 \beginngroup
13146 \hyper@chars
13147 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}}%
13148 \Hy@colorlink\@urlcolor
13149 #1\Hy@xspace@end
13150 \Hy@endcolorlink
13151 \special{t4ht=</a>}}%
13152 \endngroup
13153 \fi
13154 }

Poor implementation of \hyper@link without considering #1.
13155 \def\hyper@link#1#2#3{%
13156 \Hy@VerboseLinkStart{#1}{#2}}%
13157 \hyper@linkurl{#3}{\##\Hy@HyperDestNameFilter{#2}}}%
13158 }
13159 \def\hyper@image#1#2{%
13160 \beginngroup
13161 \hyper@chars
13162 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}}%
13163 \endngroup
13164 }

```

```

13165 \let\autoref\ref
13166 \ifx \rEfLiNK \UnDef
13167 \def\rEfLiNK #1#2{#2}%
13168 \fi
13169 \let\backref\ltx@gobble

Fix for tex4ht.
13170 \AtBeginDocument{%
13171 \expandafter
13172 \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
13173 \expandafter\def\csname Make:Label\endcsname#1#2{%
13174 \ifhmode
13175 \Hy@SaveSpaceFactor
13176 \else
13177 \global\Hy@SavedSpaceFactor=1000 %
13178 \fi
13179 \Hy@OrgMakeLabel{#1}{%
13180 \Hy@RestoreSpaceFactor
13181 #2\Hy@xspace@end%
13182 \Hy@SaveSpaceFactor
13183 }%
13184 \Hy@RestoreSpaceFactor
13185 }%
13186 }
13187 </tex4ht>
13188 (*tex4htcfg)
13189 \IfFileExists{jobname.cfg}{\endinput}{}
13190 \Preamble{html}
13191 \begin{document}%
13192 \EndPreamble
13193 \def\TeX{TeX}
13194 \def\OMEGA{Omega}
13195 \def\LaTeX{LaTeX}
13196 \def\LaTeXe{\LaTeX2e}
13197 \def\eTeX{e-TeX}
13198 \def\MF{Metafont}
13199 \def\MP{MetaPost}
13200 </tex4htcfg>

```

48 Driver-specific form support

48.1 pdfmarks

```

13201 (*pdfmark)
13202 \long\def\@Form[#1]{%
13203 \g@addto@macro\Hy@FirstPageHook{%
13204 \headerps@out{%
13205 [%
13206 /_objdef{pdfDocEncoding}%
13207 /type/dict%
13208 /OBJ pdfmark%
13209 [%
13210 {pdfDocEncoding}%
13211 <<%
13212 /Type/Encoding%
13213 /Differences[%
13214 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
13215 /tilde %

```

13216 39/quotesingle %
13217 96/grave %
13218 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13219 /fraction/guilsingleft/guilsingright/minus/perthousand%
13220 /quotedblbase/quotedblleft/quotedblright/quoteleft%
13221 /quoteright/quotesinglbase/trademark/ffi/fl/Lslash/OE/Scaron%
13222 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13223 164/currency %
13224 166/brokenbar %
13225 168/dieresis/copyright/ordfeminine %
13226 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13227 /twosuperior/threesuperior/acute/mu %
13228 183/periodcentered/cedilla/onesuperior/ordmasculine %
13229 188/onequarter/onehalf/threequarters %
13230 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13231 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13232 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13233 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13234 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13235 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13236 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13237 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13238 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
13239 /ucircumflex/udieresis/yacute/thorn/ydieresis%
13240]%
13241 >>%
13242 /PUT pdfmark%
13243 [%
13244 /_objdef{ZaDb}%
13245 /type/dict%
13246 /OBJ pdfmark%
13247 [%
13248 {ZaDb}%
13249 <<%
13250 /Type/Font%
13251 /Subtype/Type1%
13252 /Name/ZaDb%
13253 /BaseFont/ZapfDingbats%
13254 >>%
13255 /PUT pdfmark%
13256 [%
13257 /_objdef{Helv}%
13258 /type/dict%
13259 /OBJ pdfmark%
13260 [%
13261 {Helv}%
13262 <<%
13263 /Type/Font%
13264 /Subtype/Type1%
13265 /Name/Helv%
13266 /BaseFont/Helvetica%
13267 /Encoding{pdfDocEncoding}%
13268 >>%
13269 /PUT pdfmark%
13270 [%
13271 /_objdef{aform}%
13272 /type/dict%

13273 /OBJ pdfmark%
13274 [%
13275 /_objdef{afields}%
13276 /type/array%
13277 /OBJ pdfmark%
13278 [%
13279 /_objdef{corder}%
13280 /type/array%
13281 /OBJ pdfmark%
13282 {%
13283 [%
13284 /BBox[0 0 100 100]%
13285 /_objdef{Check}%
13286 /BP pdfmark %
13287 1 0 0 setrgbcolor%
13288 /ZapfDingbats 80 selectfont %
13289 20 20 moveto%
13290 (4)show%
13291 [/EP pdfmark%
13292 [%
13293 /BBox[0 0 100 100]%
13294 /_objdef{Cross}%
13295 /BP pdfmark %
13296 1 0 0 setrgbcolor%
13297 /ZapfDingbats 80 selectfont %
13298 20 20 moveto%
13299 (8)show%
13300 [/EP pdfmark%
13301 [%
13302 /BBox[0 0 250 100]%
13303 /_objdef{Submit}%
13304 /BP pdfmark %
13305 0.6 setgray %
13306 0 0 250 100 rectfill %
13307 1 setgray %
13308 2 2 moveto %
13309 2 98 lineto %
13310 248 98 lineto %
13311 246 96 lineto %
13312 4 96 lineto %
13313 4 4 lineto %
13314 fill %
13315 0.34 setgray %
13316 248 98 moveto %
13317 248 2 lineto %
13318 2 2 lineto %
13319 4 4 lineto %
13320 246 4 lineto %
13321 246 96 lineto %
13322 fill%
13323 /Helvetica 76 selectfont %
13324 0 setgray %
13325 8 22.5 moveto%
13326 (Submit)show%
13327 [/EP pdfmark%
13328 [%
13329 /BBox[0 0 250 100]%

```

13330  /_objdef{SubmitP}%
13331  /BP pdfmark %
13332  0.6 setgray %
13333  0 0 250 100 rectfill %
13334  0.34 setgray %
13335  2 2 moveto %
13336  2 98 lineto %
13337  248 98 lineto %
13338  246 96 lineto %
13339  4 96 lineto %
13340  4 4 lineto %
13341  fill %
13342  1 setgray %
13343  248 98 moveto %
13344  248 2 lineto %
13345  2 2 lineto %
13346  4 4 lineto %
13347  246 4 lineto %
13348  246 96 lineto %
13349  fill%
13350  /Helvetica 76 selectfont %
13351  0 setgray %
13352  10 20.5 moveto%
13353  (Submit)show%
13354  [/EP pdfmark%
13355  } ?pdfmark%
13356  [%
13357  {aform}%
13358  <<%
13359  /Fields{afields}%
13360  /DR<<%
13361  /Font<<%
13362  /ZaDb{ZaDb}%
13363  /Helv{Helv}%
13364  >>%
13365  >>%
13366  /DA(/Helv 10 Tf 0 g)%
13367  /CO{corder}%
13368  \ifHy@pdfa
13369  \else
13370  \ifHyField@NeedAppearances
13371  /NeedAppearances true%
13372  \fi
13373  \fi
13374  >>%
13375  /PUT pdfmark%
13376  [%
13377  {Catalog}%
13378  <<%
13379  /AcroForm{aform}%
13380  >>%
13381  /PUT pdfmark%
13382  }]%
13383  \kvsetkeys{Form}{#1}%
13384  }
13385  \let\@endForm\ltx@empty
13386  \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum

```



```

13387 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
13388 }

13389 \newcount\HyField@AnnotCount
13390 \HyField@AnnotCount=\z@
13391 \def\HyField@AdvanceAnnotCount{%
13392 \global\advance\HyField@AnnotCount\@ne
13393 }
13394 \def\HyField@TheAnnotCount{%
13395 \the\HyField@AnnotCount
13396 }

13397 \edef\Fld@pageobjref{/P\string{ThisPage\string}}

13398 \def\HyField@AddToFields#1{%
13399 \pdfmark{%
13400 pdfmark=/APPEND,%
13401 Raw={%
13402 \string{afields\string}%
13403 \string{#1\HyField@TheAnnotCount\string}%
13404 }%
13405 }%
13406 \ifx\Fld@calculate@code\ltx@empty
13407 \else
13408 \pdfmark{%
13409 pdfmark=/APPEND,%
13410 Raw={%
13411 \string{corder\string}%
13412 \string{#1\HyField@TheAnnotCount\string}%
13413 }%
13414 }%
13415 \fi
13416 }

13417 \def\@TextField[#1]#2{% parameters, label
13418 \def\Fld@name{#2}%
13419 \let\Fld@default\ltx@empty
13420 \let\Fld@value\@empty
13421 \def\Fld@width{\DefaultWidthofText}%
13422 \def\Fld@height{%
13423 \ifFld@multiline
13424 \DefaultHeightofTextMultiline
13425 \else
13426 \DefaultHeightofText
13427 \fi
13428 }%
13429 \begingroup
13430 \expandafter\HyField@SetKeys\expandafter{%
13431 \DefaultOptionsofText,#1%
13432 }%
13433 \HyField@FlagsText
13434 \ifFld@hidden\def\Fld@width{1sp}\fi
13435 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13436 \HyField@AdvanceAnnotCount
13437 \LayoutTextField{#2}{%
13438 \leavevmode
13439 \Hy@escapeform\PDFForm@Text
13440 \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
13441 pdfmark=/ANN,%
13442 objdef=text\HyField@TheAnnotCount,%

```

```

13443     Raw={\PDFForm@Text}%
13444     }%
13445     }%
13446     \HyField@AddToFields{text}%
13447 \endgroup
13448 }
13449 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13450 \def\Fld@name{#2}%
13451 \let\Fld@default\relax
13452 \let\Fld@value\relax
13453 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13454 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13455 \begingroup
13456   \Fld@menulength=0 %
13457   \@tempdima\z@
13458   \@for\@curropt:=#3\do{%
13459     \expandafter\Fld@checkequals\@curropt==\%
13460     \Hy@StepCount\Fld@menulength
13461     \settowidth{\@tempdimb}{\@currDisplay}%
13462     \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13463   }%
13464   \advance\@tempdima by 15\p@
13465   \begingroup
13466     \HyField@SetKeys{#1}%
13467   \edef\x{\endgroup
13468     \noexpand\expandafter
13469     \noexpand\HyField@SetKeys
13470     \noexpand\expandafter{%
13471       \expandafter\noexpand\cname DefaultOptionsof%
13472       \ifFld@radio
13473         Radio%
13474       \else
13475         \ifFld@combo
13476         \ifFld@popdown
13477         PopdownBox%
13478         \else
13479         ComboBox%
13480         \fi
13481         \else
13482         ListBox%
13483         \fi
13484         \fi
13485       \endcname
13486     }%
13487   }\x
13488   \HyField@SetKeys{#1}%
13489   \ifFld@hidden\def\Fld@width{1sp}\fi
13490   \ifx\Fld@value\relax
13491     \let\Fld@value\Fld@default
13492   \fi
13493 \LayoutChoiceField{#2}{%
13494   \ifFld@radio
13495     \HyField@FlagsRadioButton
13496     \@@Radio{#3}%
13497   \else
13498     \begingroup
13499     \HyField@FlagsChoice

```

```

13500     \ifdim\Fld@width<\@tempdima
13501     \ifdim\@tempdima<1cm\@tempdima1cm\fi
13502     \edef\Fld@width{\the\@tempdima}%
13503     \fi
13504     \ifFld@combo
13505     \else
13506     \@tempdima=\the\Fld@menulength\Fld@charsize
13507     \advance\@tempdima by \Fld@borderwidth bp %
13508     \advance\@tempdima by \Fld@borderwidth bp %
13509     \edef\Fld@height{\the\@tempdima}%
13510     \fi
13511     \@@ListBox{#3}%
13512     \endgroup
13513     \fi
13514     }%
13515 \endgroup
13516 }
13517 \def\@@Radio#1{%
13518   \Fld@listcount=0 %
13519   \EdefEscapeName\Fld@default{\Fld@default}%
13520   \@for\@curropt:=#1\do{%
13521     \expandafter\Fld@checkequals\@curropt==\%
13522     \EdefEscapeName\@currValue{\@currValue}%
13523     \Hy@StepCount\Fld@listcount
13524     \@currDisplay\space
13525     \Hy@escapeform\PDFForm@Radio
13526     \ifnum\Fld@listcount=1 %
13527       \HyField@AdvanceAnnotCount
13528     \fi
13529     \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
13530       pdfmark=/ANN,%
13531       objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
13532       Raw={%
13533         \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
13534       }%
13535     } % deliberate space between radio buttons
13536     \ifnum\Fld@listcount=1 %
13537       \HyField@AddToFields{radio}%
13538     \fi
13539   }%
13540 }
13541 \newcount\Fld@listcount
13542 \def\@@ListBox#1{%
13543   \HyField@PDFChoices{#1}%
13544   \Hy@escapeform\PDFForm@List
13545   \HyField@AdvanceAnnotCount
13546   \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
13547     pdfmark=/ANN,%
13548     objdef=list\HyField@TheAnnotCount,%
13549     Raw={\PDFForm@List}%
13550   }%
13551   \HyField@AddToFields{list}%
13552 }
13553 \def\@PushButton[#1]#2{% parameters, label
13554   \def\Fld@name{#2}%
13555   \begingroup
13556   \expandafter\HyField@SetKeys\expandafter{%

```

```

13557 \DefaultOptionsofPushButton,#1%
13558 }%
13559 \ifHy@pdfa
13560 \Hy@Error{%
13561 PDF/A: Push button with JavaScript is prohibited%
13562 } \@ehc
13563 \LayoutPushButtonField{%
13564 \leavevmode
13565 \MakeButtonField{#2}%
13566 }%
13567 \else
13568 \HyField@FlagsPushButton
13569 \ifFld@hidden\def\Fld@width{1sp}\fi
13570 \HyField@AdvanceAnnotCount
13571 \LayoutPushButtonField{%
13572 \leavevmode
13573 \Hy@escapeform\PDFForm@Push
13574 \pdfmark[\MakeButtonField{#2}]{%
13575 pdfmark=/ANN,%
13576 objdef=push\HyField@TheAnnotCount,%
13577 Raw={\PDFForm@Push}%
13578 }%
13579 }%
13580 \HyField@AddToFields{push}%
13581 \fi
13582 \endgroup
13583 }
13584 \def\@Submit[#1]#2{%
13585 \def\Fld@width{\DefaultWidthofSubmit}%
13586 \def\Fld@height{\DefaultHeightofSubmit}%
13587 \begingroup
13588 \expandafter\HyField@SetKeys\expandafter{%
13589 \DefaultOptionsofSubmit,#1%
13590 }%
13591 \HyField@FlagsPushButton
13592 \HyField@FlagsSubmit
13593 \ifFld@hidden\def\Fld@width{1sp}\fi
13594 \Hy@escapeform\PDFForm@Submit
13595 \HyField@AdvanceAnnotCount
13596 \pdfmark[\MakeButtonField{#2}]{%
13597 pdfmark=/ANN,%
13598 objdef=submit\HyField@TheAnnotCount,%
13599 Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}%
13600 }%
13601 \HyField@AddToFields{submit}%
13602 \endgroup
13603 }
13604 \def\@Reset[#1]#2{%
13605 \def\Fld@width{\DefaultWidthofReset}%
13606 \def\Fld@height{\DefaultHeightofReset}%
13607 \begingroup
13608 \expandafter\HyField@SetKeys\expandafter{%
13609 \DefaultOptionsofReset,#1%
13610 }%
13611 \leavevmode
13612 \ifHy@pdfa
13613 \Hy@Error{%

```

```

13614     PDF/A: Reset action is prohibited%
13615   }\@ehc
13616   \MakeButtonField{#2}%
13617   \else
13618     \HyField@FlagsPushButton
13619     \ifFld@hidden\def\Fld@width{1sp}\fi
13620     \Hy@escapeform\PDFForm@Reset
13621     \HyField@AdvanceAnnotCount
13622     \pdfmark[\MakeButtonField{#2}]{%
13623       pdfmark=/ANN,%
13624       objdef=reset\HyField@TheAnnotCount,%
13625       Raw={\PDFForm@Reset}%
13626     }%
13627     \HyField@AddToFields{reset}%
13628   \fi
13629 \endgroup
13630 }%
13631 \def\@CheckBox[#1]#2{% parameters, label
13632   \def\Fld@name{#2}%
13633   \def\Fld@default{0}%
13634   \begingroup
13635     \def\Fld@width{\DefaultWidthofCheckBox}%
13636     \def\Fld@height{\DefaultHeightofCheckBox}%
13637     \expandafter\HyField@SetKeys\expandafter{%
13638       \DefaultOptionsofCheckBox,#1%
13639     }%
13640     \HyField@FlagsCheckBox
13641     \ifFld@hidden\def\Fld@width{1sp}\fi
13642     \HyField@AdvanceAnnotCount
13643     \LayoutCheckField{#2}{%
13644       \leavevmode
13645       \Hy@escapeform\PDFForm@Check
13646       \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
13647         pdfmark=/ANN,%
13648         objdef=check\HyField@TheAnnotCount,%
13649         Raw={\PDFForm@Check}%
13650       }%
13651     }%
13652     \HyField@AddToFields{check}%
13653   \endgroup
13654 }
13655 \
```

48.2 HyperTeX

```

13656 \hypertex
13657 \def\@Form[#1]{%
13658   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13659 }
13660 \let\@endForm\ltx@empty
13661 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13662   \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
13663 }
13664 \def\@TextField[#1]#2{% parameters, label
13665   \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
13666 }
13667 \def\@CheckBox[#1]#2{% parameters, label
13668   \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%

```

```

13669 }
13670 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13671 \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
13672 }
13673 \def\@PushButton[#1]#2{% parameters, label
13674 \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
13675 }
13676 \def\@Reset[#1]#2{%
13677 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13678 }
13679 \def\@Submit[#1]#2{%
13680 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13681 }
13682 </hypertex>

```

48.3 TeX4ht

```

13683 (*tex4ht)
13684 \def\@Form[#1]{%
13685 \kvsetkeys{Form}{#1}%
13686 \HCode{<form action="\Form@action" method="\Form@method">%
13687 }
13688 \def\@endForm{\HCode{</form>}}
13689 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13690 \Hy@Message{Sorry, TeX4ht does not support gauges}%
13691 }
13692 \def\@TextField[#1]#2{% parameters, label
13693 \let\Hy@reserved@a\@empty
13694 \def\Fld@name{#2}%
13695 \let\Fld@default\tx@empty
13696 \bgroup
13697 \Field@toks={ }%
13698 \kvsetkeys{Field}{#1}%
13699 \HCode{<label for="\Fld@name">#2</label>}%
13700 \ifFld@password
13701 \@@PasswordField
13702 \else
13703 \@@TextField
13704 \fi
13705 \egroup
13706 }
13707 \def\@@PasswordField{%
13708 \HCode{%
13709 <input type="password" %
13710 id="\Fld@name" %
13711 name="\Fld@name" %
13712 \ifFld@hidden type="hidden" \fi
13713 value="\Fld@default" %
13714 \the\Field@toks
13715 >%
13716 }%
13717 }
13718 \def\@@TextField{%
13719 \ifFld@multiline
13720 \HCode{<textarea %
13721 \ifFld@readonly readonly \fi
13722 id="\Fld@name" %
13723 name="\Fld@name" %

```

```

13724     \ifFld@hidden type="hidden" \fi
13725     \the\Field@toks>%
13726   }%
13727   \Fld@default
13728   \HCode{</textarea>}%
13729 \else
13730   \HCode{<input type="textbox" %
13731     \ifFld@readonly readonly \fi
13732     id="\Fld@name" %
13733     name="\Fld@name" %
13734     \ifFld@hidden type="hidden" \fi
13735     value="\Fld@default" %
13736     \the\Field@toks>%
13737   }%
13738 \fi
13739 }
13740 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13741   \def\Fld@name{#2}%
13742   \let\Fld@default\tx@empty
13743   \let\Hy@reserved@a\relax
13744   \begingroup
13745     \expandafter\Fld@findlength#3\\%
13746     \Field@toks={ }%
13747     \kvsetkeys{Field}{#1}%
13748     #2%
13749     \ifFld@radio
13750       \expandafter\@@Radio#3\\%
13751     \else
13752       \expandafter\@@Menu#3\\%
13753     \fi
13754   \endgroup
13755 }
13756 \def\Fld@findlength#1\\{%
13757   \Fld@menulength=0 %
13758   \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
13759 }
13760 \def\@@Menu#1\\{%
13761   \HCode{<select size="\the\Fld@menulength" %
13762     name="\Fld@name" %
13763     \the\Field@toks>%
13764   }%
13765   \@for\@curropt:=#1\do{%
13766     \expandafter\Fld@checkequals\@curropt==\\%
13767     \HCode{<option %
13768       \ifx\@curropt\Fld@default selected \fi
13769       value="\@currValue">\@currDisplay</option>%
13770     }%
13771   }%
13772   \HCode{</select>}%
13773 }
13774 \def\@@Radio#1\\{%
13775   \@for\@curropt:=#1\do{%
13776     \expandafter\Fld@checkequals\@curropt==\\%
13777     \HCode{<input type="radio" %
13778       \ifx\@curropt\Fld@default checked \fi
13779       name="\Fld@name" %
13780       value="\@currValue" %

```

```

13781 \the\Field@toks>%
13782 }%
13783 \@currDisplay
13784 }%
13785 }
13786 \def\@PushButton[#1]#2{% parameters, label
13787 \def\Fld@name{#2}%
13788 \bgroup
13789 \Field@toks={ }%
13790 \kvsetkeys{Field}{#1}%
13791 \HCode{<input type="button" %
13792 name="\Fld@name" %
13793 value="#2" %
13794 \the\Field@toks>%
13795 }%
13796 \HCode{</button>}%
13797 \egroup
13798 }
13799 \def\@Submit[#1]#2{%
13800 \HCode{<button type="submit">#2</button>}%
13801 }
13802 \def\@Reset[#1]#2{%
13803 \HCode{<button type="reset">#2</button>}%
13804 }
13805 \def\@CheckBox[#1]#2{% parameters, label
13806 \let\Hy@reserved@a\@empty
13807 \def\Fld@name{#2}%
13808 \def\Fld@default{0}%
13809 \bgroup
13810 \Field@toks={ }%
13811 \kvsetkeys{Field}{#1}%
13812 \HCode{<input type="checkbox" %
13813 \ifFld@checked checked \fi
13814 \ifFld@disabled disabled \fi
13815 \ifFld@readonly readonly \fi
13816 name="\Fld@name" %
13817 \ifFld@hidden type="hidden" \fi
13818 value="\Fld@default" %
13819 \the\Field@toks>%
13820 #2%
13821 }%
13822 \egroup
13823 }
13824 </tex4ht>

```

48.4 pdfTeX

```

13825 (*pdfTeX)
13826 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13827 \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
13828 }
13829 \def\MakeFieldObject#1#2{\sbox0{#1}%
13830 \immediate\pdfxform0 %
13831 \expandafter\edef\csname #2Object\endcsname{%
13832 \the\pdflastxform\space 0 R%
13833 }%
13834 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}%
13835 }%

```



```

13836 \let\HyField@afields\ltx@empty
13837 \let\HyField@cofields\ltx@empty
13838 \begingroup\expandafter\expandafter\expandafter\endgroup
13839 \expandafter\ifx\csname pdfastlink\endcsname\relax
13840 \let\HyField@AddToFields\relax
13841 \PackageInfo{hyperref}{%
13842   You need pdfTeX 1.40.0 for setting the /Fields entry.%
13843   \MessageBreak
13844   Adobe Reader/Acrobat accepts an empty /Field array,%
13845   \MessageBreak
13846   but other PDF viewers might complain%
13847 }%
13848 \else
13849 \let\HyField@AuxAddToFields\ltx@gobble
13850 \let\HyField@AuxAddToCoFields\ltx@gobbletwo
13851 \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%

```

Insertion sort for calculation field list. In case of equal sort keys (for example, if ‘calculatesortkey’ is not used at all) the keys keep document calling order.

```

13852 \def\HyField@ABD@AuxAddToCoFields#1#2{%
13853   \begingroup
13854     \Hy@safe@activestrue
13855     \let\ltx@secondoftwo\relax
13856     \ifx\HyField@cofields\ltx@empty
13857       \xdef\HyField@cofields{%
13858         \ltx@secondoftwo{#1}{ #2 0 R}%
13859       }%
13860     \else
13861       \let\ltx@secondoftwo\relax
13862       \def\HyField@AddCoField##1##2##3{%
13863         \ifx##1\ltx@empty
13864           \ltx@secondoftwo{#1}{ #2 0 R}%
13865           \expandafter\ltx@gobble
13866         \else
13867           \ifnum\pdfstrcmp{##2}{#1}>\ltx@zero
13868             \ltx@secondoftwo{#1}{ #2 0 R}%
13869             \ltx@secondoftwo{##2}{##3}%
13870             \expandafter\expandafter\expandafter\ltx@gobble
13871           \else
13872             \ltx@secondoftwo{##2}{##3}%
13873           \fi
13874         \fi
13875         \HyField@AddCoField
13876       }%
13877       \xdef\HyField@cofields{%
13878         \expandafter\HyField@AddCoField
13879         \HyField@cofields\ltx@empty\ltx@empty\ltx@empty
13880       }%
13881     \fi
13882   \endgroup
13883 }%
13884 \Hy@AtBeginDocument{%
13885   \if@filesw
13886     \immediate\write\@mainaux{%
13887       \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13888     }%
13889     \immediate\write\@mainaux{%
13890       \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%

```

```

13891 }%
13892 \fi
13893 \let\HyField@AfterAuxOpen\@firstofone
13894 \def\HyField@AuxAddToFields#1{%
13895 \xdef\HyField@afields{%
13896 \ifx\HyField@afields\@empty
13897 \else
13898 \HyField@afields
13899 \space
13900 \fi
13901 #1 0 R%
13902 }%
13903 }%
13904 \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
13905 }%
13906 \def\HyField@AddToFields{%
13907 \expandafter\HyField@@AddToFields\expandafter{%
13908 \the\pdfastlink
13909 }%
13910 \ifx\Fld@calculate@code\ltx@empty
13911 \else
13912 \begingroup
13913 \Hy@safe@activestrue
13914 \edef\Hy@temp{%
13915 \endgroup
13916 \if@filesw
13917 \write\@mainaux{%
13918 \string\HyField@AuxAddToCoFields{%
13919 \Fld@calculate@sortkey
13920 }{%
13921 \the\pdfastlink
13922 }%
13923 }%
13924 \fi
13925 }%
13926 \Hy@temp
13927 \fi
13928 }%
13929 \def\HyField@@AddToFields#1{%
13930 \HyField@AfterAuxOpen{%
13931 \if@filesw
13932 \write\@mainaux{%
13933 \string\HyField@AuxAddToFields{#1}%
13934 }%
13935 \fi
13936 }%
13937 }%
13938 \fi
13939 \def\@Form[#1]{%
13940 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13941 \kvsetkeys{Form}{#1}%
13942 \pdf@ifdraftmode{}{%
13943 \Hy@FormObjects
13944 \ifnum\pdfTeXversion>13 %
13945 \pdfrefobj\OBJ@pdfdocencoding
13946 \pdfrefobj\OBJ@ZaDb
13947 \pdfrefobj\OBJ@Helv

```

```

13948 \fi
13949 \AtVeryEndDocument{%
13950 \immediate\pdfobj{%
13951 <<%
13952 /Fields[\HyField@afields]%
13953 \ifx\HyField@cofields\ltx@empty
13954 \else
13955 /CO[\romannumeral-`\Q\HyField@cofields]%
13956 \fi
13957 /DR<<%
13958 /Font<<%
13959 /ZaDb \OBJ@ZaDb\space 0 R%
13960 /Helv \OBJ@Helv\space 0 R%
13961 >>%
13962 >>%
13963 /DA(/Helv 10 Tf 0 g)%
13964 \ifHy@pdfa
13965 \else
13966 \ifHyField@NeedAppearances
13967 /NeedAppearances true%
13968 \fi
13969 \fi
13970 >>%
13971 }%
13972 \edef\OBJ@acroform{\the\pdflastobj}%
13973 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13974 }%
13975 }%
13976 \MakeFieldObject{%
Same as \ding{123} of package pifont.
13977 \begingroup
13978 \fontfamily{pzd}%
13979 \fontencoding{U}%
13980 \fontseries{m}%
13981 \fontshape{n}%
13982 \selectfont
13983 \char123 %
13984 \endgroup
13985 }{Ding}%
13986 \MakeFieldObject{%
13987 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
13988 }{Submit}%
13989 \MakeFieldObject{%
13990 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
13991 }{SubmitP}%
13992 }
13993 \let\@endForm\ltx@empty
13994 \let\HyAnn@AbsPageLabel\ltx@empty
13995 \let\Fld@pageobjref\ltx@empty
13996 \ltx@ifundefined{pdfpageref}{%
13997 }{%
13998 \ltx@ifpackageloaded{zref-abspage}{%
13999 \newcount\HyAnn@Count
14000 \HyAnn@Count=\ltx@zero
14001 \def\HyAnn@AbsPageLabel{%
14002 \global\advance\HyAnn@Count by\ltx@one
14003 \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%

```

```

14004 \zref@refused{HyAnn@the\HyAnn@Count}%
14005 }%
14006 \def\Fld@pageobjref{%
14007 \zref@ifrefundefined{HyAnn@the\HyAnn@Count}{%
14008 }{%
14009 \zref@ifrefcontainsprop{HyAnn@the\HyAnn@Count}{abspage}{%
14010 /P \pdfpageref
14011 \zref@extractdefault{HyAnn@the\HyAnn@Count}{abspage}{1} %
14012 \space 0 R%
14013 }{%
14014 }%
14015 }%
14016 }%
14017 }{%
14018 }%
14019 }

14020 \def\@TextField[#1]#2{% parameters, label
14021 \def\Fld@name{#2}%
14022 \let\Fld@default\tx@empty
14023 \let\Fld@value\@empty
14024 \def\Fld@width{\DefaultWidthofText}%
14025 \def\Fld@height{%
14026 \ifFld@multiline
14027 \DefaultHeightofTextMultiline
14028 \else
14029 \DefaultHeightofText
14030 \fi
14031 }%
14032 \begingroup
14033 \expandafter\HyField@SetKeys\expandafter{%
14034 \DefaultOptionsofText,#1%
14035 }%
14036 \PDFForm@Name
14037 \HyField@FlagsText
14038 \ifFld@hidden\def\Fld@width{1sp}\fi
14039 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14040 \LayoutTextField{#2}{%
14041 \leavevmode
14042 \HyAnn@AbsPageLabel
14043 \Hy@escapeform\PDFForm@Text
14044 \pdfstartlink user {\PDFForm@Text}\relax
14045 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
14046 \HyField@AddToFields
14047 }%
14048 \endgroup
14049 }

14050 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14051 \def\Fld@name{#2}%
14052 \let\Fld@default\relax
14053 \let\Fld@value\relax
14054 \def\Fld@width{\DefaultWidthofChoiceMenu}%
14055 \def\Fld@height{\DefaultHeightofChoiceMenu}%
14056 \begingroup
14057 \Fld@menulength=0 %
14058 \@tempdima\z@
14059 \@for\@curropt:=#3\do{%
14060 \expandafter\Fld@checkequals\@curropt==\%

```

```

14061 \Hy@StepCount\Fld@menulength
14062 \settowidth{\@tempdimb}{\@currDisplay}%
14063 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14064 }%
14065 \advance\@tempdima by 15\p@
14066 \begingroup
14067 \HyField@SetKeys{#1}%
14068 \edef\x{\endgroup
14069 \noexpand\expandafter
14070 \noexpand\HyField@SetKeys
14071 \noexpand\expandafter{%
14072 \expandafter\noexpand\csname DefaultOptionsof%
14073 \ifFld@radio
14074 Radio%
14075 \else
14076 \ifFld@combo
14077 \ifFld@popdown
14078 PopdownBox%
14079 \else
14080 ComboBox%
14081 \fi
14082 \else
14083 ListBox%
14084 \fi
14085 \fi
14086 \endcsname
14087 }%
14088 }\x
14089 \HyField@SetKeys{#1}%
14090 \PDFForm@Name
14091 \ifFld@hidden\def\Fld@width{1sp}\fi
14092 \ifx\Fld@value\relax
14093 \let\Fld@value\Fld@default
14094 \fi
14095 \LayoutChoiceField{#2}{%
14096 \ifFld@radio
14097 \HyField@FlagsRadioButton
14098 \@@Radio{#3}%
14099 \else
14100 \begingroup
14101 \HyField@FlagsChoice
14102 \ifdim\Fld@width<\@tempdima
14103 \ifdim\@tempdima<1cm\@tempdima1cm\fi
14104 \edef\Fld@width{\the\@tempdima}%
14105 \fi
14106 \ifFld@combo
14107 \else
14108 \@tempdima=\the\Fld@menulength\Fld@charsize
14109 \advance\@tempdima by \Fld@borderwidth bp %
14110 \advance\@tempdima by \Fld@borderwidth bp %
14111 \edef\Fld@height{\the\@tempdima}%
14112 \fi
14113 \@@Listbox{#3}%
14114 \endgroup
14115 \fi
14116 }%
14117 \endgroup

```

```

14118 }
14119 \def\@@Radio#1{%
14120 \Fld@listcount=0 %
14121 \EdefEscapeName\Fld@default{\Fld@default}%
14122 \@for\@curropt:=#1\do{%
14123 \expandafter\Fld@checkequals\@curropt==\%
14124 \EdefEscapeName\@currValue{\@currValue}%
14125 \Hy@StepCount\Fld@listcount
14126 \@currDisplay\space
14127 \leavevmode
14128 \HyAnn@AbsPageLabel
14129 \Hy@escapeform\PDFForm@Radio
14130 \pdfstartlink user {%
14131 \PDFForm@Radio
14132 /AP<<%
14133 /N<<%

```

Laurent.Guillope@math.univ-nantes.fr (Laurent Guillope) persuades me that this was wrong: `/\Fld@name\the\Fld@listcount`. But I leave it here to remind me that it is untested.

```

14134 \/\@currValue\space \DingObject
14135 >>%
14136 >>%
14137 }%
14138 \relax
14139 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
14140 \ifnum\Fld@listcount=1 %
14141 \HyField@AddToFields
14142 \fi
14143 \space % deliberate space between radio buttons
14144 }%
14145 }
14146 \newcount\Fld@listcount
14147 \def\@@ListBox#1{%
14148 \HyField@PDFChoices{#1}%
14149 \leavevmode
14150 \HyAnn@AbsPageLabel
14151 \Hy@escapeform\PDFForm@List
14152 \pdfstartlink user {\PDFForm@List}\relax
14153 \MakeChoiceField{\Fld@width}{\Fld@height}%
14154 \pdfendlink
14155 \HyField@AddToFields
14156 }
14157 \def\@PushButton[#1]#2{% parameters, label
14158 \def\Fld@name{#2}%
14159 \begingroup
14160 \expandafter\HyField@SetKeys\expandafter{%
14161 \DefaultOptionsofPushButton,#1%
14162 }%
14163 \PDFForm@Name
14164 \ifHy@pdfa
14165 \Hy@Error{%
14166 PDF/A: Push button with JavaScript is prohibited%
14167 }\@ehc
14168 \LayoutPushButtonField{%
14169 \leavevmode
14170 \MakeButtonField{#2}%
14171 }%

```

```

14172 \else
14173 \HyField@FlagsPushButton
14174 \ifFld@hidden\def\Fld@width{1sp}\fi
14175 \LayoutPushButtonField{%
14176 \leavevmode
14177 \HyAnn@AbsPageLabel
14178 \Hy@escapeform\PDFForm@Push
14179 \pdfstartlink user {\PDFForm@Push}\relax
14180 \MakeButtonField{#2}%
14181 \pdfendlink
14182 \HyField@AddToFields
14183 }%
14184 \fi
14185 \endgroup
14186 }
14187 \def\@Submit[#1]#2{%
14188 \def\Fld@width{\DefaultWidthofSubmit}%
14189 \def\Fld@height{\DefaultHeightofSubmit}%
14190 \begingroup
14191 \expandafter\HyField@SetKeys\expandafter{%
14192 \DefaultOptionsofSubmit,#1%
14193 }%
14194 \HyField@FlagsPushButton
14195 \HyField@FlagsSubmit
14196 \ifFld@hidden\def\Fld@width{1sp}\fi
14197 \leavevmode
14198 \HyAnn@AbsPageLabel
14199 \Hy@escapeform\PDFForm@Submit
14200 \pdfstartlink user {%
14201 \PDFForm@Submit
14202 /AP<</N \SubmitObject/D \SubmitPObject>>%
14203 }%
14204 \relax
14205 \MakeButtonField{#2}%
14206 \pdfendlink
14207 \HyField@AddToFields
14208 \endgroup
14209 }
14210 \def\@Reset[#1]#2{%
14211 \def\Fld@width{\DefaultWidthofReset}%
14212 \def\Fld@height{\DefaultHeightofReset}%
14213 \begingroup
14214 \expandafter\HyField@SetKeys\expandafter{%
14215 \DefaultOptionsofReset,#1%
14216 }%
14217 \leavevmode
14218 \ifHy@pdfa
14219 \Hy@Error{%
14220 PDF/A: Reset action is prohibited%
14221 }\@ehc
14222 \MakeButtonField{#2}%
14223 \else
14224 \HyField@FlagsPushButton
14225 \ifFld@hidden\def\Fld@width{1sp}\fi
14226 \HyAnn@AbsPageLabel
14227 \Hy@escapeform\PDFForm@Reset
14228 \pdfstartlink user {\PDFForm@Reset}\relax

```

```

14229 \MakeButtonField{#2}%
14230 \pdfendlink
14231 \HyField@AddToFields
14232 \fi
14233 \endgroup
14234 }
14235 \def\@CheckBox[#1]#2{% parameters, label
14236 \def\Fld@name{#2}%
14237 \def\Fld@default{0}%
14238 \beginingroup
14239 \def\Fld@width{\DefaultWidthofCheckBox}%
14240 \def\Fld@height{\DefaultHeightofCheckBox}%
14241 \expandafter\HyField@SetKeys\expandafter{%
14242 \DefaultOptionsofCheckBox,#1%
14243 }%
14244 \PDFForm@Name
14245 \HyField@FlagsCheckBox
14246 \ifFld@hidden\def\Fld@width{1sp}\fi
14247 \LayoutCheckField{#2}{%
14248 \leavevmode
14249 \HyAnn@AbsPageLabel
14250 \Hy@escapeform\PDFForm@Check
14251 \pdfstartlink user {\PDFForm@Check}\relax
14252 \MakeCheckField{\Fld@width}{\Fld@height}%
14253 \pdfendlink
14254 \HyField@AddToFields
14255 }%
14256 \endgroup
14257 }
14258 \def\Hy@FormObjects{%
14259 \pdfobj {%
14260 <<%
14261 /Type/Encoding%
14262 /Differences[%
14263 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
14264 /ring/tilde %
14265 39/quotesingle %
14266 96/grave %
14267 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14268 /fraction/guilsinglleft/guilsingright/minus/perthousand%
14269 /quotedblbase/quotedblleft/quotedblright/quoteleft%
14270 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
14271 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14272 164/currency %
14273 166/brokenbar %
14274 168/dieresis/copyright/ordfeminine %
14275 172/logicalnot/.notdef/registered/macron/degree/plusminus%
14276 /twosuperior/threesuperior/acute/mu %
14277 183/periodcentered/cedilla/onesuperior/ordmasculine %
14278 188/onequarter/onehalf/threequarters %
14279 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14280 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
14281 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
14282 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
14283 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
14284 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
14285 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%

```



```

14286      /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
14287      /ocircumflex/otilde/odieresis/divide/oshlash/ugrave%
14288      /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
14289      ]%
14290      >>%
14291      }%
14292      \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
14293      \pdfobj{%
14294      <<%
14295      /Type/Font%
14296      /Subtype/Type1%
14297      /Name/ZaDb%
14298      /BaseFont/ZapfDingbats%
14299      >>%
14300      }%
14301      \xdef\OBJ@ZaDb{\the\pdflastobj}%
14302      \pdfobj{%
14303      <<%
14304      /Type/Font%
14305      /Subtype/Type1%
14306      /Name/Helv%
14307      /BaseFont/Helvetica%
14308      /Encoding \OBJ@pdfdocencoding\space 0 R%
14309      >>%
14310      }%
14311      \xdef\OBJ@Helv{\the\pdflastobj}%
14312      \global\let\Hy@FormObjects\relax
14313      }
14314      </pdfTeX>

```

48.5 dvipdfm, xetex

D. P. Story adapted the pdf \TeX forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```
14315 <*dvipdfm | xetex>
```

\@Gauge

```

14316 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
14317   \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
14318 }

```

\@Form

```

14319 \def\@Form[#1]{%
14320   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
14321   \kvsetkeys{Form}{#1}%
14322   \Hy@FormObjects
14323   \@pdfm@mark{obj @afields []}%
14324   \@pdfm@mark{obj @corder []}%
14325   \@pdfm@mark{%
14326     obj @aform <<%
14327     /Fields @afields%
14328     /DR<<%
14329     /Font<<%
14330     /ZaDb @OBJZaDb%
14331     /Helv @OBJHelv%
14332     >>%
14333     >>%
14334     /DA(/Helv 10 Tf 0 g)%

```

```

14335 /CO @corder%
14336 \ifHy@pdfa
14337 \else
14338 \ifHyField@NeedAppearances
14339 /NeedAppearances true%
14340 \fi
14341 \fi
14342 >>%
14343 }%
14344 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
14345 }

```

\@endForm

```
14346 \let\@endForm\ltx@empty
```

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

```

14347 \def\dvipdfm@setdim{%
14348 height \the\ht\pdfm@box\space
14349 width \the\wd\pdfm@box\space
14350 depth \the\dp\pdfm@box\space
14351 }

```

\HyField@AnnotCount

```

14352 \newcount\HyField@AnnotCount
14353 \HyField@AnnotCount=\z@

```

\HyField@AdvanceAnnotCount

```

14354 \def\HyField@AdvanceAnnotCount{%
14355 \global\advance\HyField@AnnotCount\@ne
14356 }

```

\HyField@TheAnnotCount

```

14357 \def\HyField@TheAnnotCount{%
14358 \the\HyField@AnnotCount
14359 }

```

\Fld@pageobjref

```
14360 \def\Fld@pageobjref{/P @thispage}%
```

\HyField@AddToFields

```

14361 \def\HyField@AddToFields#1{%
14362 \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%
14363 \ifx\Fld@calculate@code\ltx@empty
14364 \else
14365 \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%
14366 \fi
14367 }

```

\@TextField

```

14368 \def\@TextField[#1]#2{% parameters, label
14369 \def\Fld@name{#2}%
14370 \let\Fld@default\ltx@empty
14371 \let\Fld@value\@empty
14372 \def\Fld@width{\DefaultWidthofText}%
14373 \def\Fld@height{%
14374 \ifFld@multiline

```

```

14375 \DefaultHeightofTextMultiline
14376 \else
14377 \DefaultHeightofText
14378 \fi
14379 }%
14380 \begingroup
14381 \expandafter\HyField@SetKeys\expandafter{%
14382 \DefaultOptionsofText,#1%
14383 }%
14384 \PDFForm@Name
14385 \HyField@FlagsText
14386 \ifFld@hidden\def\Fld@width{1sp}\fi
14387 \ifx\Fld@value\empty\def\Fld@value{\Fld@default}\fi
14388 \setbox\pdfm@box=\hbox{%
14389 \MakeTextField{\Fld@width}{\Fld@height}%
14390 }%
14391 \HyField@AdvanceAnnotCount
14392 \LayoutTextField{#2}{%
14393 \leavevmode
14394 \Hy@escapeform\PDFForm@Text
14395 \@pdfm@mark{%
14396 ann @text\HyField@TheAnnotCount\space
14397 \dviPDFm@setdim << \PDFForm@Text >>%
14398 }%
14399 }%
14400 \unhbox\pdfm@box
14401 \HyField@AddToFields{text}%
14402 % record in @afields array
14403 \endgroup
14404 }

```

\@ChoiceMenu

```

14405 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14406 \def\Fld@name{#2}%
14407 \let\Fld@default\relax
14408 \let\Fld@value\relax
14409 \def\Fld@width{\DefaultWidthofChoiceMenu}%
14410 \def\Fld@height{\DefaultHeightofChoiceMenu}%
14411 \begingroup
14412 \Fld@menulength=0 %
14413 \@tempdima\z@
14414 \@for\@curropt:=#3\do{%
14415 \expandafter\Fld@checkequals\@curropt==\%
14416 \Hy@StepCount\Fld@menulength
14417 \settowidth{\@tempdimb}{\@currDisplay}%
14418 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14419 }%
14420 \advance\@tempdima by 15\p@
14421 \begingroup
14422 \HyField@SetKeys{#1}%
14423 \edef\x{\endgroup
14424 \noexpand\expandafter
14425 \noexpand\HyField@SetKeys
14426 \noexpand\expandafter{%
14427 \expandafter\noexpand\cname DefaultOptionsof%
14428 \ifFld@radio
14429 Radio%
14430 \else

```

```

14431     \ifFld@combo
14432     \ifFld@popdown
14433         PopdownBox%
14434     \else
14435         ComboBox%
14436     \fi
14437     \else
14438         ListBox%
14439     \fi
14440 \fi
14441 \endcsname
14442 }%
14443 }\x
14444 \HyField@SetKeys{#1}%
14445 \PDFForm@Name
14446 \ifFld@hidden\def\Fld@width{1sp}\fi
14447 \ifx\Fld@value\relax
14448     \let\Fld@value\Fld@default
14449 \fi
14450 \LayoutChoiceField{#2}{%
14451     \ifFld@radio
14452     \HyField@FlagsRadioButton
14453     \@@Radio{#3}%
14454     \else
14455     \begingroup
14456     \HyField@FlagsChoice
14457     \ifdim\Fld@width<\@tempdima
14458     \ifdim\@tempdima<1cm\@tempdima1cm\fi
14459     \edef\Fld@width{\the\@tempdima}%
14460     \fi
14461     \ifFld@combo
14462     \else
14463     \@tempdima=\the\Fld@menulength\Fld@charsize
14464     \advance\@tempdima by \Fld@borderwidth bp %
14465     \advance\@tempdima by \Fld@borderwidth bp %
14466     \edef\Fld@height{\the\@tempdima}%
14467     \fi
14468     \@@ListBox{#3}%
14469     \endgroup
14470 \fi
14471 }%
14472 \endgroup
14473 }

```

\@@Radio

```

14474 \def\@@Radio#1{%
14475     \Fld@listcount=0 %
14476     \EdefEscapeName\Fld@default{\Fld@default}%
14477     \setbox\pdfm@box=\hbox{%
14478         \MakeRadioField{\Fld@width}{\Fld@height}%
14479     }%
14480     \@for\@curropt:=#1\do{%
14481         \expandafter\Fld@checkequals\@curropt==\%
14482         \EdefEscapeName\@currValue{\@currValue}%
14483         \Hy@StepCount\Fld@listcount
14484         \@currDisplay\space
14485         \leavevmode
14486         \Hy@escapeform\PDFForm@Radio

```

```

14487 \ifnum\Fld@listcount=1 %
14488 \HyField@AdvanceAnnotCount
14489 \fi
14490 \@pdfm@mark{%
14491 ann %
14492 \ifnum\Fld@listcount=1 %
14493 @radio\HyField@TheAnnotCount%
14494 \space
14495 \fi
14496 \dviPDFm@setdim
14497 <<%
14498 \PDFForm@Radio
14499 /AP<</N<</\@currValue /null>>>%
14500 >>%
14501 }%
14502 \unhcopy\pdfm@box\space% deliberate space between radio buttons
14503 \ifnum\Fld@listcount=1 %
14504 \HyField@AddToFields{radio}%
14505 \fi
14506 }%
14507 }

```

\Fld@listcount

```
14508 \newcount\Fld@listcount
```

\@@ListBox

```

14509 \def\@@ListBox#1{%
14510 \HyField@PDFChoices{#1}%
14511 \setbox\pdfm@box=\hbox{%
14512 \MakeChoiceField{\Fld@width}{\Fld@height}%
14513 }%
14514 \leavevmode
14515 \Hy@escapeform\PDFForm@List
14516 \HyField@AdvanceAnnotCount
14517 \@pdfm@mark{%
14518 ann @list\HyField@TheAnnotCount\space
14519 \dviPDFm@setdim
14520 <<\PDFForm@List>>%
14521 }%
14522 \unhbox\pdfm@box
14523 \HyField@AddToFields{list}%
14524 }

```

\@PushButton

```

14525 \def\@PushButton[#1]#2{% parameters, label
14526 \def\Fld@name{#2}%
14527 \begingroup
14528 \expandafter\HyField@SetKeys\expandafter{%
14529 \DefaultOptionsofPushButton,#1%
14530 }%
14531 \PDFForm@Name
14532 \ifHy@pdfa
14533 \Hy@Error{%
14534 PDF/A: Push button with JavaScript is prohibited%
14535 } \@ehc
14536 \LayoutPushButtonField{%
14537 \leavevmode

```

```

14538     \MakeButtonField{#2}%
14539   }%
14540 \else
14541   \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14542   \HyField@FlagsPushButton
14543   \ifFld@hidden\def\Fld@width{1sp}\fi
14544   \HyField@AdvanceAnnotCount
14545   \LayoutPushButtonField{%
14546     \leavevmode
14547     \Hy@escapeform\PDFForm@Push
14548     \@pdfm@mark{%
14549       ann @push\HyField@TheAnnotCount\space
14550       \dvipdfm@setdim
14551       <<\PDFForm@Push>>%
14552     }%
14553   }%
14554   \unhbox\pdfm@box
14555   \HyField@AddToFields{push}%
14556 \fi
14557 \endgroup
14558 }

```

\@Submit

```

14559 \def\@Submit[#1]#2{%
14560   \def\Fld@width{\DefaultWidthofSubmit}%
14561   \def\Fld@height{\DefaultHeightofSubmit}%
14562   \begingroup
14563   \expandafter\HyField@SetKeys\expandafter{%
14564     \DefaultOptionsofSubmit,#1%
14565   }%
14566   \HyField@FlagsPushButton
14567   \HyField@FlagsSubmit
14568   \ifFld@hidden\def\Fld@width{1sp}\fi
14569   \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14570   \leavevmode
14571   \Hy@escapeform\PDFForm@Submit
14572   \HyField@AdvanceAnnotCount
14573   \@pdfm@mark{%
14574     ann @submit\HyField@TheAnnotCount\space
14575     \dvipdfm@setdim
14576     <<\PDFForm@Submit>>%
14577   }%
14578   \unhbox\pdfm@box%
14579   \HyField@AddToFields{submit}%
14580 \endgroup
14581 }

```

\@Reset

```

14582 \def\@Reset[#1]#2{%
14583   \def\Fld@width{\DefaultWidthofReset}%
14584   \def\Fld@height{\DefaultHeightofReset}%
14585   \begingroup
14586   \expandafter\HyField@SetKeys\expandafter{%
14587     \DefaultOptionsofReset,#1%
14588   }%
14589   \leavevmode
14590   \ifHy@pdfa

```

```

14591 \Hy@Error{%
14592   PDF/A: Reset action is prohibited%
14593 } \@ehc
14594 \MakeButtonField{#2}%
14595 \else
14596 \HyField@FlagsPushButton
14597 \ifFld@hidden\def\Fld@width{1sp}\fi
14598 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14599 \Hy@escapeform\PDFForm@Reset
14600 \HyField@AdvanceAnnotCount
14601 \@pdfm@mark{%
14602   ann @reset\HyField@TheAnnotCount\space
14603   \dvi pdfm@setdim
14604   <<\PDFForm@Reset>>%
14605 }%
14606 \unhbox\pdfm@box
14607 \HyField@AddToFields{reset}%
14608 \fi
14609 \endgroup
14610 }

```

\@CheckBox

```

14611 \def\@CheckBox[#1]#2{% parameters, label
14612 \def\Fld@name{#2}%
14613 \def\Fld@default{0}%
14614 \begingroup
14615 \def\Fld@width{\DefaultWidthofCheckBox}%
14616 \def\Fld@height{\DefaultHeightofCheckBox}%
14617 \expandafter\HyField@SetKeys\expandafter{%
14618   \DefaultOptionsofCheckBox,#1%
14619 }%
14620 \PDFForm@Name
14621 \HyField@FlagsCheckBox
14622 \ifFld@hidden\def\Fld@width{1sp}\fi
14623 \setbox\pdfm@box=\hbox{%
14624   \MakeCheckField{\Fld@width}{\Fld@height}%
14625 }%
14626 \HyField@AdvanceAnnotCount
14627 \LayoutCheckField{#2}%
14628 \leavevmode
14629 \Hy@escapeform\PDFForm@Check
14630 \@pdfm@mark{%
14631   ann @check\HyField@TheAnnotCount\space
14632   \dvi pdfm@setdim
14633   <<\PDFForm@Check>>%
14634 }%
14635 \unhbox\pdfm@box
14636 \HyField@AddToFields{check}%
14637 }%
14638 \endgroup
14639 }

14640 \def\Hy@FormObjects{%
14641 \@pdfm@mark{obj @OBJpdfdocencoding%
14642 <<%
14643 /Type/Encoding%
14644 /Differences%
14645 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %

```

14646 39/quotesingle %
14647 96/grave %
14648 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14649 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14650 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
14651 /quotesinglbase/trademark/ffi/fl/Lslash/OE/Scaron/Ydieresis%
14652 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14653 164/currency %
14654 166/brokenbar %
14655 168/dieresis/copyright/ordfeminine %
14656 172/logicalnot/.notdef/registered/macron/degree/plusminus%
14657 /twosuperior/threesuperior/acute/mu %
14658 183/periodcentered/cedilla/onesuperior/ordmasculine %
14659 188/onequarter/onehalf/threequarters %
14660 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14661 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
14662 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
14663 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
14664 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
14665 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
14666 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
14667 /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
14668 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
14669 /thorn/ydieresis%
14670]%
14671 >>%
14672 }%
14673 \@pdfm@mark{obj @OBJZaDb%
14674 <<%
14675 /Type/Font%
14676 /Subtype/Type1%
14677 /Name/ZaDb%
14678 /BaseFont/ZapfDingbats%
14679 >>%
14680 }%
14681 \@pdfm@mark{obj @OBJHelv%
14682 <<%
14683 /Type/Font%
14684 /Subtype/Type1%
14685 /Name/Helv%
14686 /BaseFont/Helvetica%
14687 /Encoding @OBJpdfdocencoding%
14688 >>%
14689 }%
14690 \global\let\Hy@FormObjects\relax
14691 }
14692 </dvipdfm | xetex>

48.6 Common forms part

14693 (*pdfform)
\Fld@pageobjref
14694 \providecommand*{\Fld@pageobjref}{}
\Hy@escapestring
14695 \begingroup\expandafter\expandafter\expandafter\endgroup


```

14696 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
14697 \let\Hy@escapestring\@firstofone
14698 \def\Hy@escapeform#1{%
14699 \ifHy@pdfescapeform
14700 \def\Hy@escapestring##1{%
14701 \noexpand\Hy@escapestring{\noexpand##1}%
14702 }%
14703 \edef\Hy@temp{#1}%
14704 \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
14705 \def\Hy@escapestring##1{%
14706 \@ifundefined{Hy@esc@\string##1}{%
14707 ##1%
14708 \ThisShouldNotHappen
14709 }{%
14710 \csname Hy@esc@\string##1\endcsname
14711 }%
14712 }%
14713 \else
14714 \let\Hy@escapestring\@firstofone
14715 \fi
14716 }%
14717 \def\Hy@@@escapeform#1\Hy@escapestring#2##3\@nil{%
14718 \ifx\#3\%
14719 \else
14720 \expandafter
14721 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
14722 \ltx@ReturnAfterFi{%
14723 \Hy@@@escapeform#3\@nil
14724 }%
14725 \fi
14726 }%
14727 \else
14728 \def\Hy@escapeform#1{%
14729 \ifHy@pdfescapeform
14730 \let\Hy@escapestring\pdfescapestring
14731 \else
14732 \let\Hy@escapestring\@firstofone
14733 \fi
14734 }%
14735 \Hy@escapeform{}%
14736 \fi

```

\PDFForm@Name

```

14737 \def\PDFForm@Name{%
14738 \PDFForm@@Name\Fld@name
14739 \ifx\Fld@altname\relax
14740 \else
14741 \PDFForm@@Name\Fld@altname
14742 \fi
14743 \ifx\Fld@mappingname\relax
14744 \else
14745 \PDFForm@@Name\Fld@mappingname
14746 \fi
14747 }

```

\PDFForm@@Name

```

14748 \def\PDFForm@@Name#1{%

```

```

14749 \begingroup
14750 \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
14751 \ifHy@unicode
14752 \Hy@unicodedefalse
14753 \fi
14754 \fi
14755 \HyPsd@XeTeXBigCharstrue
14756 \pdfstringdef\Hy@gtemp#1%
14757 \endgroup
14758 \let#1\Hy@gtemp
14759 }

```

\Fld@additionalactions

```

14760 \def\Fld@@additionalactions{%
K input (keystroke) format
14761 \ifx\Fld@keystroke@code\@empty
14762 \else
14763 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
14764 \fi

F display format
14765 \ifx\Fld@format@code\@empty
14766 \else
14767 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
14768 \fi

V validation
14769 \ifx\Fld@validate@code\@empty
14770 \else
14771 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
14772 \fi

C calculation
14773 \ifx\Fld@calculate@code\@empty
14774 \else
14775 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
14776 \fi

Fo receiving the input focus
14777 \ifx\Fld@onfocus@code\@empty
14778 \else
14779 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
14780 \fi

Bl losing the input focus (blurred)
14781 \ifx\Fld@onblur@code\@empty
14782 \else
14783 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
14784 \fi

D pressing the mouse button (down)
14785 \ifx\Fld@onmousedown@code\@empty
14786 \else
14787 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
14788 \fi

U releasing the mouse button (up)
14789 \ifx\Fld@onmouseup@code\@empty
14790 \else
14791 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
14792 \fi

```

E cursor enters the annotation's active area.

```
14793 \ifx\Fld@onenter@code\@empty
14794 \else
14795 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
14796 \fi
```

X cursor exits the annotation's active area.

```
14797 \ifx\Fld@onexit@code\@empty
14798 \else
14799 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
14800 \fi
14801 }
14802 \def\Fld@additionalactions{%
14803 \if-\Fld@@additionalactions-%
14804 \else
14805 \ifHy@pdfa
14806 \else
14807 /AA<<\Fld@@additionalactions>>%
14808 \fi
14809 \fi
14810 }
```

\Fld@annotnames

```
14811 \def\Fld@annotnames{%
14812 /T(\Fld@name)%
14813 \ifx\Fld@altname\relax
14814 \else
14815 /TU(\Fld@altname)%
14816 \fi
14817 \ifx\Fld@mappingname\relax
14818 \else
14819 /TM(\Fld@mappingname)%
14820 \fi
14821 }
```

\PDFForm@Check

```
14822 \def\PDFForm@Check{%
14823 /Subtype/Widget%
14824 \Fld@annotflags
14825 \Fld@pageobjref
14826 \Fld@annotnames
14827 /FT/Btn%
14828 \Fld@flags
14829 /Q \Fld@align
14830 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
14831 /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
14832 /MK<<%
14833 \ifnum\Fld@rotation=\z@
14834 \else
14835 /R \Fld@rotation
14836 \fi
14837 \ifx\Fld@bordercolor\relax
14838 \else
14839 /BC[\Fld@bordercolor]%
14840 \fi
14841 \ifx\Fld@bcolor\relax
14842 \else
```

```

14843 /BG[\Fld@bcolor]%
14844 \fi
14845 /CA(\Hy@escapestring{\Fld@cbsymbol})%
14846 >>%
14847 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14848 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14849 /H/P%
14850 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
14851 \Fld@additionalactions
14852 }

```

\PDFForm@Push

```

14853 \ifHy@pdfa
14854 \else
14855 \def\PDFForm@Push{%
14856 /Subtype/Widget%
14857 \Fld@annotflags
14858 \Fld@pageobjref
14859 \Fld@annotnames
14860 /FT/Btn%
14861 \Fld@flags
14862 /H/P%
14863 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14864 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14865 \ifx\Fld@bordercolor\relax\else 1\fi
14866 \space
14867 \else
14868 /MK<<%
14869 \ifnum\Fld@rotation=\z@
14870 \else
14871 /R \Fld@rotation
14872 \fi
14873 \ifx\Fld@bordercolor\relax
14874 \else
14875 /BC[\Fld@bordercolor]%
14876 \fi
14877 >>%
14878 \fi
14879 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14880 \Fld@additionalactions
14881 }%
14882 \fi

```

\PDFForm@List

```

14883 \def\PDFForm@List{%
14884 /Subtype/Widget%
14885 \Fld@annotflags
14886 \Fld@pageobjref
14887 \Fld@annotnames
14888 /FT/Ch%
14889 \Fld@flags
14890 /Q \Fld@align
14891 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14892 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14893 \ifx\Fld@bordercolor\relax\else 1\fi
14894 \ifx\Fld@bcolor\relax \else 1\fi
14895 \space

```

```

14896 \else
14897 /MK<<%
14898 \ifnum\Fld@rotation=\z@
14899 \else
14900 /R \Fld@rotation
14901 \fi
14902 \ifx\Fld@bordercolor\relax
14903 \else
14904 /BC[\Fld@bordercolor]%
14905 \fi
14906 \ifx\Fld@bcolor\relax
14907 \else
14908 /BG[\Fld@bcolor]%
14909 \fi
14910 >>%
14911 \fi
14912 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14913 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14914 \Fld@choices
14915 \Fld@additionalactions
14916 }

```

\PDFForm@Radio

```

14917 \def\PDFForm@Radio{%
14918 /Subtype/Widget%
14919 \Fld@annotflags
14920 \Fld@pageobjref
14921 \Fld@annotnames
14922 /FT/Btn%
14923 \Fld@flags
14924 /H/P%
14925 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14926 /MK<<%
14927 \ifnum\Fld@rotation=\z@
14928 \else
14929 /R \Fld@rotation
14930 \fi
14931 \ifx\Fld@bordercolor\relax
14932 \else
14933 /BC[\Fld@bordercolor]%
14934 \fi
14935 \ifx\Fld@bcolor\relax
14936 \else
14937 /BG[\Fld@bcolor]%
14938 \fi
14939 /CA(\Hy@escapestring{\Fld@radiosymbol})%
14940 >>%
14941 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14942 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

New code, the default value is used for all buttons

```

14943 \ifx\Fld@default\@empty
14944 /V/Off%
14945 /DV/Off%
14946 \else
14947 /V/\Fld@default
14948 /DV/\Fld@default
14949 \fi

```

```
14950 \Fld@additionalactions
14951 }
```

\PDFForm@Text

```
14952 \def\PDFForm@Text{%
14953 /Subtype/Widget%
14954 \Fld@annotflags
14955 \Fld@pageobjref
14956 \Fld@annotnames
14957 /FT/Tx%
14958 \Fld@flags
14959 /Q \Fld@align
14960 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14961 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14962     \ifx\Fld@bordercolor\relax\else 1\fi
14963     \ifx\Fld@bcolor\relax \else 1\fi
14964     \space
14965 \else
14966 /MK<<%
14967     \ifnum\Fld@rotation=\z@
14968     \else
14969     /R \Fld@rotation
14970     \fi
14971     \ifx\Fld@bordercolor\relax
14972     \else
14973     /BC[\Fld@bordercolor]%
14974     \fi
14975     \ifx\Fld@bcolor\relax
14976     \else
14977     /BG[\Fld@bcolor]%
14978     \fi
14979     >>%
14980 \fi
14981 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14982     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14983 /DV(\Hy@escapestring{\Fld@default})%
14984 /V(\Hy@escapestring{\Fld@value})%
14985 \Fld@additionalactions
14986 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14987 }
```

\PDFForm@Submit

```
14988 \def\PDFForm@Submit{%
14989 /Subtype/Widget%
14990 \Fld@annotflags
14991 \Fld@pageobjref
14992 \Fld@annotnames
14993 /FT/Btn%
14994 \Fld@flags
14995 /H/P%
14996 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14997 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14998     \ifx\Fld@bordercolor\relax\else 1\fi
14999     \space
15000 \else
15001 /MK<<%
15002     \ifnum\Fld@rotation=\z@
```

```

15003 \else
15004 /R \Fld@rotation
15005 \fi
15006 \ifx\Fld@bordercolor\relax
15007 \else
15008 /BC[\Fld@bordercolor]%
15009 \fi
15010 >>%
15011 \fi
15012 /A<<%
15013 /S/SubmitForm%
15014 /F<<%
15015 /FS/URL%
15016 /F(\Hy@escapestring{\Form@action})%
15017 >>%
15018 \Fld@submitflags
15019 >>%
15020 \Fld@additionalactions
15021 }

```

\PDFForm@Reset

```

15022 \ifHy@pdfa
15023 \else
15024 \def\PDFForm@Reset{%
15025 /Subtype/Widget%
15026 \Fld@annotflags
15027 \Fld@pageobjref
15028 \Fld@annotnames
15029 /FT/Btn%
15030 \Fld@flags
15031 /H/P%
15032 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
15033 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
15034 \ifx\Fld@bordercolor\relax\else 1\fi
15035 \space
15036 \else
15037 /MK<<%
15038 \ifnum\Fld@rotation=\z@
15039 \else
15040 /R \Fld@rotation
15041 \fi
15042 \ifx\Fld@bordercolor\relax
15043 \else
15044 /BC[\Fld@bordercolor]%
15045 \fi
15046 % /CA (Clear)
15047 % /AC (Done)
15048 >>%
15049 \fi
15050 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
15051 /A<</S/ResetForm>>%
15052 \Fld@additionalactions
15053 }%
15054 \fi

15055 (/pdfform)
15056 (*package)

```

49 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `reperesty`); it needed the `reperesty` or `makebook.pl` post-processor to work properly. Now redundant, as it is done entirely in L^AT_EX macros.

To write out the current section title, and its rationalized number, we have to intercept the `\@sect` command, which is rather dangerous. But how else to see the information we need? We do the *same* for `\@ssect`, giving anchors to unnumbered sections. This allows things like bibliographies to get bookmarks when used with a manual `\addcontentsline`

```
15057 \def\phantomsection{%
15058   \Hy@MakeCurrentHrefAuto{section*}%
15059   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
15060 }
15061 \</package>
```

49.1 Bookmarks

```
15062 (*outlines)
```

This section was written by Heiko Oberdiek; the code replaces an earlier version by David Carlisle.

The first part of bookmark code is in section 6. Further documentation is available as paper and slides of the talk, that Heiko Oberdiek has given at the EuroTeX'99 meeting in Heidelberg. See `paper.pdf` and `slides.pdf` in the `doc` directory of `hyperref`.

When using the right-to-left typesetting based on ε -T_EX, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of ε -T_EX's implementation (that it processes the shipped out lines left-to-right, instead of the order in which they appear in the document). The wrong order will appear when the file contains two bookmarks on the same line typeset right-to-left.

To work around this problem, the `bookmark@seq@number` counter is used to write the bookmark's sequential number into a comment in the `\@outlinefile`, which could be used to post-process it to achieve the proper ordering of `\BOOKMARK` commands in that file.

```
15063 \def\Hy@writebookmark#1#2#3#4#5{%
15064   % section number, text, label, level, file
15065   \ifx\WriteBookmarks\relax%
15066     \else
15067     \ifnum#4>\Hy@bookmarksdepth\relax
15068     \else
15069     \@@writetorep{#1}{#2}{#3}{#4}{#5}%
15070     \fi
15071     \fi
15072 }
15073 \def\Hy@currentbookmarklevel{0}
15074 \def\Hy@numberline#1{#1 }
15075 \def\@@writetorep#1#2#3#4#5{%
15076   \begingroup
15077   \edef\Hy@tempa{#5}%
15078   \ifx\Hy@tempa\Hy@bookmarkstype
15079     \edef\Hy@level{#4}%
15080     \ifx\Hy@levelcheck Y%
15081       \@tempcnta\Hy@level\relax
15082       \advance\@tempcnta by -1 %
```



```

15083 \ifnum\Hy@currentbookmarklevel<\@tempcnta
15084 \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
15085 \advance\@tempcnta by 1 %
15086 \Hy@Warning{%
15087   Difference (\the\@tempcnta) between bookmark levels is %
15088   greater \MessageBreak than one, level fixed%
15089 }%
15090 \@tempcnta\Hy@currentbookmarklevel
15091 \advance\@tempcnta by 1 %
15092 \edef\Hy@level{\the\@tempcnta}%
15093 \fi
15094 \else
15095 \global\let\Hy@levelcheck Y%
15096 \fi
15097 \global\let\Hy@currentbookmarklevel\Hy@level
15098 \@tempcnta\Hy@level\relax
15099 \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
15100 \advance\@tempcnta by -1 %
15101 \edef\Hy@tempa{#3}%
15102 \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
15103 \ifx\Hy@tempa\Hy@tempb
15104 \Hy@Warning{%
15105   The anchor of a bookmark and its parent's must not%
15106   \MessageBreak be the same. Added a new anchor%
15107 }%
15108 \phantomsection
15109 \fi
15110 \ifHy@bookmarksnumbered
15111 \let\numberline\Hy@numberline
15112 \let\booknumberline\Hy@numberline
15113 \let\partnumberline\Hy@numberline
15114 \let\chapternumberline\Hy@numberline
15115 \else
15116 \let\numberline\@gobble
15117 \let\booknumberline\@gobble
15118 \let\partnumberline\@gobble
15119 \let\chapternumberline\@gobble
15120 \fi
15121 \HyPsd@XeTeXBigCharstrue
15122 \pdfstringdef\Hy@tempa{#2}%
15123 \HyPsd@SanitizeForOutFile\Hy@tempa
15124 \if@filesw
15125 \stepcounter{bookmark@seq@number}%
15126 \@ifundefined{@outlinefile}{%
15127 }{%
15128 \protected@write\@outlinefile}{%
15129 \protect\BOOKMARK
15130 [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
15131 {\Hy@tempa}{\Hy@tempb}%
15132 \@percentchar\space\thebookmark@seq@number
15133 }%
15134 }%
15135 \fi
15136 \fi
15137 \endgroup
15138 }
15139 \newcounter{bookmark@seq@number}

```

```

15140 \begingroup
15141 \lccode` (= ` { %
15142 \lccode` ) = ` } %
15143 \lccode` 1 = \z @
15144 \lccode` 2 = \z @
15145 \lccode` 3 = \z @
15146 \lccode` 5 = \z @
15147 \lccode` 7 = \z @
15148 \lccode` \# = \z @
15149 \lccode` \ ` = \z @
15150 \lccode` \ { = \z @
15151 \lccode` \ } = \z @
15152 \lowercase { %
15153 \endgroup
15154 \def \HyPsd@SanitizeForOutFile#1 { %
15155   \@onelevel@sanitize \Hy@tempa
15156   \escapechar ` \ %
15157   \edef \Hy@tempa { %
15158     \expandafter \HyPsd@SanitizeOut@BraceLeft \Hy@tempa \ @nil
15159   } %
15160   \edef \Hy@tempa { %
15161     \expandafter \HyPsd@SanitizeOut@BraceRight \Hy@tempa \ @nil
15162   } %
15163 } %
15164 \def \HyPsd@SanitizeOut@BraceLeft#1 (#2 \ @nil { %
15165   #1 %
15166   \ifx \ #2 \ %
15167     \expandafter \ltx@gobble
15168   \else
15169     \expandafter \ltx@firstofone
15170   \fi
15171   { %
15172     \string \173 %
15173     \HyPsd@SanitizeOut@BraceLeft #2 \ @nil
15174   } %
15175 } %
15176 \def \HyPsd@SanitizeOut@BraceRight#1) #2 \ @nil { %
15177   #1 %
15178   \ifx \ #2 \ %
15179     \expandafter \ltx@gobble
15180   \else
15181     \expandafter \ltx@firstofone
15182   \fi
15183   { %
15184     \string \175 %
15185     \HyPsd@SanitizeOut@BraceRight #2 \ @nil
15186   } %
15187 } %
15188 }

```

In the call of `\BOOKMARK` the braces around `#4` are omitted, because it is not likely, that the level number contains `]`.

```

15189 \newcommand{\currentpdfbookmark}{%
15190 \pdfbookmark[\Hy@currentbookmarklevel]%
15191 }
15192 \newcommand{\subpdfbookmark}{%
15193 \@tempcnta \Hy@currentbookmarklevel
15194 \Hy@StepCount \@tempcnta

```

```

15195 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
15196 }
15197 \newcommand{\belowpdfbookmark}[2]{%
15198 \@tempcnta\Hy@currentbookmarklevel
15199 \Hy@StepCount\@tempcnta
15200 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
15201 \advance\@tempcnta by -1 %
15202 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
15203 }

```

Tobias Oetiker rightly points out that we need a way to force a bookmark entry. So we introduce `\pdfbookmark`, with two parameters, the title, and a symbolic name. By default this is at level 1, but we can reset that with the optional first argument.

```

15204 \renewcommand\pdfbookmark[3][0]{%
15205 \Hy@writebookmark-}{#2}{#3.#1}{#1}{toc}%
15206 \hyper@anchorstart{#3.#1}\hyper@anchorend
15207 }
15208 \def\BOOKMARK{%
15209 \ifnextchar{\@BOOKMARK}{\@BOOKMARK[1][-]}%
15210 }
15211 \def\@BOOKMARK[#1]{%
15212 \ifnextchar{\@BOOKMARK[{#1}]}{\@BOOKMARK[{#1}][-]}%
15213 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfopdf` macros.

49.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

15214 \RequirePackage{rerunfilecheck}[2009/12/10]
15215 \def\Hy@OutlineRerunCheck{%
15216 \RerunFileCheck{\jobname.out}{%
15217 \immediate\closeout\@outlinefile
15218 }{%
15219 Rerun to get outlines right\MessageBreak
15220 or use package `bookmark'%
15221 }%
15222 }

```

49.1.2 Driver stuff

The VTEX section was written originally by VTEX, but then amended by Denis Girou (denis.girou@idris.fr), then by by Taco Hoekwater (taco.hoekwater@wkap.nl). The problem is that VTEX, with its close integration of the PDF backend, does look at the contents of bookmarks, escaping `\` and the like.

```

15223 (*vtex)
15224 \newcount\@serial@counter\@serial@counter=1\relax

```

`\hv@pdf@char` Plain octal codes doesn't work with versions below 6.50. So for early versions hex numbers have to be used. It would be possible to program this instead of the large `\ifcase`, but I'm too lazy to sort that out now.

```

15225 \begingroup
15226 \catcode`\'=12 %
15227 \ifnum\Hy@VTeXversion<650 %
15228 \catcode`\ "=12 %
15229 \gdef\hv@pdf@char#1#2#3{%

```

```

15230 \char
15231 \ifcase'#1#2#3 %
15232 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
15233 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
15234 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
15235 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
15236 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
15237 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
15238 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
15239 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
15240 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
15241 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
15242 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
15243 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
15244 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
15245 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
15246 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
15247 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
15248 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
15249 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
15250 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
15251 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
15252 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
15253 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
15254 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
15255 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
15256 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
15257 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
15258 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
15259 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
15260 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
15261 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
15262 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
15263 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
15264 \fi
15265 }%
15266 \else
15267 \gdef\hv@pdf@char{\char'}%
15268 \fi
15269 \endgroup

```

\@@BOOKMARK

```

15270 \def\@@BOOKMARK[#1][#2]#3#4#5{%
15271 \expandafter\edef\csname @count@#3\endcsname{%
15272 \the\@serial@counter
15273 }%
15274 \edef\@mycount{\the\@serial@counter}%
15275 \Hy@StepCount\@serial@counter
15276 \edef\@parcount{%
15277 \expandafter\ifx\csname @count@#5\endcsname\relax
15278 0%
15279 \else
15280 \csname @count@#5\endcsname
15281 \fi
15282 }%
15283 \immediate\special{%
15284 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
15285 s=\ifx#2-c\else o\fi,t=#4%

```

15286 }%
15287 }%

\ReadBookmarks

```
15288 \def\ReadBookmarks{%  
15289   \begingroup  
15290   \def\0{\hv@pdf@char 0}%  
15291   \def\1{\hv@pdf@char 1}%  
15292   \def\2{\hv@pdf@char 2}%  
15293   \def\3{\hv@pdf@char 3}%  
15294   \def\({}%  
15295   \def\)}%  
15296   \def\do##1{%  
15297     \ifnum\catcode`##1=\active  
15298       \@makeother##1%  
15299     \else  
15300       \ifnum\catcode`##1=6 %  
15301         \@makeother##1%  
15302       \fi  
15303     \fi  
15304   }%  
15305   \dospecials  
15306   \Hy@safe@activetrue  
15307   \InputIfFileExists{\jobname.out}{-}{-}%  
15308 \endgroup  
15309 \ifx\WriteBookmarks\relax  
15310 \else  
15311   \if@filesw  
15312     \newwrite\@outlinefile  
15313     \Hy@OutlineRerunCheck  
15314     \immediate\openout\@outlinefile=\jobname.out\relax  
15315     \ifHy@typexml  
15316       \immediate\write\@outlinefile{<relaxxml>\relax}%  
15317     \fi  
15318   \fi  
15319 \fi  
15320 }  
  
15321 </vtex>  
15322 <*\vtex>  
15323 \def\ReadBookmarks{%  
15324   \pdf@ifdraftmode{-}{-}%  
15325   \begingroup  
15326     \def\do##1{%  
15327       \ifnum\catcode`##1=\active  
15328         \@makeother##1%  
15329       \else  
15330         \ifnum\catcode`##1=6 %  
15331           \@makeother##1%  
15332         \fi  
15333       \fi  
15334     }%  
15335     \dospecials  
15336     \Hy@safe@activetrue  
15337     \escapechar=\\%  
15338     \def\@@BOOKMARK[##1][##2]##3##4##5{%  
15339       \calc@bm@number{##5}%
```

```

15340 }%
15341 \InputIfFileExists{\jobname.out}{-}{-}%
15342 \ifx\WriteBookmarks\relax
15343   \global\let\WriteBookmarks\relax
15344 \fi
15345 \def\@@BOOKMARK[##1][##2]##3##4##5{%
15346   \def\Hy@temp{##4}%
15347 (*pdfTeX)
15348   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15349   \Hy@OutlineName{}\Hy@pstringName{%
15350     ##2\check@bm@number{##3}}%
15351   }{%
15352     \expandafter\strip@prefix\meaning\Hy@temp
15353   }%
15354 </pdfTeX)
15355 (*pdfmark)
15356   \pdfmark{%
15357     pdfmark=/OUT,%
15358     Count={##2\check@bm@number{##3}},%
15359     Dest={##3},%
15360     Title=\expandafter\strip@prefix\meaning\Hy@temp
15361   }%
15362 </pdfmark)
15363 (*dviPDFM | xetex)
15364   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15365   \pdfm@mark{%
15366     outline \ifHy@DvipdfmxOutlineOpen
15367       [%
15368         \ifnum##21>\z@
15369         \else
15370         -%
15371         \fi
15372       ]%
15373       \fi
15374       ##1<<%
15375       /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
15376       /A<<%
15377       /S/GoTo%
15378       /D(\Hy@pstringName)%
15379       >>%
15380     >>%
15381   }%
15382 </dviPDFM | xetex)
15383 }%
15384 \begingroup
15385   \def\WriteBookmarks{0}%
15386   \InputIfFileExists{\jobname.out}{-}{-}%
15387 \endgroup
15388 %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
15389 \endgroup
15390 }%
15391 \ifx\WriteBookmarks\relax
15392 \else
15393   \if@filesW
15394     \newwrite\@outlinefile
15395     \Hy@OutlineRerunCheck
15396     \immediate\openout\@outlinefile=\jobname.out\relax

```

```

15397 \ifHy@typexml
15398 \immediate\write\@outlinefile{<relaxxml>\relax}%
15399 \fi
15400 \fi
15401 \fi
15402 }
15403 (*pdfTEX)
15404 \def\Hy@OutlineName#1#2#3#4{%
15405 \pdfoutline goto name{#2}count#3{#4}%
15406 }
15407 </pdfTEX)
15408 \def\check@bm@number#1{%
15409 \expandafter\ifx\csname B_#1\endcsname\relax
15410 0%
15411 \else
15412 \csname B_#1\endcsname
15413 \fi
15414 }
15415 \def\calc@bm@number#1{%
15416 \@tempcnta=\check@bm@number{#1}\relax
15417 \advance\@tempcnta by 1 %
15418 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
15419 }
15420 </!vTeX)

15421 \ifHy@implicit
15422 \else
15423 \expandafter\endinput
15424 \fi

15425 </outlines)
15426 (*outlines | hypertex)

15427 \newlength\Hy@SectionHShift
15428 \def\Hy@SectionAnchorHref#1{%
15429 \ifx\protect\@typeset@protect
15430 \Hy@@@SectionAnchor{#1}%
15431 \fi
15432 }
15433 \DeclareRobustCommand*{\Hy@@@SectionAnchor}[1]{%
15434 \leavevmode
15435 \hbox to 0pt{%
15436 \kern-\Hy@SectionHShift
15437 \Hy@raisedlink{%
15438 \hyper@anchorstart{#1}\hyper@anchorend
15439 }%
15440 \hss
15441 }%
15442 }
15443 \let\H@old@ssect\@ssect
15444 \def\@ssect#1#2#3#4#5{%
15445 \Hy@MakeCurrentHrefAuto{section*}%
15446 \setlength{\Hy@SectionHShift}{#1}%
15447 \begingroup
15448 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
15449 \toks\tw@\expandafter{%
15450 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15451 #5%
15452 }%

```

```

15453 \edef\x{\endgroup
15454   \the\toks@{\the\toks\tw@}%
15455 } \x
15456 }
15457 \let\H@old@schapter\@schapter
15458 \def\@schapter#1{%
15459   \begingroup
15460   \let\@mkboth\@gobbletwo
15461   \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15462   \Hy@raisedlink{%
15463     \hyper@anchorstart{\@currentHref}\hyper@anchorend
15464   }%
15465   \endgroup
15466   \H@old@schapter{#1}%
15467 }

```

If there is no chapter number (`\frontmatter` or `\backmatter`) then the counting by `\refstepcounter{chapter}` is not executed, so there will be no destination for `\ddcontentsline`. So `\@chapter` is overloaded to avoid this:

```

15468 \ltx@ifundefined{@chapter}{}{%
15469   \let\Hy@org@chapter\@chapter
15470   \def\@chapter{%
15471     \def\Hy@next{%
15472       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15473       \Hy@raisedlink{%
15474         \hyper@anchorstart{\@currentHref}\hyper@anchorend
15475       }%
15476     }%
15477     \ifnum\c@secnumdepth>\m@ne
15478       \ltx@ifundefined{if@mainmatter}%
15479       \iftrue{\csname if@mainmatter\endcsname}%
15480       \let\Hy@next\relax
15481     \fi
15482     \fi
15483     \Hy@next
15484     \Hy@org@chapter
15485   }%
15486 }

15487 \let\H@old@part\@part
15488 \begingroup\expandafter\expandafter\expandafter\endgroup
15489 \expandafter\ifx\csname chapter\endcsname\relax
15490   \let\Hy@secnum@part\z@
15491 \else
15492   \let\Hy@secnum@part\m@ne
15493 \fi
15494 \def\@part{%
15495   \ifnum\Hy@secnum@part>\c@secnumdepth
15496     \phantomsection
15497   \fi
15498   \H@old@part
15499 }

15500 \let\H@old@spart\@spart
15501 \def\@spart#1{%
15502   \Hy@MakeCurrentHrefAuto{part*}%
15503   \Hy@raisedlink{%
15504     \hyper@anchorstart{\@currentHref}\hyper@anchorend
15505   }%

```



```

15506 \H@old@spart{#1}%
15507 }
15508 \let\H@old@sect\@sect
15509 \def\@sect#1#2#3#4#5#6[#7]#8{%
15510 \ifnum #2>\c@secnumdepth
15511 \expandafter\@firstoftwo
15512 \else
15513 \expandafter\@secondoftwo
15514 \fi
15515 {%
15516 \Hy@MakeCurrentHrefAuto{section*}%
15517 \setlength{\Hy@SectionHShift}{#3}%
15518 \begingroup
15519 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
15520 \toks\tw@\expandafter{%
15521 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15522 #8%
15523 }%
15524 \edef\x{\endgroup
15525 \the\toks@\the\toks\tw@}%
15526 }\x
15527 }{%
15528 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
15529 }%
15530 }

15531 </outlines | hypertex>
15532 <*outlines>

15533 \expandafter\def\csname Parent-4\endcsname{}
15534 \expandafter\def\csname Parent-3\endcsname{}
15535 \expandafter\def\csname Parent-2\endcsname{}
15536 \expandafter\def\csname Parent-1\endcsname{}
15537 \expandafter\def\csname Parent0\endcsname{}
15538 \expandafter\def\csname Parent1\endcsname{}
15539 \expandafter\def\csname Parent2\endcsname{}
15540 \expandafter\def\csname Parent3\endcsname{}
15541 \expandafter\def\csname Parent4\endcsname{}

15542 </outlines>

```

50 Compatibility with koma-script classes

```
15543 <*outlines | hypertex>
```

Hard-wire in an unpleasant over-ride of komascript ‘scrbook’ class for Tobias Isenberg (Tobias.Isenberg@gmx.de). With version 6.71b the hack is also applied to ‘scrreprt’ class and is removed for koma-script versions since 2001/01/01, because Markus Kohm supports hyperref in komascript.

```

15544 \def\Hy@tempa{%
15545 \def\@addchap[##1]##2{%
15546 \typeout{##2}%
15547 \if@twoside
15548 \@mkboth{##1}{}%
15549 \else
15550 \@mkboth{}{##1}%
15551 \fi
15552 \addtocontents{lof}{\protect\addvspace{10\p@}}%
15553 \addtocontents{lot}{\protect\addvspace{10\p@}}%

```

```

15554 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15555 \Hy@raisedlink{%
15556 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15557 }%
15558 \if@twocolumn
15559 \@topnewpage[\@makeschapterhead{##2}]%
15560 \else
15561 \@makeschapterhead{##2}%
15562 \@afterheading
15563 \fi
15564 \addcontentsline{toc}{chapter}{##1}%
15565 }%
15566 }
15567 \@ifclassloaded{scrbook}{%
15568 \@ifclasslater{scrbook}{2001/01/01}{%
15569 \let\Hy@tempa\@empty
15570 }{}%
15571 }{}%
15572 \@ifclassloaded{scrreprt}{%
15573 \@ifclasslater{scrreprt}{2001/01/01}{%
15574 \let\Hy@tempa\@empty
15575 }{}%
15576 }{}%
15577 \let\Hy@tempa\@empty
15578 }%
15579 }%
15580 \Hy@tempa
15581 </outlines | hypertex>

```

51 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

51.1 PD1 encoding

```

15582 (*pd1enc)
15583 \DeclareFontEncoding{PD1}{}{}

Accents
15584 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
15585 \DeclareTextAccent{\'}{PD1}{\textacute}
15586 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
15587 \DeclareTextAccent{\~}{PD1}{\texttilde}
15588 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
15589 \DeclareTextAccent{\r}{PD1}{\textring}
15590 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
15591 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
15592 \DeclareTextAccent{\c}{PD1}{\textcedilla}
15593 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
15594 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
15595 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
15596 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
15597 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
15598 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}
15599 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
15600 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}

```

```

15601 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
15602 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
15603 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
15604 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
15605 \DeclareTextCompositeCommand{\=} {PD1}{\@empty}{\textasciimacron}
15606 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
15607 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
15608 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
15609 \DeclareTextCompositeCommand{\' }{PD1}{\ }{\textacute}
15610 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\textasciicircum}
15611 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
15612 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
15613 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
15614 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
15615 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
15616 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
15617 \DeclareTextCompositeCommand{\=} {PD1}{\ }{\textasciimacron}
15618 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
15619 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
15620 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
15621 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
15622 \DeclareTextCommand{\newtie}{PD1}[1]{%
15623   \TextSymbolUnavailable{\newtie{#1}}#1%
15624 }

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

15625 % U+0009 (CHARACTER TABULATION)
15626 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
15627 % U+000A (LINE FEED)
15628 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
15629 % U+000D (CARRIAGE RETURN)
15630 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

15631 % U+02D8 BREVE; breve
15632 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
15633 % U+02C7 CARON; caron
15634 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
15635 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
15636 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
15637 % U+02D9 DOT ABOVE; dotaccent
15638 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
15639 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
15640 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
15641 % U+02DB OGONEK; ogonek
15642 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
15643 % U+02DA RING ABOVE; ring
15644 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
15645 % U+02DC SMALL TILDE; ilde, *tilde
15646 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

\040: U+0020 SPACE; *space, spacehackarabic

\041: U+0021 EXCLAMATION MARK; exclam

15647 % U+0022 QUOTATION MARK; quotedbl

15648 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022

15649 % U+0023 NUMBER SIGN; numbersign

15650 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023

15651 % U+0024 DOLLAR SIGN; dollar

15652 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
15653 % U+0025 PERCENT SIGN; percent
15654 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
15655 % U+0026 AMPERSAND; ampersand
15656 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
\047: U+0027 APOSTROPHE; quotesingle

15657 % U+0028 LEFT PARENTHESIS; parenleft
15658 \DeclareTextCommand{\textparenleft}{PD1}{\string\{}% \050 U+0028
15659 % U+0029 RIGHT PARENTHESIS; parenright
15660 \DeclareTextCommand{\textparenright}{PD1}{\string\}}% \051 U+0029
\052: U+002A ASTERISK; asterisk
\053: U+002B PLUS SIGN; plus
\054: U+002C COMMA; comma
\055: U+002D HYPHEN-MINUS; hyphen
\056: U+002E FULL STOP; period
15661 % U+002E FULL STOP; period
15662 \DeclareTextCommand{\textdotbelow}{PD1}{.}% \056 U+002E
\057: U+002F SOLIDUS; slash
\060: U+0030 DIGIT ZERO; zero
...
\071: U+0039 DIGIT NINE; nine
\072: U+003A COLON; colon
\073: U+003B SEMICOLON; semicolon
15663 % U+003C LESS-THAN SIGN; less
15664 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
\075: U+003D EQUALS SIGN; equal
15665 % U+003E GREATER-THAN SIGN; greater
15666 \DeclareTextCommand{\textgreater}{PD1}{>}% \076 U+003E
\077: U+003F QUESTION MARK; question
\100: U+0040 COMMERCIAL AT; at
\101: U+0041 LATIN CAPITAL LETTER A; A
...
\132: U+005A LATIN CAPITAL LETTER Z; Z
\133: U+005B LEFT SQUARE BRACKET; bracketleft
15667 % U+005C REVERSE SOLIDUS; backslash
15668 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
15669 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
15670 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}
\135: U+005D RIGHT SQUARE BRACKET; bracketright
15671 % U+005E CIRCUMFLEX ACCENT; asciicircum
15672 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
15673 % U+005F LOW LINE; underscore
15674 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
15675 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
15676 % U+0060 GRAVE ACCENT; grave
15677 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
\141: U+0061 LATIN SMALL LETTER A; a
...
\150: U+0068 LATIN SMALL LETTER H; h
15678 % U+0069 LATIN SMALL LETTER I; i
15679 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069

\152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 15680 % U+007B LEFT CURLY BRACKET; braceleft
 15681 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 15682 % U+007C VERTICAL LINE; *bar, verticalbar
 15683 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 15684 % U+007D RIGHT CURLY BRACKET; braceright
 15685 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 15686 % U+007E TILDE; asciitilde
 15687 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 15688 % U+2022 BULLET; bullet
 15689 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 15690 % U+2020 DAGGER; dagger
 15691 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 15692 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 15693 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 15694 \DeclareTextCommand{\textddagger}{PD1}{\textdagger}
 15695 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15696 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 15697 % U+2014 EM DASH; emdash
 15698 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 15699 % U+2013 EN DASH; endash
 15700 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 15701 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 15702 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 15703 % U+2044 FRACTION SLASH; fraction
 15704 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 15705 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 inglleft
 15706 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
 15707 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 singlaright
 15708 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
 15709 % U+2212 MINUS SIGN; minus
 15710 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 15711 % U+2030 PER MILLE SIGN; perthousand
 15712 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 15713 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15714 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
 15715 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 15716 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
 15717 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 15718 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
 15719 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15720 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
 15721 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15722 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 15723 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15724 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 15725 % U+2122 TRADE MARK SIGN; trademark
 15726 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 15727 % U+FB01 LATIN SMALL LIGATURE FI; fi
 15728 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 15729 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15730 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02

15731 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
15732 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
15733 % U+0152 LATIN CAPITAL LIGATURE OE; OE
15734 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
15735 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
15736 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
15737 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
15738 \DeclareTextCompositeCommand{\"}{PD1}{Y}{\230}% U+0178
15739 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
15740 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
15741 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
15742 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
15743 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
15744 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
15745 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
15746 % U+0153 LATIN SMALL LIGATURE OE; oe
15747 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
15748 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
15749 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
15750 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
15751 \DeclareTextCompositeCommand{\v}{PD1}{z}{\236}% U+017E

Slot \237 (0x9F) is not defined in PDFDocEncoding.
The euro \240 is inserted in version 1.3 of the pdf specification.

15752 % U+20AC EURO SIGN; *Euro, euro
15753 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
15754 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
15755 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
15756 % U+00A2 CENT SIGN; cent
15757 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
15758 % U+00A3 POUND SIGN; sterling
15759 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
15760 % U+00A4 CURRENCY SIGN; currency
15761 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
15762 % U+00A5 YEN SIGN; yen
15763 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
15764 % U+00A6 BROKEN BAR; brokenbar
15765 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
15766 % U+00A7 SECTION SIGN; section
15767 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
15768 % U+00A8 DIAERESIS; dieresis
15769 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
15770 % U+00A9 COPYRIGHT SIGN; copyright
15771 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
15772 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
15773 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
15774 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
15775 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
15776 % U+00AC NOT SIGN; logicalnot
15777 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
15778 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not

No glyph \255 in PDFDocEncoding.

15779 % U+00AE REGISTERED SIGN; registered
15780 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
15781 % U+00AF MACRON; *macron, overscore
15782 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
15783 % U+00B0 DEGREE SIGN; degree

15784 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
15785 % U+00B1 PLUS-MINUS SIGN; plusminus
15786 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
15787 % U+00B2 SUPERSCRIPT TWO; twosuperior
15788 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
15789 % U+00B3 SUPERSCRIPT THREE; threesuperior
15790 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
15791 % U+00B4 ACUTE ACCENT; acute
15792 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
15793 % U+00B5 MICRO SIGN; mu, mu1
15794 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
15795 % U+00B6 PILCROW SIGN; paragraph
15796 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
15797 % U+00B7 MIDDLE DOT; middot, *periodcentered
15798 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
15799 % U+00B8 CEDILLA; cedilla
15800 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
15801 % U+00B9 SUPERSCRIPT ONE; onesuperior
15802 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
15803 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15804 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
15805 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
15806 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
15807 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15808 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
15809 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15810 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
15811 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15812 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
15813 % U+00BF INVERTED QUESTION MARK; questiondown
15814 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
15815 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15816 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
15817 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15818 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
15819 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15820 \DeclareTextCompositeCommand{\`}{PD1}{A}{\302}% U+00C2
15821 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15822 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
15823 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15824 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
15825 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15826 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
15827 % U+00C6 LATIN CAPITAL LETTER AE; AE
15828 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
15829 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15830 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
15831 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15832 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
15833 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15834 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
15835 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15836 \DeclareTextCompositeCommand{\`}{PD1}{E}{\312}% U+00CA
15837 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15838 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
15839 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave

15840 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
15841 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15842 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
15843 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15844 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
15845 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15846 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
15847 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15848 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
15849 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
15850 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15851 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
15852 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15853 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
15854 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15855 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
15856 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15857 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
15858 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15859 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
15860 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15861 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
15862 % U+00D7 MULTIPLICATION SIGN; multiply
15863 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
15864 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15865 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
15866 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15867 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
15868 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15869 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
15870 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15871 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
15872 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15873 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
15874 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15875 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
15876 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15877 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
15878 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
15879 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15880 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
15881 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15882 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
15883 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15884 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
15885 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15886 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
15887 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15888 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
15889 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15890 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
15891 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15892 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
15893 % U+00E6 LATIN SMALL LETTER AE; ae
15894 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
15895 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15896 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7

15897 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15898 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
15899 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15900 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
15901 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15902 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
15903 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15904 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
15905 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15906 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15907 \DeclareTextCompositeCommand{\^}{PD1}{i}{\354}% U+00EC
15908 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15909 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15910 \DeclareTextCompositeCommand{\^}{PD1}{i}{\355}% U+00ED
15911 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15912 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15913 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15914 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15915 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15916 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15917 % U+00F0 LATIN SMALL LETTER ETH; eth
15918 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
15919 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15920 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
15921 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15922 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
15923 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15924 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
15925 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15926 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
15927 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15928 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
15929 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15930 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
15931 % U+00F7 DIVISION SIGN; divide
15932 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
15933 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15934 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
15935 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15936 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
15937 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15938 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
15939 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15940 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
15941 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15942 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
15943 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
15944 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
15945 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
15946 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
15947 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
15948 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15949 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
15950 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

Glyphs that consist of several characters.
15951 \DeclareTextCommand{\SS}{PD1}{SS}%
15952 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

Aliases (german.sty)

```
15953 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
15954 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
15955 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
15956 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
15957 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}%
15958 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}%
15959 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
15960 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%
```

Aliases (math names)

```
15961 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
15962 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15963 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15964 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15965 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15966 \DeclareTextCommand{\textbeta}{PD1}{\ss}%
```

Polish aliases. PDF encoding does not have the characters, but it is useful to Poles to have the plain letters regardless. Requested by Wojciech Myszka (W.Myszka@immt.pwr.wroc.pl).

```
15967 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15968 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15969 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15970 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15971 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15972 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15973 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15974 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15975 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15976 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15977 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15978 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15979 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15980 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
```

```
15981 </pd1enc>
```

51.2 PU encoding

```
15982 (*puenc)
15983 \DeclareFontEncoding{PU}{-}{-}
```

51.2.1 NFSS2 accents

```
15984 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecmb
15985 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
15986 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15987 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
15988 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
15989 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
15990 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
15991 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
15992 % U+0304 COMBINING MACRON; macroncmb
15993 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
15994 % U+0306 COMBINING BREVE; brevecmb
15995 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
15996 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
15997 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
15998 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
15999 % U+0308 COMBINING DIAERESIS; dieresiscmb
```

16000 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
16001 % U+030A COMBINING RING ABOVE; ringcmb
16002 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
16003 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
16004 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
16005 % U+030C COMBINING CARON; caroncmb
16006 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
16007 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravescmb
16008 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
16009 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
16010 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
16011 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
16012 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
16013 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
16014 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
16015 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubumlaut (tipa)
16016 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
16017 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
16018 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
16019 % U+0327 COMBINING CEDILLA; cedillacmb
16020 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
16021 % U+0328 COMBINING OGONEK; ogonekcmb
16022 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
16023 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
16024 % \textsubcircum (tipa)
16025 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
16026 % U+032E COMBINING BREVE BELOW; brevebelowcmb
16027 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
16028 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
16029 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
16030 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
16031 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
16032 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
16033 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
16034 % U+20DD COMBINING ENCLOSING CIRCLE
16035 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

Double accents.

16036 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
16037 \DeclareTextCommand{\textgravemacron}{PU}[1]{#1\83\000\83\004}% U+0300 U+0304

\@empty is an artefact of the NFSS2 machinery, it gets inserted for empty arguments and spaces.

16038 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}%
16039 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}%
16040 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\textasciicircum}%
16041 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
16042 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
16043 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%
16044 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
16045 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
16046 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
16047 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
16048 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
16049 \DeclareTextCompositeCommand{\=} {PU}{\@empty}{\textasciimacron}%
16050 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
16051 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%

16052 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\{\ \83\021\}}% U+0311
16053 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\{\ \83\044\}}% U+0324
16054 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\{\texttringlow\}}%
16055 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\{\textcirc-
low\}}%
16056 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\{\ \83\056\}}% U+032E
16057 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\{\texttildelow\}}%
16058 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\{\textmacronbelow\}}%
16059 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\{\textdotbelow\}}%
16060 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\{\texttie\}}%
16061 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\{\textnewtie\}}%
16062 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\{\textbigcircle\}}%
16063 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\{\ \83\001\83\004\}}% U+0301 U
16064 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\{\ \83\000\83\004\}}% U+0300 U
16065 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}%
16066 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%
16067 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}%
16068 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
16069 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%
16070 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
16071 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
16072 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
16073 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
16074 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
16075 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%
16076 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%
16077 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%
16078 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
16079 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\{\ \83\021\}}% U+0311
16080 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\{\ \83\044\}}% U+0324
16081 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\{\texttringlow\}}%
16082 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\{\textcirc-
low\}}%
16083 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\{\ \83\056\}}% U+032E
16084 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\{\texttildelow\}}%
16085 \DeclareTextCompositeCommand{\b}{PU}{\ }{\{\textmacronbelow\}}%
16086 \DeclareTextCompositeCommand{\d}{PU}{\ }{\{\textdotbelow\}}%
16087 \DeclareTextCompositeCommand{\t}{PU}{\ }{\{\texttie\}}%
16088 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\{\textnewtie\}}%
16089 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\{\textbigcircle\}}%
16090 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\{\ \83\001\83\004\}}% U+0301 U+0304
16091 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\{\ \83\000\83\004\}}% U+0300 U+0304

Accents for capitals (see encoding TS1)

16092 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
16093 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
16094 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
16095 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}%
16096 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
16097 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
16098 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"}{#1}}%
16099 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
16100 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
16101 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
16102 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
16103 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
16104 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}%
16105 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
16106 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

51.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

```
16107 % U+0009 (CHARACTER TABULATION)
16108 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
16109 % U+000A (LINE FEED)
16110 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
16111 % U+000D (CARRIAGE RETURN)
16112 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam
16113 % U+0022 QUOTATION MARK; quotedbl
16114 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
16115 % U+0023 NUMBER SIGN; numbersign
16116 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
16117 % U+0024 DOLLAR SIGN; dollar
16118 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
16119 %* \textdollar -> \mathdollar
16120 %* \textdollar -> \EyesDollar (marvosym)
16121 % U+0025 PERCENT SIGN; percent
16122 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
16123 % U+0026 AMPERSAND; ampersand
16124 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
16125 %* \textampersand -> \binampersand (stmaryrd)
16126 %* \textampersand -> \with (cmll)
16127 % U+0027 APOSTROPHE; quotesingle
16128 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
16129 % U+0028 LEFT PARENTHESIS; parenleft
16130 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
16131 % U+0029 RIGHT PARENTHESIS; parenright
16132 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
16133 % U+002A ASTERISK; asterisk; (?)
16134 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
16135 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
16136 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
16137 % U+002C COMMA; comma; \MVComma (marvosym)
16138 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
16139 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
16140 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
16141 % U+002E FULL STOP; period; \MVPeriod (marvosym)
16142 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
16143 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
16144 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
16145 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
16146 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
16147 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
16148 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
16149 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
16150 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
16151 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
16152 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
16153 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
16154 \DeclareTextCommand{\textMVFour}{PU}{\80\064}%* U+0034
16155 % U+0035 DIGIT FIVE; five; \MVFive (marvosym)
16156 \DeclareTextCommand{\textMVFive}{PU}{\80\065}%* U+0035
16157 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
16158 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
```

16159 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
16160 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
16161 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
16162 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
16163 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
16164 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039
\80\072: U+003A COLON; colon
\80\073: U+003B SEMICOLON; semicolon
16165 % U+003C LESS-THAN SIGN; less
16166 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
\80\075: U+003D EQUALS SIGN; equal
16167 % U+003E GREATER-THAN SIGN; greater
16168 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E
\80\077: U+003F QUESTION MARK; question
16169 % U+0040 COMMERCIAL AT; at; \MVAt (marvosym)
16170 \DeclareTextCommand{\textMVAt}{PU}{\80\100}%* U+0040
\80\101: U+0041 LATIN CAPITAL LETTER A; A
...
\80\132: U+005A LATIN CAPITAL LETTER Z; Z
\80\133: U+005B LEFT SQUARE BRACKET; bracketleft
16171 % U+005C REVERSE SOLIDUS; backslash
16172 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
\80\135: U+005D RIGHT SQUARE BRACKET; bracketright
16173 % U+005E CIRCUMFLEX ACCENT; asciicircum
16174 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
16175 % U+005F LOW LINE; underscore
16176 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
16177 %* \textunderscore -> \mathunderscore (LaTeX)
16178 % U+0060 GRAVE ACCENT; grave
16179 \DeclareTextCommand{\textasciigrave}{PU}{\80\140}% U+0060
\80\141: U+0061 LATIN SMALL LETTER A; a
...
\80\150: U+0068 LATIN SMALL LETTER H; h
16180 % U+0069 LATIN SMALL LETTER I; i
16181 \DeclareTextCompositeCommand{\.}{PU}{i}{i}% \80\151 U+0069
16182 \DeclareTextCompositeCommand{\.}{PU}{i}{i}% \80\151 U+0069
\80\152: U+006A LATIN SMALL LETTER J; j
...
\80\172: U+007A LATIN SMALL LETTER Z; z
16183 % U+007B LEFT CURLY BRACKET; braceleft
16184 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
16185 % U+007C VERTICAL LINE; *bar, verticalbar
16186 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
16187 %* \textbar -> \textvline (tipa)
16188 % U+007D RIGHT CURLY BRACKET; braceright
16189 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
16190 % U+007E TILDE; asciitilde
16191 \DeclareTextCommand{\textasciitilde}{PU}{\80\176}% U+007E

51.2.3 Latin-1 Supplement: U+0080 to U+00FF

\80\240: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace

16192 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
16193 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
16194 % U+00A2 CENT SIGN; cent
16195 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
16196 % U+00A3 POUND SIGN; sterling
16197 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
16198 %* \textsterling -> \mathsterling (LaTeX)
16199 %* \textsterling -> \pounds (LaTeX)
16200 % U+00A4 CURRENCY SIGN; currency
16201 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
16202 % U+00A5 YEN SIGN; yen
16203 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
16204 % U+00A6 BROKEN BAR; brokenbar
16205 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
16206 %* \textbrokenbar -> \brokenvert (wasysym)
16207 % U+00A7 SECTION SIGN; section
16208 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
16209 %* \textsection -> \mathsection (LaTeX)
16210 %* \textsection -> \S (LaTeX)
16211 % U+00A8 DIAERESIS; diaeresis
16212 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
16213 % U+00A9 COPYRIGHT SIGN; copyright
16214 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
16215 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
16216 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
16217 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
16218 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
16219 % U+00AC NOT SIGN; logicalnot
16220 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
16221 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
\80\255: U+00AD SOFT HYPHEN; sftthyphen, softthyphen
16222 % U+00AE REGISTERED SIGN; registered
16223 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
16224 % U+00AF MACRON; *macron, overscore
16225 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
16226 % U+00B0 DEGREE SIGN; degree
16227 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
16228 % U+00B1 PLUS-MINUS SIGN; plusminus
16229 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
16230 % U+00B2 SUPERSCRIPT TWO; twosuperior
16231 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
16232 % U+00B3 SUPERSCRIPT THREE; threesuperior
16233 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
16234 % U+00B4 ACUTE ACCENT; acute
16235 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
16236 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
16237 % U+00B5 MICRO SIGN; mu, mu1
16238 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
16239 % U+00B6 PILCROW SIGN; paragraph
16240 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
16241 %* \textparagraph -> \mathparagraph (LaTeX)
16242 % U+00B7 MIDDLE DOT; middot, *periodcentered
16243 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
16244 %* \textperiodcentered -> \MultiplicationDot (marvosym)
16245 %* \textperiodcentered -> \Squaredot (marvosym)
16246 % U+00B8 CEDILLA; cedilla

16247 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
16248 % U+00B9 SUPERSCRIPT ONE; onesuperior
16249 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
16250 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
16251 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
16252 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
16253 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
16254 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
16255 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
16256 % U+00BD VULGAR FRACTION ONE HALF; onehalf
16257 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
16258 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
16259 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
16260 % U+00BF INVERTED QUESTION MARK; questiondown
16261 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
16262 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
16263 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
16264 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
16265 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
16266 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
16267 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
16268 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
16269 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
16270 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
16271 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
16272 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
16273 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
16274 % U+00C6 LATIN CAPITAL LETTER AE; AE
16275 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
16276 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
16277 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
16278 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
16279 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
16280 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
16281 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
16282 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
16283 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
16284 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
16285 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
16286 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
16287 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
16288 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
16289 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
16290 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
16291 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
16292 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
16293 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
16294 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
16295 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
16296 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
16297 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
16298 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
16299 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
16300 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
16301 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
16302 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex

16303 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\324}% U+00D4
16304 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
16305 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
16306 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
16307 \DeclareTextCompositeCommand{"}{PU}{O}{\80\326}% U+00D6
16308 % U+00D7 MULTIPLICATION SIGN; multiply
16309 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
16310 %* \textmultiply -> \vartimes (stmaryrd)
16311 %* \textmultiply -> \MVMultiplication (marvosym)
16312 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
16313 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
16314 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
16315 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
16316 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
16317 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
16318 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
16319 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
16320 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
16321 \DeclareTextCompositeCommand{"}{PU}{U}{\80\334}% U+00DC
16322 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
16323 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
16324 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
16325 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
16326 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
16327 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
16328 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
16329 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
16330 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
16331 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
16332 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
16333 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
16334 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
16335 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
16336 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
16337 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
16338 \DeclareTextCompositeCommand{"}{PU}{a}{\80\344}% U+00E4
16339 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
16340 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
16341 % U+00E6 LATIN SMALL LETTER AE; ae
16342 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
16343 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
16344 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
16345 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
16346 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
16347 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
16348 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
16349 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
16350 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
16351 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
16352 \DeclareTextCompositeCommand{"}{PU}{e}{\80\353}% U+00EB
16353 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
16354 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
16355 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
16356 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
16357 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16358 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16359 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex

16360 \DeclareTextCompositeCommand{\~}{PU}{i}{\80\356}% U+00EE
16361 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
16362 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
16363 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
16364 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\357}% U+00EF
16365 % U+00F0 LATIN SMALL LETTER ETH; eth
16366 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
16367 %* \dh -> \eth (wsuiipa, phonetic)
16368 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
16369 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
16370 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
16371 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
16372 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
16373 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
16374 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
16375 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
16376 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
16377 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
16378 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
16379 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
16380 % U+00F7 DIVISION SIGN; divide
16381 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
16382 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
16383 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
16384 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
16385 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
16386 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
16387 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
16388 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
16389 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
16390 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
16391 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
16392 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
16393 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
16394 % U+00FE LATIN SMALL LETTER THORN; thorn;
16395 % \th, \thorn (wasysym), \textthorn (tipa)
16396 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
16397 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
16398 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
16399 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

51.2.4 Latin Extended-A: U+0080 to U+017F

16400 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
16401 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
16402 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
16403 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
16404 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
16405 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
16406 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
16407 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
16408 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
16409 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
16410 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
16411 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
16412 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
16413 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106

16414 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
16415 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
16416 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
16417 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
16418 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
16419 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
16420 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
16421 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
16422 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
16423 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
16424 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
16425 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
16426 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
16427 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
16428 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
16429 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
16430 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
16431 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
16432 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
16433 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
16434 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
16435 % \textcrd (tipa)
16436 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
16437 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
16438 %* \textcrd -> \crossd (wsuipa)
16439 % An alternate glyph with the stroke through the bowl:
16440 %* \textcrd -> \textbard (tipa)
16441 %* \textcrd -> \bard (wsuipa)
16442 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
16443 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
16444 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
16445 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
16446 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
16447 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
16448 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
16449 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
16450 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
16451 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
16452 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
16453 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
16454 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
16455 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
16456 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
16457 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
16458 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
16459 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
16460 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
16461 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
16462 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
16463 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
16464 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
16465 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
16466 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
16467 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
16468 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
16469 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F

16470 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
16471 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
16472 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
16473 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
16474 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
16475 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
16476 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
16477 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
16478 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
16479 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
16480 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
16481 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
16482 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
16483 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
16484 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
16485 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
16486 %* \texthbar -> \textcrh (tipa)
16487 %* \texthbar -> \crossh (wsuipa)
16488 %* \texthbar -> \planck (phonetic)
16489 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
16490 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
16491 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
16492 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16493 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16494 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
16495 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
16496 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
16497 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16498 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16499 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
16500 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
16501 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
16502 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16503 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16504 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
16505 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
16506 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
16507 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16508 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16509 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
16510 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
16511 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
16512 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
16513 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
16514 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
16515 % U+0133 LATIN SMALL LIGATURE IJ; ij
16516 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
16517 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
16518 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
16519 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
16520 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16521 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16522 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
16523 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136

16524 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
 16525 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

The canonical name of U+0138, small letter kra, would be `\textkgreenlandic`, following the glyph naming convention. However `latex/base/inputenc.dtx` has choosen `\textkra`.

16526 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
 16527 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
 16528 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
 16529 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
 16530 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
 16531 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
 16532 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
 16533 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
 16534 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 16535 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 16536 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 16537 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 16538 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
 16539 \DeclareTextCompositeCommand{\v}{PU}{l}{\81\076}% U+013E

There seems to be no variants of letters ‘L’ and ‘l’ with a dot above (reasonable). Therefore the `\.` accent is reused instead of making a separate accent macro `\textmiddledot`.

16540 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
 16541 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 16542 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 16543 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 16544 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 16545 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
 16546 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 16547 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 16548 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 16549 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
 16550 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
 16551 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
 16552 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
 16553 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
 16554 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
 16555 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
 16556 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
 16557 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
 16558 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
 16559 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
 16560 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
 16561 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 16562 % U+014A LATIN CAPITAL LETTER ENG; Eng
 16563 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 16564 % U+014B LATIN SMALL LETTER ENG; eng
 16565 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
 16566 %* \ng -> \eng (wsuipa)
 16567 %* \ng -> \engma (phonetic)
 16568 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 16569 \DeclareTextCompositeCommand{\=} {PU}{O}{\81\114}% U+014C

16570 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
16571 \DeclareTextCompositeCommand{=} {PU}{o}{\81\115}% U+014D
16572 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
16573 \DeclareTextCompositeCommand{\u} {PU}{O}{\81\116}% U+014E
16574 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
16575 \DeclareTextCompositeCommand{\u} {PU}{o}{\81\117}% U+014F
16576 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
16577 \DeclareTextCompositeCommand{\H} {PU}{O}{\81\120}% U+0150
16578 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
16579 \DeclareTextCompositeCommand{\H} {PU}{o}{\81\121}% U+0151
16580 % U+0152 LATIN CAPITAL LIGATURE OE; OE
16581 \DeclareTextCommand{\OE} {PU}{\81\122}% U+0152
16582 % U+0153 LATIN SMALL LIGATURE OE; oe
16583 \DeclareTextCommand{\oe} {PU}{\81\123}% U+0153
16584 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
16585 \DeclareTextCompositeCommand{\'} {PU}{R}{\81\124}% U+0154
16586 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
16587 \DeclareTextCompositeCommand{\'} {PU}{r}{\81\125}% U+0155
16588 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
16589 \DeclareTextCompositeCommand{\c} {PU}{R}{\81\126}% U+0156
16590 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
16591 \DeclareTextCompositeCommand{\c} {PU}{r}{\81\127}% U+0157
16592 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
16593 \DeclareTextCompositeCommand{\v} {PU}{R}{\81\130}% U+0158
16594 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
16595 \DeclareTextCompositeCommand{\v} {PU}{r}{\81\131}% U+0159
16596 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
16597 \DeclareTextCompositeCommand{\'} {PU}{S}{\81\132}% U+015A
16598 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
16599 \DeclareTextCompositeCommand{\'} {PU}{s}{\81\133}% U+015B
16600 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
16601 \DeclareTextCompositeCommand{\^} {PU}{S}{\81\134}% U+015C
16602 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
16603 \DeclareTextCompositeCommand{\^} {PU}{s}{\81\135}% U+015D
16604 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
16605 \DeclareTextCompositeCommand{\c} {PU}{S}{\81\136}% U+015E
16606 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
16607 \DeclareTextCompositeCommand{\c} {PU}{s}{\81\137}% U+015F
16608 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
16609 \DeclareTextCompositeCommand{\v} {PU}{S}{\81\140}% U+0160
16610 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
16611 \DeclareTextCompositeCommand{\v} {PU}{s}{\81\141}% U+0161
16612 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
16613 \DeclareTextCompositeCommand{\c} {PU}{T}{\81\142}% U+0162
16614 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
16615 \DeclareTextCompositeCommand{\c} {PU}{t}{\81\143}% U+0163
16616 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
16617 \DeclareTextCompositeCommand{\v} {PU}{T}{\81\144}% U+0164
16618 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
16619 \DeclareTextCompositeCommand{\v} {PU}{t}{\81\145}% U+0165
16620 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
16621 \DeclareTextCommand{\textTslash} {PU}{\81\146}% U+0166
16622 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar

16623 `\DeclareTextCommand{\textt slash}{PU}{\81\147}% U+0167`
16624 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
16625 `\DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168`
16626 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
16627 `\DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169`
16628 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
16629 `\DeclareTextCompositeCommand{\=} {PU}{U}{\81\152}% U+016A`
16630 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
16631 `\DeclareTextCompositeCommand{\=} {PU}{u}{\81\153}% U+016B`
16632 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
16633 `\DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C`
16634 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
16635 `\DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D`
16636 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
16637 `\DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E`
16638 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
16639 `\DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F`
16640 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblac
acute, Uhungarumlaut
16641 `\DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170`
16642 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udbla
acute, uhungarumlaut
16643 `\DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171`
16644 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
16645 `\DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172`
16646 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
16647 `\DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173`
16648 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
16649 `\DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174`
16650 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
16651 `\DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175`
16652 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
16653 `\DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176`
16654 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
16655 `\DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177`
16656 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
16657 `\DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178`
16658 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
16659 `\DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179`
16660 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
16661 `\DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A`
16662 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
16663 `\DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B`
16664 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
16665 `\DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C`
16666 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
16667 `\DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D`
16668 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
16669 `\DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E`
16670 % U+017F LATIN SMALL LETTER LONG S; longs, slong
16671 `\DeclareTextCommand{\textlong s}{PU}{\81\177}% U+017F`

51.2.5 Latin Extended-B: U+0180 to U+024F

16672 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; `\textcrb` (tipa)
16673 `\DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180`
16674 %* `\textcrb` -> `\crossb` (wsuipa)
16675 % An alternate glyph with the stroke through the bowl:

16676 %* \textcrb -> \textbarb (tipa)
16677 %* \textcrb -> \barb (wsuipa)
16678 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausab (phonetic)
16679 \DeclareTextCommand{\texthausab}{PU}{\81\201}%* U+0181
16680 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
16681 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
16682 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausad (phonetic)
16683 \DeclareTextCommand{\texthausad}{PU}{\81\212}%* U+018A
16684 % U+018E LATIN CAPITAL LETTER REVERSED E; Eversed
16685 \DeclareTextCommand{\textEversed}{PU}{\81\216}% U+018E
16686 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
16687 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
16688 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
16689 %* \textflorin -> \Florin (marvosym)
16690 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
16691 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
16692 %* \texthvlig -> \hv (wsuipa)
16693 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausak (phonetic)
16694 \DeclareTextCommand{\texthausak}{PU}{\81\230}%* U+0198
16695 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
16696 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
16697 %* \texthtk -> \hausak (phonetic)
16698 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
16699 % \textbarl (tipa), \barl (wsuipa)
16700 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
16701 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
16702 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
16703 % \textclambda (tipa)
16704 \DeclareTextCommand{\textclambda}{PU}{\81\233}% U+019B
16705 %* \textclambda -> \crossnilambda (wsuipa)
16706 %* \textclambda -> \barlambd (phonetic)
16707 %* \textclambda -> \lambdabar (txfonts/pxfonts)
16708 %* \textclambda -> \lambdaslash (txfonts/pxfonts)
16709 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegrightlong;
16710 % \textnrleg (tipx)
16711 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
16712 %* \textPUnrleg -> \textnrleg (tipx)
16713 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
16714 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
16715 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
16716 % \textlhookt (tipa)
16717 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB
16718 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
16719 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
16720 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
16721 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
16722 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
16723 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
16724 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
16725 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
16726 % glottalinvertedstroke; \textcrinvglotstop (tipa)
16727 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
16728 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)

16729 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
16730 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
tal;
16731 % \textpipe (tipa)
16732 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
16733 %* \textpipe -> \textpipevar (tipx)
16734 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
16735 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
16736 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
16737 %* \textdoublepipe -> \textdoublepipevar (tipx)
16738 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-
BLE BAR;
16739 % clickalveolar; \textdoublebarpipe (tipa)
16740 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
16741 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
16742 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
16743 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
16744 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
16745 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
16746 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
16747 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
16748 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
16749 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16750 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16751 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
16752 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
16753 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
16754 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
16755 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
16756 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
16757 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
16758 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
16759 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
16760 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
16761 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
16762 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
16763 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
16764 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
16765 %* \textgslash -> \textcrg (tipa)
16766 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
16767 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
16768 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
16769 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
16770 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
16771 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
16772 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
16773 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
16774 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
16775 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
16776 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
16777 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
16778 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
16779 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16780 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16781 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
16782 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
16783 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute

16784 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
16785 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
16786 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\370}% U+01F8
16787 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
16788 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\371}% U+01F9
16789 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
16790 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
16791 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
16792 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
16793 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
16794 % *Oslashacute, Ostrokeacut
16795 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
16796 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
16797 % *oslashacute, ostrokeacute
16798 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
16799 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
16800 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
16801 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
16802 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
16803 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
16804 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
16805 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
16806 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
16807 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
edbreve
16808 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
16809 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einvert-
breve
16810 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
16811 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
16812 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
16813 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
16814 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16815 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16816 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; Inverted-
breve
16817 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
16818 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
breve
16819 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16820 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16821 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
16822 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
16823 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
16824 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
16825 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-
edbreve
16826 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
16827 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinverted-
breve
16828 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
16829 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
16830 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
16831 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
16832 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
16833 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
16834 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214

16835 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
16836 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
16837 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvertedbreve
16838 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
16839 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinvertedbreve
16840 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
16841 % U+021E LATIN CAPITAL LETTER H WITH CARON
16842 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
16843 % U+021F LATIN SMALL LETTER H WITH CARON
16844 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
16845 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
16846 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
16847 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
16848 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
16849 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
16850 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
16851 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
16852 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
16853 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
16854 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
16855 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
16856 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
16857 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
16858 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
16859 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
16860 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
16861 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
16862 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
16863 % U+0233 LATIN SMALL LETTER Y WITH MACRON
16864 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
16865 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
16866 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
16867 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
16868 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
16869 % U+0237 LATIN SMALL LETTER DOTLESS J
16870 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
16871 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
16872 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
16873 %* \textPUdblig -> \textdblig (tipx)
16874 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
16875 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
16876 %* \textPUqplig -> \textqplig (tipx)
16877 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
16878 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
16879 %* \textslashc -> \textcentoldstyle (textcomp)
16880 % With bar instead of stroke:
16881 %* \textslashc -> \textbarc (tipa)

51.2.6 IPA Extensions: U+0250 to U+02AF

16882 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
16883 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
16884 %* \textturna -> \inva (wasysym)
16885 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
16886 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
16887 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251

16888 %* \textscripta -> \vara (phonetic)
16889 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
16890 % \textturnscripta (tipa)
16891 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
16892 %* \textturnscripta -> \invscripta (wsuipa)
16893 %* \textturnscripta -> \rotvara (phonetic)
16894 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
16895 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
16896 %* \texthtb -> \hookb (wsuipa)
16897 %* \texthtb -> \hausab (phonetic)
16898 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
16899 % \textopeno (tipa), \openo (wasysym)
16900 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
16901 %* \textopeno -> \varopeno (phonetic)
16902 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
16903 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
16904 %* \textctc -> \curlyc (wsuipa)
16905 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
16906 \DeclareTextCommand{\textrtaild}{PU}{\82\126}%* U+0256
16907 %* \textrtaild -> \taild (wsuipa)
16908 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
16909 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
16910 %* \texthtd -> \hookd (wsuipa)
16911 %* \texthtd -> \hausad (phonetic)
16912 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
16913 % \textreve (tipa), \reve (wsuipa)
16914 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
16915 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
16916 % \textschwa (tipa), \schwa (wsuipa, phonetic)
16917 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259
16918 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
16919 % \textrhookschwa (tipa)
16920 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A
16921 %* \textrhookschwa -> \er (wsuipa)
16922 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
SILON; eopen;
16923 % \niepsilon (wsuipa)
16924 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
16925 %* \textniepsilon -> \epsi (phonetic)
16926 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
16927 % \textrepsilon (tipa), \repsilon (wsuipa)
16928 \DeclareTextCommand{\textrepsilon}{PU}{\82\134}%* U+025C
16929 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
reversedhook;
16930 % \texthookrepsilon (tipa)
16931 \DeclareTextCommand{\texthookrepsilon}{PU}{\82\135}%* U+025D
16932 %* \texthookrepsilon -> \hookrepsilon (wsuipa)
16933 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
versedclosed;
16934 % \textcloserepsilon (tipa)
16935 \DeclareTextCommand{\textcloserepsilon}{PU}{\82\136}% U+025E
16936 %* \textcloserepsilon -> \closedrepsilon (wsuipa)
16937 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
lessstroke;
16938 % \textbardotlessj (tipa)
16939 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
16940 %* \textbardotlessj -> \barj (phonetic)

16941 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
16942 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
16943 %* \texthtg -> \hookg (wsuipa)
16944 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
16945 % \textscriptg (tipa), \scriptg (wsuipa)
16946 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
16947 %* \textscriptg -> \varg (phonetic)
16948 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
16949 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
16950 % U+0263 LATIN SMALL LETTER GAMMA; gammadlatinsmall;
16951 % \ipagamma (wsuipa), \vod (phonetic)
16952 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
16953 %* \textipagamma -> \vod (phonetic)
16954 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
16955 % \babygamma (wsuipa)
16956 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
16957 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
16958 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
16959 %* \textturnh -> \invh (wsuipa)
16960 %* \textturnh -> \udesc (phonetic)
16961 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
16962 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
16963 %* \texthth -> \hookh (wsuipa)
16964 %* \texthth -> \voicedh (phonetic)
16965 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \text-
ththeng (tipa)
16966 \DeclareTextCommand{\textththeng}{PU}{\82\147}% U+0267
16967 %* \textththeng -> \hookheng (wsuipa)
16968 % U+0268 LATIN SMALL LETTER I WITH STROKE;
16969 % \textbari (tipa), \bari (wsuipa)
16970 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
16971 %* \textbari -> \ibar (phonetic)
16972 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \niiota (wsuipa)
16973 \DeclareTextCommand{\textniiota}{PU}{\82\151}%* U+0269
16974 %* \textniiota -> \vari (phonetic)
16975 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
16976 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
16977 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
16978 % \textltilde (tipa)
16979 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
16980 %* \textltilde -> \tildel (wsuipa)
16981 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
16982 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
16983 %* \textbeltl -> \latfric (wsuipa)
16984 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
16985 % lhookretroflex; \textrtaill (tipa)
16986 \DeclareTextCommand{\textrtaill}{PU}{\82\155}% U+026D
16987 %* \textrtaill -> \taill (wsuipa)
16988 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
16989 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
16990 %* \textlyoghlig -> \lz (wsuipa)
16991 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
16992 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
16993 %* \textturnm -> \invm (wsuipa)
16994 %* \textturnm -> \rotm (phonetic)
16995 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
turned;

16996 % \textturnmreg (tipa)
16997 \DeclareTextCommand{\textturnmreg}{PU}{\82\160}% U+0270
16998 %* \textturnmreg -> \legm (wsuipa)
16999 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
17000 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
17001 %* \textltailm -> \labdentalnas (wsuipa)
17002 %* \textltailm -> \emgma (phonetic)
17003 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textltailn (tipa)
17004 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
17005 %* \textltailn -> \nj (wsuipa)
17006 %* \textltailn -> \nya (phonetic)
17007 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
17008 % nhookretroflex; \textrtailn (tipa)
17009 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
17010 %* \textrtailn -> \tailn (wsuipa)
17011 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
17012 \DeclareTextCommand{\textscn}{PU}{\82\164}%* U+0274
17013 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
17014 % LATIN CAPITAL LETTER BARRED O; obarred;
17015 % \textbaro (tipa), \baro (wsuipa)
17016 % But \baro from stmaryrd is different!
17017 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
17018 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscoeelig (tipa)
17019 \DeclareTextCommand{\textscoeelig}{PU}{\82\166}% U+0276
17020 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatinclosed;
17021 % \textcloseomega (tipa)
17022 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
17023 %* \textcloseomega -> \closedniomega (wsuipa)
17024 %* \textcloseomega -> \varomega (phonetic)
17025 % U+0278 LATIN SMALL LETTER PHI; philatin; \niph (wsuipa)
17026 \DeclareTextCommand{\textniph}{PU}{\82\170}%* U+0278
17027 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
17028 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
17029 %* \textturnr -> \invr (wsuipa)
17030 %* \textturnr -> \rotr (phonetic)
17031 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
17032 % rlonglegturned; \textturnlonglegr (tipa)
17033 \DeclareTextCommand{\textturnlonglegr}{PU}{\82\172}% U+027A
17034 %* \textturnlonglegr -> \invlegr (wsuipa)
17035 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhookturned;
17036 % \textturnrrtail (tipa)
17037 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
17038 %* \textturnrrtail -> \tailinvr (wsuipa)
17039 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlonglegr (tipa)
17040 \DeclareTextCommand{\textlonglegr}{PU}{\82\174}%* U+027C
17041 %* \textlonglegr -> \legr (wsuipa)
17042 % U+027D LATIN SMALL LETTER R WITH TAIL; rhook; \textrtailr (tipa)
17043 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
17044 %* \textrtailr -> \tailr (wsuipa)
17045 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
17046 % \textfishhookr (tipa)
17047 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E
17048 %* \textfishhookr -> \flapr (wsuipa)
17049 %* \textfishhookr -> \flap (phonetic)
17050 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfish-

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hookreversed;
17051 % \textlhtlongi (tipa)
17052 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
17053 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
17054 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
17055 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
17056 % \textinvscr (tipa), \invscr (wsuipa)
17057 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281
17058 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \textrtails (tipa)
17059 \DeclareTextCommand{\textrtails}{PU}{\82\202}% U+0282
17060 %* \textrtails -> \tails (wsuipa)
17061 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
17062 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283
17063 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
17064 % dotlessjstrokehook; \texthtbardotlessj (tipa)
17065 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
17066 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquat-
reversed;
17067 % \textvibyi (tipa)
17068 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
17069 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
17070 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
17071 %* \textctesh -> \curlyesh (wsuipa)
17072 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
17073 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
17074 %* \textturnt -> \clickt (wsuipa)
17075 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflex-
hook;
17076 % \textrtailt (tipa)
17077 \DeclareTextCommand{\textrtailt}{PU}{\82\210}% U+0288
17078 %* \textrtailt -> \tailt (wsuipa)
17079 % U+0289 LATIN SMALL LETTER U BAR; ubar;
17080 % \textbaru (tipa), \baru (wsuipa)
17081 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
17082 %* \textbaru -> \ubar (phonetic)
17083 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
17084 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
17085 %* \textniupsilon -> \rotOmega (phonetic)
17086 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LET-
TER SCRIPT V;
17087 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
17088 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
17089 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
17090 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
17091 %* \textturnv -> \invv (wsuipa)
17092 %* \textturnv -> \pwedge (phonetic)
17093 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
17094 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
17095 %* \textturnw -> \invw (wsuipa)
17096 %* \textturnw -> \rotw (phonetic)
17097 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
17098 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
17099 %* \textturny -> \invy (wsuipa)
17100 %* \textturny -> \roty (phonetic)
17101 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
17102 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
17103 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-

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hook;
17104 % \texttrtailz (tipa)
17105 \DeclareTextCommand{\texttrtailz}{PU}{\82\220}% U+0290
17106 %* \texttrtailz -> \tailz (wsuipa)
17107 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
17108 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
17109 %* \textctz -> \curlyz (wsuipa)
17110 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
17111 % \textyogh (tipa), \yogh (wsuipa)
17112 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
17113 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LET-
TER YOGH CURL;
17114 % ezhcurl; \textctyogh (tipa)
17115 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
17116 %* \textctyogh -> \curlyyogh (wsuipa)
17117 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
17118 % \textglotstop (tipa), \glotstop (wsuipa)
17119 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
17120 %* \textglotstop -> \ejective (wsuipa)
17121 %* \textglotstop -> \glottal (phonetic)
17122 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
17123 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
17124 % \textrevglotstop (tipa), \revglotstop (wsuipa)
17125 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
17126 %* \textrevglotstop -> \reveject (wsuipa)
17127 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
17128 % \textinvglotstop (tipa), \invglotstop (wsuipa)
17129 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
17130 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
17131 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
17132 %* \textstretchc -> \clickc (wsuipa)
17133 %* \textstretchc -> \textstretchcvar (tipx)
17134 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
17135 % \textbullseye (tipa)
17136 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
17137 %* \textbullseye -> \clickb (wsuipa)
17138 %* \textbullseye -> \textObullseye (tipx)
17139 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
17140 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
17141 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
17142 % \textcloseepsilon (tipa)
17143 \DeclareTextCommand{\textcloseepsilon}{PU}{\82\232}% U+029A
17144 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
17145 % \texthtscg (tipa)
17146 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
17147 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
17148 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
17149 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcrossed-
tail; \textcdj (tipa)
17150 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
17151 %* \textctj -> \textctjvar (tipx)
17152 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
17153 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
17154 %* \textturnk -> \textturnsck (tipx)
17155 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)
17156 \DeclareTextCommand{\textscL}{PU}{\82\237}% U+029F
17157 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)

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17158 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
17159 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-
stroke;
17160 % \textbarglotstop (tipa)
17161 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
17162 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
17163 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokere-
versed;
17164 % \textbarrevglotstop (tipa)
17165 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
17166 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzalton; \textdzlig (tipa)
17167 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
17168 %* \textdzlig -> \dz (wsupipa)
17169 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dez; \textdyogh-
lig (tipa)
17170 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
17171 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
17172 % \textdctzlig (tipa)
17173 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
17174 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
17175 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
17176 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \textteshlig (tipa)
17177 \DeclareTextCommand{\textteshlig}{PU}{\82\247}% U+02A7
17178 %* \textteshlig -> \tesh (wsuipa)
17179 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tcurl;
17180 % \texttctclig (tipa)
17181 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
17182 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
17183 % \textlhtlongy (tipa)
17184 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
17185 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
17186 % \textviby (tipa)
17187 \DeclareTextCommand{\textviby}{PU}{\82\257}% U+02AF

51.2.7 Spacing Modifier Letters: U+02B0 to U+02FF

17188 % U+02BD MODIFIER LETTER REVERSED COMMA;
17189 % commareversedmod, afi64937; \textrevapostrophe (tipa)
17190 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
17191 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
17192 % \textraiseglotstop (tipa)
17193 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0
17194 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
17195 % \textlptr (tipa)
17196 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
17197 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
17198 % \textrptr (tipa)
17199 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
17200 % U+02C7 CARON; caron
17201 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
17202 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticalinmod;
17203 % \textprimstress (tipa)
17204 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
17205 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticalinlowmod;
17206 % \textsecstress (tipa)
17207 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
17208 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
17209 % \textlengthmark (tipa)

17210 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
 17211 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangu-
 larhalfmod;
 17212 % \texthalflength (tipa)
 17213 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
 17214 % U+02D8 BREVE; breve
 17215 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 17216 % U+02D9 DOT ABOVE; dotaccent
 17217 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 17218 % U+02DA RING ABOVE; ring
 17219 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 17220 % U+02DB OGONEK; ogonek
 17221 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 17222 % U+02DC SMALL TILDE; ilde, *tilde
 17223 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 17224 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 17225 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 17226 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
 17227 % U+02F3 MODIFIER LETTER LOW RING
 17228 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
 17229 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 17230 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 17231 % U+02F7 MODIFIER LETTER LOW TILDE
 17232 \DeclareTextCommand{\texttildedlow}{PU}{\82\367}% U+02F7
 17233 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
 17234 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
 17235 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
 17236 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

51.2.8 Combining Diacritical Marks: U+0300 to U+036F

17237 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 17238 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 17239 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 17240 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 17241 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 17242 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 17243 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 17244 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 17245 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
 blecmb
 17246 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

51.2.9 Greek and Coptic: U+0370 to U+03FF

17247 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 17248 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 17249 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 17250 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 17251 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos
 17252 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 17253 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 17254 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 17255 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etanos
 17256 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 17257 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 17258 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 17259 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omi-
 crintonos

17260 `\DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C`
17261 `% U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilontonos`
17262 `\DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E`
17263 `% U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos`
17264 `\DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F`
17265 `% U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;`
17266 `% iodadiesistonos`
17267 `\DeclareTextCompositeCommand{\'}{PU}{\textIotadiesis}{\83\220}% U+0390`
17268 `% U+0391 GREEK CAPITAL LETTER ALPHA; Alpha`
17269 `\DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391`
17270 `% U+0392 GREEK CAPITAL LETTER BETA; Beta`
17271 `\DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392`
17272 `% U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)`
17273 `\DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393`
17274 `% U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta; \Delta (LaTeX)`
17275 `\DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394`
17276 `% U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon`
17277 `\DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395`
17278 `% U+0396 GREEK CAPITAL LETTER ZETA; Zeta`
17279 `\DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396`
17280 `% U+0397 GREEK CAPITAL LETTER ETA; Eta`
17281 `\DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397`
17282 `% U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)`
17283 `\DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398`
17284 `% U+0399 GREEK CAPITAL LETTER IOTA; Iota`
17285 `\DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399`
17286 `% U+039A GREEK CAPITAL LETTER KAPPA; Kappa`
17287 `\DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A`
17288 `% U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)`
17289 `\DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B`
17290 `% U+039C GREEK CAPITAL LETTER MU; Mu`
17291 `\DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C`
17292 `% U+039D GREEK CAPITAL LETTER NU; Nu`
17293 `\DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D`
17294 `% U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)`
17295 `\DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E`
17296 `% U+039F GREEK CAPITAL LETTER OMICRON; Omicron`
17297 `\DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F`
17298 `% U+03A0 GREEK CAPITAL LETTER PI; Pi`
17299 `\DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0`
17300 `% U+03A1 GREEK CAPITAL LETTER RHO; Rho`
17301 `\DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1`
17302 `% U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)`
17303 `\DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3`
17304 `% U+03A4 GREEK CAPITAL LETTER TAU; Tau`
17305 `\DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4`
17306 `% U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon; \Upsilon (LaTeX)`
17307 `\DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5`
17308 `% U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)`
17309 `\DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6`
17310 `% U+03A7 GREEK CAPITAL LETTER CHI; Chi`
17311 `\DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7`
17312 `% U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)`
17313 `\DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8`
17314 `% U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega;`
17315 `% \Omega (LaTeX)`

17316 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
17317 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
17318 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
17319 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
17320 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilonondieresis
17321 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
17322 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
17323 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}%* U+03AC
17324 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilontonos
17325 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
17326 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etatonos
17327 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
17328 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotatonos
17329 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
17330 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
17331 % AND TONOS; upsilondieresis
17332 \DeclareTextCompositeCommand{"}{PU}{\textupsilonacute}{\83\260}% U+03B0
17333 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
17334 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
17335 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
17336 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
17337 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
17338 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
17339 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
17340 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
17341 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
17342 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
17343 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
17344 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
17345 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
17346 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
17347 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
17348 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
17349 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)
17350 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
17351 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
17352 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
17353 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
17354 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
17355 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu; \mu (LaTeX)
17356 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
17357 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
17358 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
17359 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
17360 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
17361 % U+03BF GREEK SMALL LETTER OMICRON; omicron
17362 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
17363 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
17364 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
17365 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
17366 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
17367 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
17368 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
17369 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)
17370 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
17371 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)

17372 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
17373 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon; \upsilon (LaTeX)
17374 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
17375 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)
17376 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
17377 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
17378 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
17379 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)
17380 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
17381 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
17382 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
17383 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
17384 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
17385 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
silondieresis
17386 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
17387 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
17388 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
17389 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
17390 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
17391 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
17392 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
17393 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
17394 % U+03DA GREEK LETTER STIGMA; Stigmagreek
17395 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
17396 % U+03DB GREEK SMALL LETTER STIGMA
17397 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
17398 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
17399 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
17400 % U+03DD GREEK SMALL LETTER DIGAMMA
17401 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
17402 %* \textdigammagreek -> \digamma (AmS)
17403 % U+03DE GREEK LETTER KOPPA; Koppagreek
17404 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
17405 % U+03DF GREEK SMALL LETTER KOPPA
17406 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
17407 % U+03E0 GREEK LETTER SAMPI; Sampigreek
17408 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
17409 % U+03E1 GREEK SMALL LETTER SAMPI
17410 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
17411 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
17412 % \backepsilon (AmS)
17413 \DeclareTextCommand{\textbackepsilon}{PU}{\83\366}% U+03F6

51.2.10 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vov@vov.vsu.ru) for the help with the Cyrillic glyph names.

17414 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
17415 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\000}% U+0400
17416 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afii10023
17417 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
17418 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% U+0401
17419 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
17420 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
17421 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
17422 \DeclareTextCompositeCommand{'}{PU}{\CYRG}{\84\003}% U+0403
17423 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053

17424 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
17425 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
17426 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
17427 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
17428 % Icyrillic, *afii10055
17429 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
17430 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
17431 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
17432 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
17433 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
17434 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
17435 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
17436 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
17437 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
17438 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
17439 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
17440 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
17441 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
17442 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
17443 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
17444 \DeclareTextCompositeCommand{\`}{PU}{\CYRI}{\84\015}% U+040D
17445 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
17446 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
17447 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
17448 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
17449 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
17450 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
17451 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
17452 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
17453 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
17454 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
17455 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
17456 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
17457 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
17458 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
17459 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
17460 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
17461 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
17462 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
17463 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
17464 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
17465 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
17466 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
17467 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
17468 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
17469 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
17470 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
17471 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
17472 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
17473 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
17474 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
17475 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
17476 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
17477 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
17478 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
17479 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
17480 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E

17481 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
17482 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
17483 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
17484 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
17485 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
17486 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
17487 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
17488 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
17489 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
17490 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
17491 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
17492 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
17493 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
17494 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
17495 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
17496 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
17497 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
17498 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
17499 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
17500 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
17501 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
17502 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
17503 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
17504 % Hardsigncyrillic, *afii10044
17505 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
17506 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
17507 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
17508 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
17509 % Softsigncyrillic, *afii10046
17510 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
17511 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
17512 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
17513 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
17514 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
17515 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
17516 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
17517 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
17518 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
17519 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
17520 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
17521 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
17522 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
17523 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
17524 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
17525 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
17526 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
17527 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
17528 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
17529 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhacyrillic
17530 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
17531 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
17532 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
17533 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
17534 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
17535 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
17536 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
17537 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439

17538 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
17539 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
17540 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
17541 \DeclareTextCommand{\cyr1}{PU}{\84\073}% U+043B
17542 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
17543 \DeclareTextCommand{\cyr2}{PU}{\84\074}% U+043C
17544 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
17545 \DeclareTextCommand{\cyr3}{PU}{\84\075}% U+043D
17546 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
17547 \DeclareTextCommand{\cyr4}{PU}{\84\076}% U+043E
17548 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
17549 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
17550 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
17551 \DeclareTextCommand{\cyr5}{PU}{\84\100}% U+0440
17552 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
17553 \DeclareTextCommand{\cyr6}{PU}{\84\101}% U+0441
17554 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
17555 \DeclareTextCommand{\cyr7}{PU}{\84\102}% U+0442
17556 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
17557 \DeclareTextCommand{\cyr8}{PU}{\84\103}% U+0443
17558 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
17559 \DeclareTextCommand{\cyr9}{PU}{\84\104}% U+0444
17560 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
17561 \DeclareTextCommand{\cyr10}{PU}{\84\105}% U+0445
17562 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
17563 \DeclareTextCommand{\cyr11}{PU}{\84\106}% U+0446
17564 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
17565 \DeclareTextCommand{\cyr12}{PU}{\84\107}% U+0447
17566 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
17567 \DeclareTextCommand{\cyr13}{PU}{\84\110}% U+0448
17568 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
17569 \DeclareTextCommand{\cyr14}{PU}{\84\111}% U+0449
17570 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyril-
lic
17571 \DeclareTextCommand{\cyr15}{PU}{\84\112}% U+044A
17572 %* \cyr15 -> \hardsign (tipa)
17573 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
17574 \DeclareTextCommand{\cyr16}{PU}{\84\113}% U+044B
17575 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
17576 \DeclareTextCommand{\cyr17}{PU}{\84\114}% U+044C
17577 %* \cyr17 -> \softsign (tipa)
17578 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
17579 \DeclareTextCommand{\cyr18}{PU}{\84\115}% U+044D
17580 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
17581 \DeclareTextCommand{\cyr19}{PU}{\84\116}% U+044E
17582 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
17583 \DeclareTextCommand{\cyr20}{PU}{\84\117}% U+044F
17584 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
17585 \DeclareTextCompositeCommand{\cyr21}{PU}{\84\120}% U+0450
17586 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
17587 \DeclareTextCommand{\cyr22}{PU}{\84\121}% U+0451
17588 \DeclareTextCompositeCommand{\cyr23}{PU}{\84\121}% U+0451
17589 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
17590 \DeclareTextCommand{\cyr24}{PU}{\84\122}% U+0452
17591 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
17592 \DeclareTextCompositeCommand{\cyr25}{PU}{\84\123}% U+0453
17593 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic

17594 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
17595 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
17596 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
17597 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
17598 % *afii10103, icyrillic
17599 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
17600 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
17601 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
17602 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
17603 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
17604 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
17605 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
17606 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
17607 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
17608 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
17609 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
17610 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
17611 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
17612 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
17613 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
17614 \DeclareTextCompositeCommand{\`}{PU}{\cyri}{\84\135}% U+045D
17615 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
17616 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
17617 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
17618 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
17619 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
17620 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
17621 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
17622 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
17623 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
17624 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
17625 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
17626 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
17627 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
17628 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
17629 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
17630 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
17631 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
17632 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
17633 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
17634 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
17635 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
17636 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
otifiedcyrillic
17637 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
17638 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitlei-
otifiedcyrillic
17639 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
17640 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
17641 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
17642 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
17643 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
17644 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic
17645 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
17646 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-
cyrillic

17647 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
17648 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
17649 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
17650 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
17651 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
17652 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
17653 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
17654 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
17655 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
17656 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
17657 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
17658 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
17659 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
17660 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
17661 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
17662 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
17663 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
17664 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
17665 % GRAVE ACCENT; Izhitsadblgravecyrillic
17666 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
17667 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
17668 % GRAVE ACCENT; izhitsadblgravecyrillic
17669 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
17670 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
17671 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
17672 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
17673 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
17674 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
17675 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
17676 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
17677 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
17678 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
17679 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
17680 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
17681 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
17682 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
17683 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
17684 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
17685 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
17686 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
17687 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
17688 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
17689 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
17690 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
17691 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
\84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
\84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrilliccmb
\84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrilliccmb
\84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrilliccmb
\84\207: U+0487 COMBINING CYRILLIC POKRYTIE

\84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 17692 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 17693 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 17694 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 17695 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 17696 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 17697 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 17698 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 17699 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 17700 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 17701 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 17702 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 17703 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 17704 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-
 cyrillic, *afii10050
 17705 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 17706 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, ghe-
 upturncyrillic
 17707 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 17708 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-
 cyrillic
 17709 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 17710 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 17711 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 17712 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
 17713 % Ghemiddlehookcyrillic
 17714 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 17715 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
 17716 % ghemiddlehookcyrillic
 17717 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 17718 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
 17719 % Zhedescendercyrillic
 17720 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 17721 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
 17722 % zhedescendercyrillic
 17723 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 17724 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
 dercyrillic
 17725 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 17726 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 17727 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-
 cyrillic
 17728 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 17729 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 17730 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescen-
 dercyrillic
 17731 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 17732 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescen-
 dercyrillic
 17733 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 17734 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;
 17735 % Kavertikalstrokecyrillic
 17736 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 17737 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;
 17738 % kavertikalstrokecyrillic
 17739 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D

17740 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
17741 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
17742 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
17743 \DeclareTextCommand{\cyrkhrs}{PU}{\84\237}% U+049F
17744 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
17745 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
17746 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
17747 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
17748 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-
dercyrillic
17749 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
17750 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescender-
cyrillic
17751 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
17752 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
17753 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
17754 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
17755 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
17756 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-
dlehookcyrillic
17757 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
17758 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddle-
hookcyrillic
17759 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
17760 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyril-
lic
17761 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
17762 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
17763 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
17764 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescen-
dercyrillic
17765 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
17766 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
17767 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescender-
cyrillic
17768 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
17769 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
17770 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescen-
dercyrillic
17771 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
17772 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescen-
dercyrillic
17773 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
17774 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
17775 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
17776 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
17777 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
17778 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Us-
traightstrokecyrillic
17779 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
17780 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; us-
traightstrokecyrillic
17781 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
17782 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadescen-
dercyrillic
17783 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
17784 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescen-

dercyrillic
 17785 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
 17786 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 17787 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 17788 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 17789 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
 17790 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
 17791 % Chedescendercyrillic
 17792 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
 17793 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescen-
 dercyrillic
 17794 \DeclareTextCommand{\cyrchrds}{PU}{\84\267}% U+04B7
 17795 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
 17796 % Cheverticalstrokecyrillic
 17797 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
 17798 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
 17799 % cheverticalstrokecyrillic
 17800 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
 17801 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
 17802 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
 17803 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
 17804 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
 17805 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-
 cyrillic
 17806 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
 17807 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyril-
 lic
 17808 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
 17809 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; Chedescenderabkhasiancyrillic
 17810 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 17811 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
 17812 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; chedescenderabkhasiancyrillic
 17813 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 17814 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 17815 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 17816 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 17817 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 17818 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 17819 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 17820 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 17821 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 17822 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 17823 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 17824 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 17825 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 17826 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 17827 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 17828 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
 17829 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 17830 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 17831 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 17832 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 17833 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakas-
 siancyrillic
 17834 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB

17835 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-cyrillic
17836 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
17837 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
17838 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
17839 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
17840 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
\84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
17841 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
17842 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
17843 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
17844 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
17845 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
17846 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
17847 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
17848 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
17849 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
17850 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
17851 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
17852 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
17853 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevecyrillic
17854 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
17855 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevecyrillic
17856 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
17857 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
17858 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
17859 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
17860 \DeclareTextCommand{\cyrschw}{PU}{\84\331}% U+04D9
17861 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
17862 % Schwadieresiscyrillic
17863 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
17864 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
17865 % schwadieresiscyrillic
17866 \DeclareTextCompositeCommand{\U}{PU}{\cyrschw}{\84\333}% U+04DB
17867 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedieresiscyrillic
17868 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\334}% U+04DC
17869 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
17870 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\335}% U+04DD
17871 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
17872 \DeclareTextCompositeCommand{\U}{PU}{\CYRZ}{\84\336}% U+04DE
17873 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
17874 \DeclareTextCompositeCommand{\U}{PU}{\cyrz}{\84\337}% U+04DF
17875 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasiancyrillic
17876 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
17877 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
17878 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
17879 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
17880 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\342}% U+04E2
17881 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
17882 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\343}% U+04E3

17883 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
17884 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
17885 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
17886 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
17887 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
17888 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
17889 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
17890 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
17891 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
17892 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
17893 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
17894 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
17895 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;
17896 % Obarreddieresiscyrillic
17897 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
17898 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;
17899 % obarreddieresiscyrillic
17900 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
17901 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
17902 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
17903 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
17904 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
17905 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
17906 \DeclareTextCompositeCommand{=} {PU}{\CYRU}{\84\356}% U+04EE
17907 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
17908 \DeclareTextCompositeCommand{=} {PU}{\cyru}{\84\357}% U+04EF
17909 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
17910 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
17911 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
17912 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
17913 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
17914 \DeclareTextCompositeCommand{H}{PU}{\CYRU}{\84\362}% U+04F2
17915 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
17916 \DeclareTextCompositeCommand{H}{PU}{\cyru}{\84\363}% U+04F3
17917 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
17918 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
17919 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
17920 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
17921 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
17922 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
17923 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
17924 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
17925 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresiscyrillic
17926 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
17927 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresiscyrillic
17928 \DeclareTextCompositeCommand{"}{PU}{\cyrery}{\84\371}% U+04F9
\84\372: U+04FA CYRILLIC CAPITAL LETTER GHE WITH STROKE AND HOOK
\84\373: U+04FB CYRILLIC SMALL LETTER GHE WITH STROKE AND

HOOK

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17929 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
17930 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
17931 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
17932 \DeclareTextCommand{\cyrhk}{PU}{\84\375}% U+04FD
\84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
\84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE
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51.2.11 Hebrew: U+0590 to U+05FF

Macro names are taken from `he8enc.def`.

```
17933 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
17934 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
17935 % U+05D0 HEBREW LETTER ALEF
17936 \DeclareTextCommand{\heba1ef}{PU}{\85\320}% U+05D0
17937 % U+05D1 HEBREW LETTER BET
17938 \DeclareTextCommand{\hebb1et}{PU}{\85\321}% U+05D1
17939 % U+05D2 HEBREW LETTER GIMEL
17940 \DeclareTextCommand{\hebg1mel}{PU}{\85\322}% U+05D2
17941 % U+05D3 HEBREW LETTER DALET
17942 \DeclareTextCommand{\hebda1et}{PU}{\85\323}% U+05D3
17943 % U+05D4 HEBREW LETTER HE
17944 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
17945 % U+05D5 HEBREW LETTER VAV
17946 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
17947 % U+05D6 HEBREW LETTER ZAYIN
17948 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
17949 % U+05D7 HEBREW LETTER HET
17950 \DeclareTextCommand{\hebh1et}{PU}{\85\327}% U+05D7
17951 % U+05D8 HEBREW LETTER TET
17952 \DeclareTextCommand{\hebt1et}{PU}{\85\330}% U+05D8
17953 % U+05D9 HEBREW LETTER YOD
17954 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
17955 % U+05DA HEBREW LETTER FINAL KAF
17956 \DeclareTextCommand{\hebf1nalkaf}{PU}{\85\332}% U+05DA
17957 % U+05DB HEBREW LETTER KAF
17958 \DeclareTextCommand{\hebkaf}{PU}{\85\333}% U+05DB
17959 % U+05DC HEBREW LETTER LAMED
17960 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
17961 % U+05DD HEBREW LETTER FINAL MEM
17962 \DeclareTextCommand{\hebf1nalmem}{PU}{\85\335}% U+05DD
17963 % U+05DE HEBREW LETTER MEM
17964 \DeclareTextCommand{\hebm1em}{PU}{\85\336}% U+05DE
17965 % U+05DF HEBREW LETTER FINAL NUN
17966 \DeclareTextCommand{\hebf1nlnun}{PU}{\85\337}% U+05DF
17967 % U+05E0 HEBREW LETTER NUN
17968 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0
17969 % U+05E1 HEBREW LETTER SAMEKH
17970 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
17971 % U+05E2 HEBREW LETTER AYIN
17972 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
17973 % U+05E3 HEBREW LETTER FINAL PE
17974 \DeclareTextCommand{\hebf1nalpe}{PU}{\85\343}% U+05E3
17975 % U+05E4 HEBREW LETTER PE
17976 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
17977 % U+05E5 HEBREW LETTER FINAL TSADI
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17978 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
 17979 % U+05E6 HEBREW LETTER TSADI
 17980 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
 17981 % U+05E7 HEBREW LETTER QOF
 17982 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
 17983 % U+05E8 HEBREW LETTER RESH
 17984 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
 17985 % U+05E9 HEBREW LETTER SHIN
 17986 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
 17987 %* \hebshin -> \hebsin (he8)
 17988 % U+05EA HEBREW LETTER TAV
 17989 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 17990 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 17991 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 17992 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 17993 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 17994 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 17995 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2

51.2.12 Thai: U+0E00 to U+0E7F

17996 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 17997 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

51.2.13 Phonetic Extensions: U+1D00 to U+1D7F

17998 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textscA (tipa)
 17999 \DeclareTextCommand{\textscA}{PU}{\9035\000}% U+1D00
 18000 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 18001 \DeclareTextCommand{\textscd}{PU}{\9035\005}%* U+1D05
 18002 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textscE (tipa)
 18003 \DeclareTextCommand{\textscE}{PU}{\9035\007}% U+1D07
 18004 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscJ (tipa)
 18005 \DeclareTextCommand{\textscJ}{PU}{\9035\012}% U+1D0A
 18006 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textscK (tipx)
 18007 \DeclareTextCommand{\textPUscK}{PU}{\9035\013}% U+1D0B
 18008 %* \textPUscK -> \textscK (tipx)
 18009 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscM (tipx)
 18010 \DeclareTextCommand{\textPUscM}{PU}{\9035\015}% U+1D0D
 18011 %* \textPUscM -> \textscM (tipx)
 18012 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscP (tipx)
 18013 \DeclareTextCommand{\textPUscP}{PU}{\9035\030}% U+1D18
 18014 %* \textPUscP -> \textscP (tipx)
 18015 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
 18016 \DeclareTextCommand{\textPUrevscr}{PU}{\9035\031}% U+1D19
 18017 %* \textPUrevscr -> \textrevscr (tipx)
 18018 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscU (tipa), \scU (wsuipa)
 18019 \DeclareTextCommand{\textscU}{PU}{\9035\034}%* U+1D1C
 18020 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
 18021 \DeclareTextCommand{\textiinferior}{PU}{\9035\142}%* U+1D62
 18022 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
 18023 \DeclareTextCommand{\textrinferior}{PU}{\9035\143}%* U+1D63
 18024 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
 18025 \DeclareTextCommand{\textuinferior}{PU}{\9035\144}%* U+1D64
 18026 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
 18027 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}%* U+1D65
 18028 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
 18029 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}%* U+1D66

18030 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
18031 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}%* U+1D67
18032 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
18033 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}%* U+1D68
18034 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
18035 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}%* U+1D69
18036 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
18037 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}%* U+1D6A
18038 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
18039 % \barsci (wsuipa)
18040 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
18041 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
18042 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
18043 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
18044 % \barscu (wsuipa)
18045 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

51.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

18046 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \textPurhooka (tipx)
18047 \DeclareTextCommand{\textPurhooka}{PU}{\9035\217}% U+1D8F
18048 %* \textPurhooka -> \texttrhooka (tipx)
18049 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \textHtrtaild (tipa)
18050 \DeclareTextCommand{\textHtrtaild}{PU}{\9035\221}%* U+1D91
18051 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \texttrhooke (tipx)
18052 \DeclareTextCommand{\textPurhooke}{PU}{\9035\222}% U+1D92
18053 %* \textPurhooke -> \texttrhooke (tipx)
18054 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
18055 % \texttrhookepsilon (tipx)
18056 \DeclareTextCommand{\textPurhookepsilon}{PU}{\9035\223}% U+1D93
18057 %* \textPurhookepsilon -> \texttrhookepsilon (tipx)
18058 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
18059 % \texttrhookopeno (tipx)
18060 \DeclareTextCommand{\textPurhookopeno}{PU}{\9035\227}% U+1D97
18061 %* \textPurhookopeno -> \texttrhookopeno (tipx)

51.2.15 Latin Extended Additional: U+1E00 to U+1EFF

18062 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
18063 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
18064 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
18065 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
18066 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
18067 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
18068 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
18069 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
18070 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
18071 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
18072 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
18073 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
18074 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
18075 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
18076 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
18077 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
18078 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
18079 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A

18080 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
18081 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
18082 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
18083 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
18084 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
18085 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
18086 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
18087 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
18088 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
18089 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
18090 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
18091 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
18092 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
18093 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
18094 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-
cumflexbelow
18095 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
18096 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
cumflexbelow
18097 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
18098 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
18099 % Emacrongrave
18100 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
18101 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
18102 % emacrongrave
18103 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
18104 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
18105 % Emacronacute
18106 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
18107 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
18108 % emacronacute
18109 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
18110 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
cumflexbelow
18111 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
18112 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
cumflexbelow
18113 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
18114 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
18115 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
18116 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
18117 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
18118 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
18119 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
18120 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
18121 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
18122 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
18123 \DeclareTextCompositeCommand{\=} {PU}{G}{\9036\040}% U+1E20
18124 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
18125 \DeclareTextCompositeCommand{\=} {PU}{g}{\9036\041}% U+1E21
18126 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
18127 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
18128 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
18129 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
18130 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
18131 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
18132 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow

18133 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
18134 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
18135 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
18136 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
18137 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
18138 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
18139 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
18140 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
18141 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
18142 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
18143 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
18144 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
18145 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
18146 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
18147 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
18148 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
18149 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
18150 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
18151 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
18152 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
18153 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
18154 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
18155 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
18156 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
18157 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
18158 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
18159 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
18160 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
18161 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
18162 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
18163 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
18164 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
18165 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
18166 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
18167 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
18168 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
18169 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
18170 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
cumflexbelow
18171 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
18172 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
cumflexbelow
18173 \DeclareTextCompositeCommand{\textsubcircum}{PU}{l}{\9036\075}% U+1E3D
18174 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
18175 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
18176 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
18177 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
18178 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
18179 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
18180 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
18181 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
18182 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
18183 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
18184 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
18185 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
18186 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
18187 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44

18188 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
18189 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
18190 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
18191 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
18192 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
18193 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
18194 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
18195 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
18196 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
18197 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
18198 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncircumflexbelow
18199 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
18200 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncircumflexbelow
18201 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
18202 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
18203 % Omacrongrave
18204 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
18205 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
18206 % omacrongrave
18207 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
18208 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
18209 % Omacronacute
18210 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
18211 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
18212 % omacronacute
18213 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
18214 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
18215 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
18216 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
18217 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
18218 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
18219 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
18220 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
18221 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
18222 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
18223 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
18224 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
18225 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
18226 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
18227 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
18228 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
18229 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
18230 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
18231 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
18232 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
18233 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
18234 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
18235 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
18236 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
18237 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
18238 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
18239 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
18240 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
18241 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
18242 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent

18243 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
18244 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
18245 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
18246 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
18247 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
18248 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
18249 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
18250 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
18251 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
18252 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
18253 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
18254 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcircumflexbelow
18255 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
18256 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcircumflexbelow
18257 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
18258 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
sisbelow
18259 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
18260 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-
sisbelow
18261 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
18262 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
18263 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
18264 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
18265 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
18266 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucircumflexbelow
18267 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
18268 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucircumflexbelow
18269 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
18270 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
18271 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
18272 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
18273 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
18274 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
18275 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
18276 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
18277 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
18278 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
18279 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
18280 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
18281 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
18282 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
18283 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
18284 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
18285 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
18286 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
18287 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
18288 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
18289 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
18290 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
18291 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
18292 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
18293 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87

18294 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
18295 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
18296 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
18297 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
18298 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
18299 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
18300 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
18301 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
18302 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
18303 \DeclareTextCompositeCommand{"}{PU}{X}{\9036\214}% U+1E8C
18304 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
18305 \DeclareTextCompositeCommand{"}{PU}{x}{\9036\215}% U+1E8D
18306 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
18307 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
18308 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
18309 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
18310 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
18311 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
18312 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
18313 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
18314 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
18315 \DeclareTextCompositeCommand{\d}{PU}{Z}{\9036\222}% U+1E92
18316 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
18317 \DeclareTextCompositeCommand{\d}{PU}{z}{\9036\223}% U+1E93
18318 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
18319 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
18320 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
18321 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
18322 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
18323 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
18324 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
18325 \DeclareTextCompositeCommand{"}{PU}{t}{\9036\227}% U+1E97
18326 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
18327 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
18328 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
18329 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
18330 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-
taccent
18331 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
18332 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
18333 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
18334 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow
18335 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
18336 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
18337 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
18338 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
18339 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
18340 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
18341 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
18342 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
18343 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
18344 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
18345 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
18346 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
18347 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
18348 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
18349 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC

18350 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
 18351 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 18352 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
 18353 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 18354 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
 18355 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 18356 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 18357 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 18358 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 18359 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 18360 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
 18361 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
 18362 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
 18363 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 18364 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 18365 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 18366 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 18367 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

51.2.16 General Punctuation: U+2000 to U+206F

18368 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 18369 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 18370 % U+2013 EN DASH; endash
 18371 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 18372 % U+2014 EM DASH; emdash
 18373 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 18374 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 18375 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 18376 %* \textbardbl -> \textdoublevertline (tipa)
 18377 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 18378 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 18379 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 18380 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 18381 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 18382 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 18383 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 18384 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 18385 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 18386 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 18387 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 18388 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 18389 % U+2020 DAGGER; dagger
 18390 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
 18391 %* \textdagger -> \dag (LaTeX)
 18392 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 18393 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 18394 %* \textdaggerdbl -> \ddagger (LaTeX)
 18395 %* \textdaggerdbl -> \ddag (LaTeX)
 18396 % U+2022 BULLET; bullet
 18397 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
 18398 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
 18399 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
 18400 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 18401 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 18402 %* \textellipsis -> \mathellipsis
 18403 % U+2030 PER MILLE SIGN; perthousand
 18404 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030

18405 % U+2031 PER TEN THOUSAND SIGN
 18406 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 18407 % U+2032 PRIME; minute; \prime (MnSymbol)
 18408 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
 18409 % U+2033 DOUBLE PRIME; \second (mathabx)
 18410 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
 18411 % U+2034 TRIPLE PRIME; \third (mathabx)
 18412 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
 18413 % U+2035 REVERSED PRIME; \backprime (AmS)
 18414 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
 18415 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 18416 \DeclareTextCommand{\guilsingleft}{PU}{\9040\071}% U+2039
 18417 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 ingright
 18418 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
 18419 % U+203B REFERENCE MARK; referencemark
 18420 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 18421 % U+203D INTERROBANG
 18422 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 18423 % U+2044 FRACTION SLASH; fraction
 18424 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 18425 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 18426 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 18427 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 18428 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 18429 % U+2052 COMMERCIAL MINUS SIGN
 18430 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
 18431 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
 18432 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
 18433 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
 18434 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
 18435 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 18436 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

51.2.17 Superscripts and Subscripts: U+2070 to U+209F

18437 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 18438 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 18439 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 18440 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 18441 % U+2074 SUPERSCRIPT FOUR; foursuperior
 18442 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074
 18443 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 18444 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 18445 % U+2076 SUPERSCRIPT SIX; sixsuperior
 18446 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 18447 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 18448 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 18449 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 18450 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
 18451 % U+2079 SUPERSCRIPT NINE; ninesuperior
 18452 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
 18453 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 18454 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
 18455 % U+207B SUPERSCRIPT MINUS
 18456 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
 18457 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior

18458 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
18459 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
18460 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
18461 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
18462 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
18463 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
18464 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
18465 % U+2080 SUBSCRIPT ZERO; zeroinferior
18466 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
18467 % U+2081 SUBSCRIPT ONE; oneinferior
18468 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
18469 % U+2082 SUBSCRIPT TWO; twoinferior
18470 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
18471 % U+2083 SUBSCRIPT THREE; threeminferior
18472 \DeclareTextCommand{\textthreeminferior}{PU}{\9040\203}%* U+2083
18473 % U+2084 SUBSCRIPT FOUR; fourinferior
18474 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
18475 % U+2085 SUBSCRIPT FIVE; fiveinferior
18476 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
18477 % U+2086 SUBSCRIPT SIX; sixinferior
18478 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
18479 % U+2087 SUBSCRIPT SEVEN; seveninferior
18480 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
18481 % U+2088 SUBSCRIPT EIGHT; eightinferior
18482 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
18483 % U+2089 SUBSCRIPT NINE; nineinferior
18484 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
18485 % U+208A SUBSCRIPT PLUS SIGN
18486 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
18487 % U+208B SUBSCRIPT MINUS
18488 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
18489 % U+208C SUBSCRIPT EQUALS SIGN
18490 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
18491 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
18492 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
18493 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
18494 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
18495 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
18496 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
18497 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
18498 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
18499 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
18500 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
18501 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
18502 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
18503 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
18504 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
18505 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
18506 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
18507 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
18508 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
18509 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
18510 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
18511 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
18512 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
18513 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
18514 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099

18515 % U+209A LATIN SUBSCRIPT SMALL LETTER P
18516 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
18517 % U+209B LATIN SUBSCRIPT SMALL LETTER S
18518 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
18519 % U+209C LATIN SUBSCRIPT SMALL LETTER T
18520 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

51.2.18 Currency Symbols: U+20A0 to U+20CF

18521 % U+20A1 COLON SIGN; *colonmonetary, colonsign
18522 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
18523 % U+20A4 LIRA SIGN; afi08941, *lira
18524 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
18525 % U+20A6 NAIRA SIGN
18526 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
18527 % U+20A7 PESETA SIGN; peseta
18528 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
18529 % U+20A9 WON SIGN; won
18530 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
18531 % U+20AB DONG SIGN; dong
18532 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
18533 % U+20AC EURO SIGN; *Euro, euro
18534 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
18535 %* \texteuro -> \EurDig (marvosym)
18536 %* \texteuro -> \EURdig (marvosym)
18537 %* \texteuro -> \EurHv (marvosym)
18538 %* \texteuro -> \EURhv (marvosym)
18539 %* \texteuro -> \EurCr (marvosym)
18540 %* \texteuro -> \EURcr (marvosym)
18541 %* \texteuro -> \EurTm (marvosym)
18542 %* \texteuro -> \EURtm (marvosym)
18543 %* \texteuro -> \Eur (marvosym)
18544 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
18545 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
18546 %* \textDeleatur -> \Denarius (marvosym)
18547 % U+20B1 PESO SIGN
18548 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
18549 % U+20B2 GUARANI SIGN
18550 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

51.2.19 Letterlike Symbols: U+2100 to U+214F

18551 % U+2103 DEGREE CELSIUS; centigrade
18552 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
18553 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
18554 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
18555 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
18556 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
18557 % U+2113 SCRIPT SMALL L (=ell, liter); afi61289, lsquare; \ell (LaTeX)
18558 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
18559 % U+2116 NUMERO SIGN; *afi61352, numero
18560 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
18561 % U+2117 SOUND RECORDING COPYRIGHT
18562 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
18563 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
18564 % weierstrass; \wp (LaTeX)
18565 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
18566 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)

18567 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
18568 % U+211E PRESCRIPTION TAKE; prescription
18569 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
18570 % U+2120 SERVICE MARK
18571 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
18572 % U+2122 TRADE MARK SIGN; trademark
18573 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
18574 % U+2126 OHM SIGN; Ohm, Omega
18575 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
18576 % U+2127 INVERTED OHM SIGN
18577 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
18578 %* \textmho -> \agemO (wasysym)
18579 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
18580 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
18581 % U+212B ANGSTROM SIGN; angstrom
18582 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
18583 % U+212E ESTIMATED SYMBOL; estimated
18584 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
18585 %* \textestimated -> \EstimatedSign (marvosym)
18586 %* \textestimated -> \Ecommerce (marvosym)
18587 % U+2132 TURNED CAPITAL F; \Finv (AmS)
18588 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
18589 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
18590 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
18591 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
18592 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
18593 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
18594 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
18595 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
18596 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
18597 % U+213B FACSIMILE SIGN; \fax (marvosym)
18598 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
18599 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
18600 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
18601 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
18602 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
18603 %* \textinvamp -> \bindnasrepma (stmaryrd)
18604 %* \textinvamp -> \parr (cml)

51.2.20 Number Forms: U+2150 to U+218F

18605 % U+2150 VULGAR FRACTION ONE SEVENTH
18606 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
18607 % U+2151 VULGAR FRACTION ONE NINTH
18608 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
18609 % U+2152 VULGAR FRACTION ONE TENTH
18610 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
18611 % U+2153 VULGAR FRACTION ONE THIRD; onethird
18612 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
18613 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
18614 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
18615 % U+2155 VULGAR FRACTION ONE FIFTH
18616 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
18617 % U+2156 VULGAR FRACTION TWO FIFTHS
18618 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
18619 % U+2157 VULGAR FRACTION THREE FIFTHS
18620 \DeclareTextCommand{\textthreefifths}{PU}{\9041\127}% U+2157
18621 % U+2158 VULGAR FRACTION FOUR FIFTHS

18622 `\DeclareTextCommand{\textfourfifths}{PU}{\9041\130}%` U+2158
 18623 % U+2159 VULGAR FRACTION ONE SIXTH
 18624 `\DeclareTextCommand{\textonesixth}{PU}{\9041\131}%` U+2159
 18625 % U+215A VULGAR FRACTION FIVE SIXTHS
 18626 `\DeclareTextCommand{\textfivesixths}{PU}{\9041\132}%` U+215A
 18627 % U+215B VULGAR FRACTION ONE EIGHTH; `oneeighth`
 18628 `\DeclareTextCommand{\textoneeighth}{PU}{\9041\133}%` U+215B
 18629 % U+215C VULGAR FRACTION THREE EIGHTHS; `threeeighths`
 18630 `\DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}%` U+215C
 18631 % U+215D VULGAR FRACTION FIVE EIGHTHS; `fiveeighths`
 18632 `\DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}%` U+215D
 18633 % U+215E VULGAR FRACTION SEVEN EIGHTHS; `seveneighths`
 18634 `\DeclareTextCommand{\textseveneighths}{PU}{\9041\136}%` U+215E
 18635 % U+2184 LATIN SMALL LETTER REVERSED C
 18636 `\DeclareTextCommand{\textrevc}{PU}{\9041\204}%` U+2184
 18637 % U+2189 VULGAR FRACTION ZERO THIRDS
 18638 `\DeclareTextCommand{\textzerthirds}{PU}{\9041\211}%` U+2189

51.2.21 Arrows: U+2190 to U+21FF

18639 % U+2190 LEFTWARDS ARROW; `arrowleft`
 18640 `\DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%*` U+2190
 18641 % U+2191 UPWARDS ARROW; `arrowup`
 18642 `\DeclareTextCommand{\textuparrow}{PU}{\9041\221}%*` U+2191
 18643 % U+2192 RIGHTWARDS ARROW; `arrowright`
 18644 `\DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%*` U+2192
 18645 %* `\textrightarrow -> \MVRightArrow` (marvosym)
 18646 %* `\textrightarrow -> \MVRightarrow` (marvosym)
 18647 % U+2193 DOWNWARDS ARROW; `arrowdown`
 18648 `\DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%*` U+2193
 18649 %* `\textdownarrow -> \MVAArrowDown` (marvosym)
 18650 %* `\textdownarrow -> \Force` (marvosym)
 18651 % U+2194 LEFT RIGHT ARROW; `arrowboth`; `\leftrightarrow` (LaTeX)
 18652 `\DeclareTextCommand{\textleftrightarrow}{PU}{\9041\224}%*` U+2194
 18653 % U+2195 UP DOWN ARROW; `arrowupdn`; `\updownarrow` (LaTeX)
 18654 `\DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%*` U+2195
 18655 % U+2196 NORTH WEST ARROW; `arrowupleft`; `\nwarrow` (LaTeX)
 18656 `\DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%*` U+2196
 18657 % U+2197 NORTH EAST ARROW; `arrowupright`; `\nearrow` (LaTeX)
 18658 `\DeclareTextCommand{\textnearrow}{PU}{\9041\227}%*` U+2197
 18659 %* `\textnearrow -> \textglobrise` (tipa)
 18660 % U+2198 SOUTH EAST ARROW; `arrowdownright`; `\searrow` (LaTeX)
 18661 `\DeclareTextCommand{\textsearrow}{PU}{\9041\230}%*` U+2198
 18662 %* `\textsearrow -> \textglobfall` (tipa)
 18663 % U+2199 SOUTH WEST ARROW; `arrowdownleft`; `\swarrow` (LaTeX)
 18664 `\DeclareTextCommand{\textswarrow}{PU}{\9041\231}%*` U+2199
 18665 % U+219A LEFTWARDS ARROW WITH STROKE; `\leftarrow` (AmS)
 18666 `\DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%*` U+219A
 18667 % U+219B RIGHTWARDS ARROW WITH STROKE; `\rightarrow` (AmS)
 18668 `\DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%*` U+219B
 18669 % U+219E LEFTWARDS TWO HEADED ARROW; `\twoheadleftarrow` (AmS)
 18670 `\DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%*` U+219E
 18671 % `\twoheadleftarrow` (txfonts/pxfonts)
 18672 `\DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%*` U+219E U+0338
 18673 % U+219F UPWARDS TWO HEADED ARROW; `\twoheaduparrow` (MnSymbol)
 18674 `\DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%*` U+219F
 18675 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
 18676 % `\twoheadrightarrow` (AmS)

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18677 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
18678 % \ntwoheadrightarrow (txfonts/pxfonts)
18679 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
18680 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
      Symbol)
18681 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
18682 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
18683 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
18684 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
18685 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
18686 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
18687 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
18688 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
18689 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\251}%* U+21A9
18690 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
18691 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\252}%* U+21AA
18692 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
18693 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
18694 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
18695 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
18696 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightarrow (AmS)
18697 \DeclareTextCommand{\textnleftrightarrow}{PU}{\9041\256}%* U+21AE
18698 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
18699 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
18700 %* \textlightning -> \Lightning (marvosym)
18701 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
18702 % \dls (mathabx)
18703 \DeclareTextCommand{\textdls}{PU}{\9041\265}%* U+21B5
18704 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
18705 % \curvearrowleft (AmS)
18706 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
18707 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
18708 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
18709 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
      barbup;
18710 % \leftharpoonup (LaTeX)
18711 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
18712 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
18713 % \leftharpoondown (LaTeX)
18714 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
18715 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
18716 % \upharpoonright (AmS)
18717 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
18718 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
18719 % \upharpoonleft (AmS)
18720 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
18721 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
      barbup
18722 % \rightharpoonup (LaTeX)
18723 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
18724 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
18725 % \rightharpoondown (LaTeX)
18726 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
18727 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
18728 % \downharpoonright (AmS)
18729 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
18730 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;

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18731 % \downharpoonleft (AmS)
18732 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
18733 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
18734 % arrowrightoverleft; \rightleftarrows (MnSymbol)
18735 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
18736 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
rowupleftofdown;
18737 % \updownarrows (MnSymbol)
18738 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
18739 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
overright;
18740 % \leftrightarrows (AmS)
18741 \DeclareTextCommand{\textleftrightarrows}{PU}{\9041\306}%* U+21C6
18742 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
18743 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
18744 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
18745 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
18746 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
18747 \DeclareTextCommand{\textrightarrows}{PU}{\9041\311}%* U+21C9
18748 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
18749 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
18750 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
18751 % \leftrightharpoons (AmS);
18752 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
18753 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
18754 % \rightleftharpoons (LaTeX, AmS)
18755 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
18756 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftd-
blstroke;
18757 % \nLeftarrow (AmS)
18758 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
18759 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightarrow
(AmS)
18760 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
18761 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightd-
blstroke;
18762 % \nrightarrow (AmS)
18763 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\317}%* U+21CF
18764 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
18765 % \Leftarrow (LaTeX)
18766 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
18767 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)
18768 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
18769 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
18770 % \rightarrow (LaTeX)
18771 \DeclareTextCommand{\textrightarrow}{PU}{\9041\322}%* U+21D2
18772 %* \textrightarrow -> \Conclusion (marvosym)
18773 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbldown; \Downarrow (La-
TeX)
18774 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
18775 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
18776 % \Leftrightarrow (LaTeX)
18777 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
18778 %* \textLeftrightarrow -> \Equivalence (marvosym)
18779 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
18780 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
18781 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)

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18782 `\DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6`
18783 `% U+21D7 NORTH EAST DOUBLE ARROW; \Narrow (MnSymbol)`
18784 `\DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7`
18785 `% U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)`
18786 `\DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8`
18787 `% U+21D9 SOUTH WEST DOUBLE ARROW; \Swarrow (MnSymbol)`
18788 `\DeclareTextCommand{\textSwarrow}{PU}{\9041\331}%* U+21D9`
18789 `% U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)`
18790 `\DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA`
18791 `% U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)`
18792 `\DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB`
18793 `% U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)`
18794 `\DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC`
18795 `% U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)`
18796 `\DeclareTextCommand{\textrightsquigarrow}{PU}{\9041\335}%* U+21DD`
18797 `% U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;`
18798 `% \dashleftarrow (AmS)`
18799 `\DeclareTextCommand{\textdashleftarrow}{PU}{\9041\340}%* U+21E0`
18800 `%* \textdashleftarrow -> \dashedleftarrow (MnSymbol)`
18801 `% U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (Mn-`
`Symbol)`
18802 `\DeclareTextCommand{\textdasheduparrow}{PU}{\9041\341}%* U+21E1`
18803 `% U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightarrow`
`(AmS)`
18804 `\DeclareTextCommand{\textdashrightarrow}{PU}{\9041\342}%* U+21E2`
18805 `%* \textdashrightarrow -> \dashedrightarrow (MnSymbol)`
18806 `% U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownar-`
`row (MnSymbol)`
18807 `\DeclareTextCommand{\textdasheddownarrow}{PU}{\9041\343}%* U+21E3`
18808 `% U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)`
18809 `\DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8`
18810 `% U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;`
18811 `% \downuparrows (MnSymbol)`
18812 `\DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5`
18813 `% U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)`
18814 `\DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD`
18815 `% U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)`
18816 `\DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE`
18817 `% U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtri-`
`angle (stmaryrd)`
18818 `\DeclareTextCommand{\textleftrightarrowtriangle}{PU}{\9041\377}%* U+21FF`

51.2.22 Mathematical Operators: U+2200 to U+22FF

18819 `% U+2200 FOR ALL; forall; \forall (LaTeX)`
18820 `\DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200`
18821 `% U+2201 COMPLEMENT; \complement (AmS)`
18822 `\DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201`
18823 `% U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)`
18824 `\DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202`
18825 `% U+2203 THERE EXISTS; existential; \exists (LaTeX)`
18826 `\DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203`
18827 `% U+2204 THERE DOES NOT EXIST; \nexists (AmS)`
18828 `\DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204`
18829 `% U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)`
18830 `\DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205`
18831 `%* \textemptyset -> \varnothing (AmS)`
18832 `% U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)`

18833 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
18834 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
18835 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
18836 % U+2208 ELEMENT OF; element; \in (LaTeX)
18837 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
18838 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
18839 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
18840 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
18841 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
18842 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
18843 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
18844 %* \textni -> \owns (mathabx)
18845 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
18846 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
18847 %* \textnotowner -> \notni (txfonts/pxfonts)
18848 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
18849 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
18850 % U+220F N-ARY PRODUCT; \prod (LaTeX)
18851 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
18852 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
18853 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
18854 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
18855 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
18856 % U+2212 MINUS SIGN; minus
18857 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
18858 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
18859 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
18860 % U+2214 DOT PLUS; \dotplus (AmS)
18861 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
18862 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
18863 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
18864 % \DividesNot (marvosym)
18865 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
18866 % U+2216 SET MINUS; \setminus (LaTeX)
18867 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
18868 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
18869 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
18870 % U+2218 RING OPERATOR; \circ (LaTeX)
18871 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
18872 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
18873 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
18874 % U+221A SQUARE ROOT; radical
18875 \DeclareTextCommand{\textsqrt}{PU}{\9042\032}%* U+221A
18876 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
18877 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
18878 %* \textpropto -> \varprop (wasysym)
18879 % U+221E INFINITY; infinity; \infty (LaTeX)
18880 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
18881 % U+2220 ANGLE; angle; \angle (LaTeX)
18882 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
18883 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
18884 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
18885 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
18886 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
18887 %* \textsphericalangle -> \varangle (wasysym)
18888 %* \textsphericalangle -> \Anglesign (marvosym)
18889 %* \textsphericalangle -> \AngleSign (marvosym)

18890 % U+2223 DIVIDES; divides; \mid (LaTeX)
18891 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
18892 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
18893 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
18894 %* \textnmid -> \notdivides (mathabx)
18895 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
18896 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
18897 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18898 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
18899 %* \textnparallel -> nUpdownline (MnSymbol)
18900 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18901 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
18902 % \owedge (stmaryrd)
18903 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18904 %* \textowedge -> \varowedge (stmaryrd)
18905 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18906 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18907 % \ovee (stmaryrd)
18908 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18909 %* \textovee -> \varovee (stmaryrd)
18910 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18911 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
18912 % U+222A UNION; union; \cup (LaTeX)
18913 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18914 % U+222B INTEGRAL; integral; \int (LaTeX)
18915 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18916 %* \textint -> \varint (wasysym)
18917 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
18918 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18919 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18920 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
18921 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
18922 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18923 %* \textoint -> \varoint (wasysym)
18924 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
18925 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
18926 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18927 % \ointclockwise (txfonts/pxfonts)
18928 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
18929 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrackwise (tx-
fonts/pxfonts)
18930 \DeclareTextCommand{\textointctrackwise}{PU}{\9042\063}%* U+2233
18931 % U+2234 THEREFORE; therefore; \therefore (AmS)
18932 \DeclareTextCommand{\textttherefore}{PU}{\9042\064}%* U+2234
18933 %* \textttherefore -> uptherefore (MnSymbol)
18934 % U+2235 BECAUSE; because; \because (AmS)
18935 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
18936 %* \textbecause -> \downtherefore (MnSymbol)
18937 % U+2236 RATIO; \dotdot (MnSymbol)
18938 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
18939 % U+2237 PROPORTION; \squaredots (MnSymbol)
18940 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
18941 % U+2238 DOT MINUS; \dotminus (MnSymbol)
18942 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
18943 %* \textdotminus -> \textdotdiv (mathabx)
18944 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
18945 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239

18946 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
18947 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
18948 %* \textsim -> \AC (wasysym)
18949 % U+223D REVERSED TILDE; reversedtilde; \backsimeq (AmS)
18950 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\075}%* U+223D
18951 % \nbacksimeq (txfonts/pxfonts)
18952 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\075\83\070}%* U+223D U+0338
18953 % U+2240 WREATH PRODUCT; \wr (LaTeX)
18954 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
18955 %* \textwr -> \wreath (MnSymbol)
18956 % U+2241 NOT TILDE; \nsim (AmS)
18957 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
18958 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
18959 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
18960 % \neqsim (MnSymbol)
18961 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
18962 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (LaTeX)
18963 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
18964 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
18965 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
18966 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
18967 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
18968 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
18969 % \ncong (AmS)
18970 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
18971 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
18972 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
18973 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)
18974 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
18975 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
18976 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
18977 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
18978 % \napproxeq (txfonts/pxfonts)
18979 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
18980 % U+224B TRIPLE TILDE; $\triple sim$ (MnSymbol)
18981 \DeclareTextCommand{\texttriple sim}{PU}{\9042\113}%* U+224B
18982 %* \texttriple sim -> \VHF (wasysym)
18983 % \ntriple sim (MnSymbol)
18984 \DeclareTextCommand{\textntriple sim}{PU}{\9042\113\83\070}%* U+224B U+0338
18985 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
18986 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C
18987 % \nbackcong (MnSymbol)
18988 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
18989 % U+224D EQUIVALENT TO; \asymp (LaTeX)
18990 \DeclareTextCommand{\textasymp}{PU}{\9042\115}%* U+224D
18991 % \nasymp (txfonts/pxfonts)
18992 \DeclareTextCommand{\textnasymp}{PU}{\9042\115\83\070}%* U+224D U+0338
18993 %* \textnasymp -> \notasymp (mathabx)
18994 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
18995 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
18996 % \nBumpeq (txfonts/pxfonts)
18997 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
18998 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
18999 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
19000 % \nbumpeq (txfonts/pxfonts)
19001 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338

19002 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
19003 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
19004 % \ndoteq (MnSymbol)
19005 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
19006 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
19007 % \doteqdot (AmS)
19008 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
19009 %* \textdoteqdot -> \Doteq (MnSymbol)
19010 % \nDoteq (MnSymbol)
19011 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
19012 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
equalorimage;
19013 % \fallingdotseq (AmS)
19014 \DeclareTextCommand{\textfallingdoteq}{PU}{\9042\122}%* U+2252
19015 % \nfallingdotseq (MnSymbol)
19016 \DeclareTextCommand{\textnfallingdoteq}{PU}{\9042\122\83\070}%* U+2252 U+0338
19017 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapproxi-
matelyequal;
19018 % \risingdotseq (AmS)
19019 \DeclareTextCommand{\textrisingdoteq}{PU}{\9042\123}%* U+2253
19020 % \nrisingdoteq (MnSymbol)
19021 \DeclareTextCommand{\textnrisingdoteq}{PU}{\9042\123\83\070}%* U+2253 U+0338
19022 % U+2254 COLON EQUALS; \colonequals (colonequals)
19023 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
19024 % U+2255 EQUALS COLON; \equalscolon (colonequals)
19025 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
19026 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
19027 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
19028 % \neqcirc (MnSymbol)
19029 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
19030 % U+2257 RING EQUAL TO; \circeq (AmS)
19031 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
19032 % \ncirceq (MnSymbol)
19033 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
19034 % U+2259 ESTIMATES; \hateq (MnSymbol)
19035 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
19036 %* \texthateq -> \corresponds (mathabx)
19037 %* \texthateq -> \Corresponds (marvosym)
19038 % \nhateq (MnSymbol)
19039 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
19040 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
19041 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
19042 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
19043 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
19044 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
19045 %* \textneq -> \nequal (MnSymbol)
19046 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
19047 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
19048 %* \textequiv -> \Congruent (marvosym)
19049 % U+2262 NOT IDENTICAL TO; notidentical; \notequiv (txfonts/pxfonts)
19050 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
19051 %* \textnequiv -> \NotCongruent (marvosym)
19052 %* \textnequiv -> \notequiv (mathabx)
19053 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
19054 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
19055 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264
19056 %* \textleq -> \LessOrEqual (marvosym)

19057 % U+2265 GREATER-THAN OR EQUAL TO; `greaterequal`;
19058 % `\ge` (LaTeX), `\geq` (LaTeX)
19059 `\DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265`
19060 `\DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265`
19061 %* `\textgeq` -> `\LargerOrEqual` (marvosym)
19062 % U+2266 LESS-THAN OVER EQUAL TO; `lessoverequal`; `\leqq` (AmS)
19063 `\DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266`
19064 % `\leqq` (txfonts/pxfonts)
19065 `\DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338`
19066 % U+2267 GREATER-THAN OVER EQUAL TO; `greateroverequal`; `\geqq` (AmS)
19067 `\DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267`
19068 % `\ngeqq` (txfonts/pxfonts)
19069 `\DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338`
19070 % U+2268 LESS-THAN BUT NOT EQUAL TO; `\lneq` (AmS)
19071 `\DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268`
19072 % U+2269 GREATER-THAN BUT NOT EQUAL TO; `\gneqq` (AmS)
19073 `\DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269`
19074 % U+226A MUCH LESS-THAN; `muchless`; `\ll` (LaTeX)
19075 `\DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A`
19076 % `\ll` (txfonts/pxfonts)
19077 `\DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338`
19078 % U+226B MUCH GREATER-THAN; `muchgreater`; `\gg` (LaTeX)
19079 `\DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B`
19080 % `\ngg` (txfonts/pxfonts)
19081 `\DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338`
19082 % U+226C BETWEEN; `\between` (AmS)
19083 `\DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C`
19084 % U+226E NOT LESS-THAN; `notless`; `\nless` (AmS)
19085 `\DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E`
19086 % U+226F NOT GREATER-THAN; `notgreater`; `\ngtr` (AmS)
19087 `\DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F`
19088 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; `notlessnorequal`;
19089 % `\nleq` (AmS)
19090 `\DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270`
19091 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; `notgreaternorequal`;
`\ngeq` (AmS)
19092 `\DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271`
19093 % U+2272 LESS-THAN OR EQUIVALENT TO; `lessorequivalent`; `\lessim` (AmS)
19094 `\DeclareTextCommand{\textlessim}{PU}{\9042\162}%* U+2272`
19095 %* `\textlessim` -> `\apprle` (wasysym)
19096 % U+2273 GREATER-THAN OR EQUIVALENT TO; `greaterorequivalent`; `\gtrsim`
`(AmS)`
19097 `\DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273`
19098 %* `\textgtrsim` -> `\apprge` (wasysym)
19099 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; `\nlessim` (tx-
`fonts/pxfonts)`
19100 `\DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274`
19101 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; `\ngtrsim` (tx-
`fonts/pxfonts)`
19102 `\DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275`
19103 % U+2276 LESS-THAN OR GREATER-THAN; `lessorgreater`; `\lessgtr` (AmS)
19104 `\DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276`
19105 % U+2277 GREATER-THAN OR LESS-THAN; `greaterorless`; `\gtrless` (AmS)
19106 `\DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277`
19107 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; `\ngtrless` (tx-
`fonts/pxfonts)`
19108 `\DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278`

19109 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (tx-
 fonts/pxfonts)

19110 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279

19111 % U+227A PRECEDES; precedes; \prec (LaTeX)

19112 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A

19113 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)

19114 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B

19115 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)

19116 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C

19117 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)

19118 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D

19119 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)

19120 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E

19121 % \nprecsim (txfonts/pxfonts)

19122 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338

19123 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)

19124 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F

19125 % \nsuccsim (txfonts/pxfonts)

19126 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338

19127 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)

19128 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280

19129 % U+2281 DOES NOT SUCCEED; notsucceds; \nsucc (AmS)

19130 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281

19131 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)

19132 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282

19133 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)

19134 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283

19135 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)

19136 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284

19137 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)

19138 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285

19139 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)

19140 \DeclareTextCommand{\textsubseteq}{PU}{\9042\206}%* U+2286

19141 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)

19142 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287

19143 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)

19144 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288

19145 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)

19146 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289

19147 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subsetneq (AmS)

19148 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A

19149 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supsetneq (AmS)

19150 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B

19151 % U+228D MULTISET MULTIPLICATION; \cupdot (MnSymbol)

19152 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D

19153 % U+228E MULTISET UNION; \cupplus (MnSymbol)

19154 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E

19155 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)

19156 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F

19157 % \nsqsubset (txfonts/pxfonts)

19158 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338

19159 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)

19160 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290

19161 % \nsqsupset (txfonts/pxfonts)

19162 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338

19163 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseteq (LaTeX)
19164 \DeclareTextCommand{\textsqsubseteq}{PU}{\9042\221}%* U+2291
19165 % \nsqsubseteq (txfonts/pxfonts)
19166 \DeclareTextCommand{\textnsqsubseteq}{PU}{\9042\221\83\070}%* U+2291 U+0338
19167 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
19168 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
19169 % \nsqsupseteq (txfonts/pxfonts)
19170 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
19171 % U+2293 SQUARE CAP; \sqcap (LaTeX)
19172 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
19173 % U+2294 SQUARE CUP; \sqcup (LaTeX)
19174 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
19175 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
19176 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
19177 %* \textoplus -> \varoplus (stmaryrd)
19178 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
19179 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
19180 %* \textominus -> \varominus (stmaryrd)
19181 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
19182 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
19183 %* \textotimes -> \varotimes (stmaryrd)
19184 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
19185 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
19186 %* \textoslash -> \varoslash (stmaryrd)
19187 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
19188 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
19189 %* \textodot -> \varodot (stmaryrd)
19190 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
19191 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
19192 %* \textcircledcirc -> \ocirc (mathabx)
19193 %* \textcircledcirc -> \varocircle (stmaryrd)
19194 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
19195 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
19196 %* \textcircledast -> \varoast (stmaryrd)
19197 %* \textcircledast -> \oasterisk (mathabx)
19198 % U+229D CIRCLED DASH; \circleddash (AmS)
19199 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
19200 % U+229E SQUARED PLUS; \boxplus (AmS)
19201 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
19202 % U+229F SQUARED MINUS; \boxminus (AmS)
19203 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
19204 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
19205 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
19206 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
19207 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
19208 % U+22A2 RIGHT TACK; \vdash (LaTeX)
19209 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
19210 %* \textvdash -> \rightvdash (MnSymbol)
19211 % U+22A3 LEFT TACK; tackleft; \dashv (LaTeX)
19212 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
19213 %* \textdashv -> \leftvdash (MnSymbol)
19214 % \ndashv (mathabx)
19215 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
19216 %* \textndashv -> \nleftvdash (MnSymbol)
19217 % U+22A4 DOWN TACK (=top); tackdown; \top (LaTeX)
19218 \DeclareTextCommand{\texttop}{PU}{\9042\244}%* U+22A4
19219 %* \texttop -> \downvdash (MnSymbol)

19220 % \ndownvdash (MnSymbol)
19221 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
19222 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
19223 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
19224 %* \textbot -> \upvdash (MnSymbol)
19225 % \nupvdash (MnSymbol)
19226 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
19227 %* \textnupvdash -> \nperp (MnSymbol)
19228 % U+22A8 TRUE; \vDash (AmS)
19229 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
19230 %* \textvDash -> \models (LaTeX)
19231 %* \textvDash -> \rightmodels (MnSymbol)
19232 % U+22A9 FORCES; \Vdash (AmS)
19233 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
19234 %* \textVdash -> \rightVdash (MnSymbol)
19235 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
19236 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
19237 % \nVvdash (mathabx)
19238 \DeclareTextCommand{\textnVvdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
19239 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
19240 % \VDash (mathabx)
19241 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
19242 %* \textVDash -> \rightModels (MnSymbol)
19243 % U+22AC DOES NOT PROVE; \nvdash (AmS)
19244 \DeclareTextCommand{\textnvdash}{PU}{\9042\254}%* U+22AC
19245 %* \textnvdash -> \nrighvdash (MnSymbol)
19246 % U+22AD NOT TRUE; \nvDash (AmS)
19247 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
19248 %* \textnvDash -> \rightmodels (MnSymbol)
19249 %* \textnvDash -> \nmodels (MnSymbol)
19250 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
19251 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
19252 %* \textnVdash -> \nrighVdash (MnSymbol)
19253 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
STILE; \nVDash (AmS)
19254 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
19255 %* \textnVDash -> \nrighModels (MnSymbol)
19256 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
19257 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
19258 %* \textlhd -> \lessclosed (MnSymbol)
19259 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
19260 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
19261 %* \textrhd -> \gtrclosed (MnSymbol)
19262 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
19263 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
19264 %* \textunlhd -> \leqclosed (MnSymbol)
19265 %* \textunlhd -> \trianglelefteq (MnSymbol)
19266 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
texsym, ...)
19267 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
19268 %* \textunrhd -> \geqclosed (MnSymbol)
19269 %* \textunrhd -> \trianglerighteq (MnSymbol)
19270 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
19271 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
19272 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
19273 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
19274 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)

19275 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
19276 % U+22BB XOR; \veebar (AmS)
19277 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
19278 % U+22BC NAND; \barwedge (mathabx)
19279 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
19280 % U+22C6 STAR OPERATOR; \star (LaTeX)
19281 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
19282 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
19283 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
19284 % U+22C8 BOWTIE; \bowtie (LaTeX)
19285 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
19286 %* \textbowtie -> \Bowtie (wasysym)
19287 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
19288 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
19289 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
19290 % \rtimes (AmS)
19291 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
19292 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
19293 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
19294 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
19295 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
19296 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
19297 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
19298 % \nbacksimeq (txfonts/pxfonts)
19299 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
19300 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
19301 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
19302 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
19303 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
19304 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
19305 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
19306 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
19307 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
19308 % \nSubset (txfonts/pxfonts)
19309 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
19310 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
19311 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
19312 % \nSupset (txfonts/pxfonts)
19313 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
19314 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
19315 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
19316 %* \textCap -> \doublecap (mathabx)
19317 % U+22D3 DOUBLE UNION; \Cup (AmS)
19318 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
19319 %* \textCup -> \doublecup (mathabx)
19320 % U+22D4 PITCHFORK; \pitchfork (mathabx)
19321 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
19322 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
19323 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
19324 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
19325 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
19326 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
19327 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
19328 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
19329 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
19330 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lesseqqualorgreater;
19331 % \lesseqgtr (AmS)

19332 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
19333 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterequalorless;
19334 % \gtreqless (AmS)
19335 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
19336 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
19337 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
19338 % \ncurlyeqprec (mathabx)
19339 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
19340 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
19341 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
19342 % \ncurlyeqsucc (mathabx)
19343 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
19344 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
19345 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
19346 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
19347 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
19348 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nsqsubseteq (tx-
fonts/pxfonts)
19349 \DeclareTextCommand{\textnqsubseteq}{PU}{\9042\342}%* U+22E2
19350 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseteq (tx-
fonts/pxfonts)
19351 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
19352 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
19353 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
19354 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
19355 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
abx)
19356 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
19357 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
19358 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
19359 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
19360 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
19361 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
19362 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \preccsim (AmS)
19363 \DeclareTextCommand{\textpreccsim}{PU}{\9042\350}%* U+22E8
19364 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succsim (AmS)
19365 \DeclareTextCommand{\textsuccsim}{PU}{\9042\351}%* U+22E9
19366 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
19367 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
19368 %* \textntriangleleft -> \nlessclosed (MnSymbol)
19369 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriang-
leright (AmS)
19370 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
19371 %* \textntriangleright -> \ngtrclosed (MnSymbol)
19372 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
19373 % \ntrianglelefteq (AmS)
19374 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
19375 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
19376 % \ntrianglerighteq (AmS)
19377 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
19378 %* \textntrianglerighteq -> \textngeqclosed
19379 % U+22EE VERTICAL ELLIPSIS; ellipsisvertical; \vdots (LaTeX)
19380 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
19381 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
19382 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
19383 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
19384 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0

19385 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
19386 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
19387 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
19388 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

51.2.23 Miscellaneous Technical: U+2300 to U+23FF

19389 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
19390 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
19391 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
19392 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
19393 % U+2311 SQUARE LOZENGE; \wasylozenge (wasysym)
19394 \DeclareTextCommand{\textwasylozenge}{PU}{\9043\021}%* U+2311
19395 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
19396 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
19397 % U+231A WATCH; \clock (wasysym)
19398 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
19399 %* \textclock -> \Clocklogo (marvosym)
19400 %* \textclock -> \ClockLogo (marvosym)
19401 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
19402 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
19403 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
19404 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
19405 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
19406 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
19407 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
19408 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
19409 % U+2322 FROWN; \frown (LaTeX)
19410 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
19411 % U+2323 SMILE; \smile (LaTeX)
19412 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
19413 % U+2328 KEYBOARD; \Keyboard (marvosym)
19414 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
19415 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \langle (LaTeX)
19416 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
19417 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \rangle (LaTeX)
19418 \DeclareTextCommand{\textrightangle}{PU}{\9043\052}%* U+232A
19419 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLin (wasysym)
19420 \DeclareTextCommand{\textAPLin}{PU}{\9043\071}%* U+2339
19421 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
19422 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
19423 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)
19424 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}%* U+233D
19425 %* \textstmaryrdbaro -> \baro (stmaryrd)
19426 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
19427 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
19428 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
19429 % \notbackslash (wasysym)
19430 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
19431 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxbackslash (mathabx)
19432 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
19433 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
19434 % \APLleftarrowbox (wasysym)
19435 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347
19436 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
19437 % \APLrightarrowbox (wasysym)

19438 \DeclareTextCommand{\textAPLrightrightarrowbox}{PU}{\9043\110}%* U+2348
 19439 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLuparrowbox (wasysym)
 19440 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
 19441 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
 19442 % \APLdownarrowbox (wasysym)
 19443 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
 19444 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
 19445 % \APLinput (wasysym)
 19446 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
 19447 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
 19448 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
 19449 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 19450 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 19451 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 19452 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 19453 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 19454 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 19455 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;
 19456 % \ForwardToIndex (marvosym)
 19457 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 19458 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;
 19459 % \RewindToIndex (marvosym)
 19460 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

51.2.24 Control Pictures: U+2400 to U+243F

19461 % U+2422 BLANK SYMBOL
 19462 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 19463 % U+2423 OPEN BOX; blank
 19464 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

51.2.25 Optical Character Recognition: U+2440 to U+245F

19465 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
 19466 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 19467 %* \textbbslash -> \varparallelinv (txfonts/pxfonts)

51.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

19468 % U+2460 CIRCLED DIGIT ONE; onecircle
 19469 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 19470 % U+2461 CIRCLED DIGIT TWO; twocircle
 19471 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 19472 % U+2462 CIRCLED DIGIT THREE; threecircle
 19473 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 19474 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 19475 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 19476 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 19477 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 19478 % U+2465 CIRCLED DIGIT SIX; sixcircle
 19479 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 19480 % U+2466 CIRCLED DIGIT SEVEN; sevencircle
 19481 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 19482 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 19483 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 19484 % U+2468 CIRCLED DIGIT NINE; ninecircle
 19485 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468

19486 % U+2469 CIRCLED NUMBER TEN; tencircle
19487 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
19488 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
19489 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
19490 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
19491 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
19492 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
19493 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
19494 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
19495 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
19496 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
19497 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
19498 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
19499 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
19500 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
19501 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
19502 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
19503 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
19504 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
19505 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
19506 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
19507 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
19508 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
19509 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
19510 % \CircledA (marvosym)
19511 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
19512 %* \textCircledA -> \CleaningA
19513 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
19514 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
19515 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
19516 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
19517 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
19518 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
19519 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
19520 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
19521 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
19522 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
19523 % \CleaningF (marvosym)
19524 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
19525 % \CleaningFF (marvosym)
19526 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
19527 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
19528 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
19529 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
19530 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
19531 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
19532 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
19533 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
19534 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
19535 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
19536 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
19537 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
19538 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
19539 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
19540 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
19541 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
19542 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3

19543 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
19544 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
19545 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
19546 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
19547 % \CleaningP (marvosym)
19548 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
19549 % \CleaningPP (marvosym)
19550 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
19551 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
19552 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
19553 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
19554 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
19555 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
19556 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
19557 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
19558 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
19559 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
19560 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
19561 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
19562 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
19563 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
19564 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
19565 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
19566 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
19567 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
19568 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
19569 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
19570 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
19571 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
19572 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
19573 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
19574 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
19575 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
19576 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
19577 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
19578 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
19579 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
19580 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
19581 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
19582 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
19583 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
19584 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
19585 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
19586 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
19587 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
19588 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
19589 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
19590 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
19591 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
19592 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
19593 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
19594 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
19595 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
19596 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
19597 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
19598 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
19599 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle

19600 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 19601 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 19602 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 19603 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 19604 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 19605 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 19606 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 19607 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 19608 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 19609 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 19610 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 19611 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 19612 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 19613 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 19614 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 19615 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 19616 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 19617 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 19618 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 19619 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 19620 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 19621 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 19622 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 19623 % U+24EA CIRCLED DIGIT ZERO
 19624 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

51.2.27 Box Drawing: U+2500 to 257F

19625 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
 Line (marvosym)
 19626 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
 19627 %* \textCuttingLine -> \Kutline (marvosym)
 19628 %* \textCuttingLine -> \CutLine (marvosym)
 19629 %* \textCuttingLine -> \Cutline (marvosym)

51.2.28 Geometric Shapes: U+25A0 to U+25FF

19630 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
 19631 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
 19632 %* \textUParrow -> \MoveUp (marvosym)
 19633 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
 19634 % \bigtriangleup (LaTeX)
 19635 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
 19636 %* \textbigtriangleup -> \APLup (wasysym)
 19637 %* \textbigtriangleup -> \Bleech (marvosym)
 19638 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
 19639 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
 19640 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
 tion);
 19641 % whiterightpointingtriangle; \triangleright (LaTeX)
 19642 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
 19643 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
 19644 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
 19645 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
 19646 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
 19647 %* \textDOWNarrow -> \MoveDown (marvosym)
 19648 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtri-
 angle;
 19649 % \bigtriangledown (LaTeX)

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19650 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
19651 %* \textbigtriangledown -> \APLdown (wasysym)
19652 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
19653 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
19654 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
restriction);
19655 % whiteleftpointingtriangle; \triangleleft (LaTeX)
19656 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
19657 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
19658 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
19659 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
19660 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
19661 %* \textdiamond -> \Diamond (wasysym)
19662 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
19663 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
19664 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
19665 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
19666 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
19667 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
19668 % U+25E6 WHITE BULLET; *openbullet, whitebullet
19669 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
19670 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
19671 % \boxbar (stmaryrd)
19672 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
19673 % U+25EF LARGE CIRCLE; largecircle
19674 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
19675 %* \textbigcircle -> \varbigcirc (stmaryrd)
19676 %

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51.2.29 Miscellaneous Symbols: U+2600 to U+26FF

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19677 % U+2601 CLOUD; \Cloud (ifsym)
19678 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
19679 % U+2605 BLACK STAR; \FiveStar (bding)
19680 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
19681 % U+2606 WHITE STAR; \FiveStarOpen (bding)
19682 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
19683 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bding)
19684 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
19685 %* \textPhone -> \Telefon (marvosym)
19686 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
19687 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
19688 %* \textboxempty -> \Box (wasysym)
19689 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
19690 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
19691 %* \textCheckedbox -> \CheckedBox (marvosym)
19692 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
19693 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
19694 %* \textCrossedbox -> \XBox (wasysym)
19695 %* \textCrossedbox -> \CrossedBox (marvosym)
19696 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
19697 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
19698 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bding)
19699 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
19700 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bding)
19701 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
19702 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bding)
19703 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C

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19704 %* \textHandLeft -> \rightpointleft (fourier)
19705 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bbding)
19706 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
19707 %* \textHandRight -> \leftpointright (fourier)
19708 %* \textHandRight -> \PointingHand (marvosym)
19709 %* \textHandRight -> \Pointinghand (marvosym)
19710 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
19711 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
19712 %* \textRadioactivity -> \Radiation (ifsym)
19713 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
19714 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
19715 % U+2625 ANKH; \Ankh (marvosym)
19716 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
19717 % U+262F YIN YANG; \YinYang (marvosym)
19718 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
19719 %* \textYinYang -> \Yinyang (marvosym)
19720 %* \textYinYang -> \YingYang (marvosym)
19721 %* \textYinYang -> \Yingyang (marvosym)
19722 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
19723 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
19724 %* \textfrownie -> \Frowny (marvosym)
19725 % U+263A WHITE SMILING FACE; \smiley (wasysym)
19726 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
19727 %* \textsmiley -> \Smiley (marvosym)
19728 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
19729 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
19730 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
19731 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
19732 %* \textsun -> \Sun (marvosym)
19733 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
19734 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
19735 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
19736 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
19737 % U+263F MERCURY; \mercury (wasysym)
19738 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
19739 %* \textmercury -> \Mercury (marvosym)
19740 % U+2640 FEMALE SIGN; female; \female (wasysym)
19741 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
19742 %* \textPUfemale -> \textfemale (tipx)
19743 %* \textPUfemale -> \female (wasysym)
19744 %* \textPUfemale -> \venus (wasysym)
19745 %* \textPUfemale -> \Venus (marvosym)
19746 %* \textPUfemale -> \Female (marvosym)
19747 % U+2641 EARTH; \earth (wasysym)
19748 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
19749 %* \textearth -> \Earth (marvosym)
19750 % U+2642 MALE SIGN; male; mars; \male (wasysym)
19751 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
19752 %* \textmale -> \mars (wasysym)
19753 %* \textmale -> \Mars (marvosym)
19754 %* \textmale -> \Male (marvosym)
19755 % U+2643 JUPITER; \jupiter (wasysym)
19756 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
19757 %* \textjupiter -> \Jupiter (marvosym)
19758 % U+2644 SATURN; \saturn (wasysym)
19759 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
19760 %* \textsaturn -> \Saturn (marvosym)

19761 % U+2645 URANUS; \uranus (wasysym)
19762 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
19763 %* \texturanus -> \Uranus (marvosym)
19764 % U+2646 NEPTUNE; \neptune (wasysym)
19765 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
19766 %* \textneptune -> \Neptune (marvosym)
19767 % U+2647 PLUTO; \pluto (wasysym)
19768 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
19769 %* \textpluto -> \Pluto (marvosym)
19770 % U+2648 ARIES; \aries (wasysym)
19771 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
19772 %* \textaries -> \Aries (marvosym)
19773 % U+2649 TAURUS; \taurus (wasysym)
19774 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
19775 %* \texttaurus -> \Taurus (marvosym)
19776 % U+264A GEMINI; \gemini (wasysym)
19777 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
19778 %* \textgemini -> \Gemini (marvosym)
19779 % U+264B CANCER; \cancer (wasysym)
19780 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
19781 %* \textcancer -> \Cancer (marvosym)
19782 % U+264C LEO; \leo (wasysym)
19783 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
19784 %* \textleo -> \Leo (marvosym)
19785 % U+264D VIRGO; \virgo (wasysym)
19786 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
19787 %* \textvirgo -> \Virgo (marvosym)
19788 % U+264E LIBRA; \libra (wasysym)
19789 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
19790 %* \textlibra -> \Libra (marvosym)
19791 % U+264F SCORPIO; \scorpio (wasysym)
19792 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
19793 %* \textscorpio -> \Scorpio (marvosym)
19794 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
19795 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
19796 %* \textsagittarius -> \Sagittarius (marvosym)
19797 % U+2651 CAPRICORN; \capricornus (wasysym)
19798 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
19799 %* \textcapricornus -> \Capricorn (marvosym)
19800 % U+2652 AQUARIUS; \aquarius (wasysym)
19801 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
19802 %* \textaquarius -> \Aquarius (marvosym)
19803 % U+2653 PISCES; \pisces (wasysym)
19804 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
19805 %* \textpisces -> \Pisces (marvosym)
19806 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
19807 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}%* U+2660
19808 %* \textspadesuitblack -> \spadesuit (MnSymbol)
19809 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
19810 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}%* U+2661
19811 %* \textheartsuitwhite -> \Heart (marvosym)
19812 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
19813 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
19814 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}%* U+2662
19815 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
19816 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
19817 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}%* U+2663

19818 %* \textclubsuitblack -> \clubsuit (MnSymbol)
19819 % U+2664 WHITE SPADE SUIT; spadesuitwhite
19820 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
19821 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
19822 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
19823 % U+2666 BLACK DIAMOND SUIT; diamond
19824 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
19825 % U+2667 WHITE CLUB SUIT; clubsuitwhite
19826 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
19827 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
19828 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
19829 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
19830 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
19831 %* \textmusicalnote -> \eighthnote (wasysym, arev)
19832 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
19833 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
19834 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
note (arev)
19835 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
19836 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
19837 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
19838 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
19839 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
19840 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
19841 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
19842 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
19843 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
19844 %* \textrecycle -> \Recycling (marvosym)
19845 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
19846 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
19847 % U+2691 BLACK FLAG; \Flag (ifsym)
19848 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
19849 %* \textFlag -> \VarFlag (ifsym)
19850 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
19851 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
19852 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
19853 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
19854 %* \textdsmilitary -> \textxswup (fourier)
19855 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
19856 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
19857 % U+2696 SCALES; \dsjuridical (dictsym)
19858 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696
19859 % U+2697 ALEMBIC; \dschemical (dictsym)
19860 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
19861 % U+2698 FLOWER; \dsbiological (dictsym)
19862 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
19863 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
19864 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
19865 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
19866 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
19867 % U+26A0 WARNING SIGN; \danger (fourier)
19868 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
19869 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
19870 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
19871 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
19872 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
19873 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (mar-

vosym)

19874 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
19875 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
19876 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
19877 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
19878 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
19879 % U+26AD MARRIAGE SYMBOL
19880 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
19881 % U+26AE DIVORCE SYMBOL
19882 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
19883 % U+26B2 NEUTER; \textunconfemale (tipx)
19884 \DeclareTextCommand{\textPUunconfemale}{PU}{\9046\262}% U+26B2
19885 %* \textPUunconfemale -> \textunconfemale (tipx)
19886 % U+26B9 SEXTILE; \hexstar (wasysym)
19887 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
19888 % U+26BD SOCCER BALL; \Football (marvosym)
19889 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
19890 %* \textSoccerBall -> \Football (marvosym)
19891 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
19892 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
19893 % U+26C6 RAIN; \Rain (ifsym)
19894 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
19895 % U+26D4 NO ENTRY; \noway (fourier)
19896 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
19897 % U+26F0 MOUNTAIN; \Mountain (ifsym)
19898 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
19899 % U+26FA TENT; \Tent (ifsym)
19900 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

51.2.30 Dingbats: U+2700 to U+27BF

19901 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bding)
19902 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
19903 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
19904 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
19905 % U+2702 BLACK SCISSORS; \ScissorRight (bding)
19906 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
19907 %* \textScissorRight -> \RightScissors (marvosym)
19908 %* \textScissorRight -> \Leftscissors (marvosym)
19909 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bding)
19910 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
19911 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bding)
19912 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704
19913 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bding)
19914 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
19915 % U+2707 TAPE DRIVE; \Tape (bding)
19916 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
19917 % U+2708 AIRPLANE; \Plane (bding)
19918 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
19919 % U+2709 ENVELOPE; \Envelope (bding),
19920 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
19921 %* \textEnvelope -> \Letter (marvosym)
19922 % U+270C VICTORY HAND; \Peace (bding)
19923 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
19924 % U+270D WRITING HAND; \WritingHand (marvosym)
19925 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
19926 %* \textWritingHand -> \Writinghand (marvosym)
19927 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bding)

19928 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
19929 % U+270F PENCIL; \PencilRight (bding)
19930 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
19931 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bding)
19932 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
19933 % U+2711 WHITE NIB; \NibRight (bding)
19934 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
19935 % U+2712 BLACK NIB; \NibSolidRight (bding)
19936 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
19937 % U+2713 CHECK MARK; checkmark; \Checkmark (bding)
19938 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
19939 %* \textCheckmark -> \checkmark (MnSymbol)
19940 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bding)
19941 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
19942 % U+2715 MULTIPLICATION X; \XSolid (bding)
19943 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
19944 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bding)
19945 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
19946 % U+2717 BALLOT X; \XSolidBrush (bding)
19947 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
19948 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
19949 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
19950 % U+271A HEAVY GREEK CROSS; \Plus (bding)
19951 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
19952 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)
19953 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
19954 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
19955 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
19956 % U+271D LATIN CROSS; \Cross (bding)
19957 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
19958 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)
19959 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
19960 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
19961 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
19962 % U+2720 MALTESE CROSS; \CrossMaltese (bding)
19963 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
19964 % U+2721 STAR OF DAVID; \DavidStar (bding)
19965 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
19966 %* \textDavidStar -> \davidstar (wasysym)
19967 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
19968 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
19969 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)
19970 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
19971 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bding)
19972 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
19973 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bding)
19974 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
19975 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bding)
19976 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
19977 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bding)
19978 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
19979 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (bding)
19980 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
19981 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bding)
19982 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
19983 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bding)

19984 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
19985 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (bding)
19986 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
19987 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bding)
19988 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
19989 % U+272F PINWHEEL STAR; \FiveStarConvex (bding)
19990 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
19991 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (bding)
19992 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
19993 % U+2731 HEAVY ASTERISK; \AsteriskBold (bding)
19994 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
19995 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)
19996 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
19997 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
19998 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
19999 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)
20000 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
20001 % U+2736 SIX POINTED BLACK STAR; \SixStar (bding)
20002 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
20003 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
20004 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
20005 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)
20006 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
20007 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)
20008 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
20009 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)
20010 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
20011 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)
20012 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
20013 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
20014 % \SixFlowerOpenCenter (bding)
20015 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
20016 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)
20017 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
20018 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAlternate (bding)
20019 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
20020 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)
20021 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F
20022 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
20023 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
20024 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlowerPetal (bding)
20025 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
20026 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \SunshineOpenCircled (bding)
20027 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
20028 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlowerAltPetal (bding)
20029 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
20030 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
20031 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
20032 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
20033 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745

20034 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
 20035 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
 20036 % U+2747 SPARKLE; \Sparkle (bding)
 20037 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
 20038 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
 20039 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
 20040 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
 20041 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
 20042 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 20043 % \EightFlowerPetalRemoved (bding)
 20044 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 20045 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 20046 % \EightAsterisk (bding)
 20047 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 20048 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
 20049 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 20050 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 20051 % \SquareShadowBottomRight (bding)
 20052 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 20053 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 20054 % \SquareShadowTopRight (bding)
 20055 \DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750
 20056 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 20057 % \SquareCastShadowBottomRight (bding)
 20058 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 20059 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 20060 % \SquareCastShadowTopRight (bding)
 20061 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 20062 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (b-
 ding)
 20063 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
 20064 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bding)
 20065 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 20066 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bding)
 20067 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 20068 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bding)
 20069 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

51.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

20070 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 20071 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 20072 % \notperp (mathabx)
 20073 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 20074 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 20075 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 20076 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 20077 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 20078 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 20079 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 20080 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 20081 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 20082 %* \textlbrackdbl -> \llbracket (stmaryrd)
 20083 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 20084 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
 20085 %* \textrbrackdbl -> \rrbracket (stmaryrd)

51.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

20086 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
 20087 % \circlearrowleft (AmS)
 20088 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
 20089 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
 20090 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
 20091 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
 20092 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
 20093 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
 20094 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
 20095 % U+27F7 LONG LEFT RIGHT ARROW; \longleftarrowrightarrow (AmS)
 20096 \DeclareTextCommand{\textlongleftarrowrightarrow}{PU}{\9047\367}%* U+27F7
 20097 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
 20098 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
 20099 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \Longrightarrow (AmS)
 20100 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
 20101 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longleftarrowrightarrow (AmS)
 20102 \DeclareTextCommand{\textLongleftarrowrightarrow}{PU}{\9047\372}%* U+27FA
 20103 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
 20104 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
 20105 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmaps-
 from (stmaryrd)
 20106 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
 20107 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmap-
 sto (stmaryrd)
 20108 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

51.2.33 Supplemental Arrows-B: U+2900 to U+297F

20109 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSym-
 bol)
 20110 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
 20111 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSym-
 bol)
 20112 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
 20113 % U+2923 NORTH WEST ARROW WITH HOOK; \hooknwarrow (MnSymbol)
 20114 \DeclareTextCommand{\textlhooknwarrow}{PU}{\9051\043}%* U+2923
 20115 % U+2924 NORTH EAST ARROW WITH HOOK; \rhooknearrow (MnSymbol)
 20116 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
 20117 % U+2925 SOUTH EAST ARROW WITH HOOK; \lhooksearrow (MnSymbol)
 20118 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
 20119 % U+2926 SOUTH WEST ARROW WITH HOOK; \rhookswarrow (MnSymbol)
 20120 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
 20121 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
 20122 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
 20123 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
 20124 % \rcurvearrowne (MnSymbol)
 20125 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934
 20126 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
 WARDS;
 20127 % \lcurvearrowse (MnSymbol)
 20128 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
 20129 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
 WARDS;
 20130 % \lcurvearrowsw (MnSymbol)
 20131 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
 20132 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
 WARDS;
 20133 % \rcurvearrowse (MnSymbol)

20134 \DeclareTextCommand{\textrcurvearrowse}{PU}{\9051\067}%* U+2937
20135 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (MnSymbol)
20136 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
20137 %* \textlcurvearrowdown -> \RightTorque (marvosym)
20138 %* \textlcurvearrowdown -> \Righttorque (marvosym)
20139 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
20140 % \rcurvearrowdown (MnSymbol)
20141 \DeclareTextCommand{\textrcurvearrowdown}{PU}{\9051\071}%* U+2939
20142 %* \textrcurvearrowdown -> \LeftTorque (marvosym)
20143 %* \textrcurvearrowdown -> \Lefttorque (marvosym)
20144 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSymbol)
20145 \DeclareTextCommand{\textrcurvearrowleft}{PU}{\9051\072}%* U+293A
20146 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
20147 % \rcurvearrowright (MnSymbol)
20148 \DeclareTextCommand{\textrcurvearrowright}{PU}{\9051\073}%* U+293B
20149 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrightharpoon (mathabx)
20150 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
20151 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightleftharpoon (mathabx)
20152 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
20153 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
20154 % \updownharpoonrightleft (MnSymbol)
20155 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
20156 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
20157 % \updownharpoonleftright (MnSymbol)
20158 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
20159 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
20160 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
20161 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
20162 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
20163 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
20164 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
20165 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHTWARDS HARPOON
20166 % WITH BARB DOWN; \rightrightarpoons (mathabx)
20167 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
20168 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWNWARDS HARPOON
20169 % WITH BARB RIGHT; \downdownharpoons (mathabx)
20170 \DeclareTextCommand{\textdowndownharpoons}{PU}{\9051\145}%* U+2965
20171 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
20172 % \leftbarharpoon (mathabx)
20173 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
20174 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
20175 % LONG DASH; \barleftharpoon (mathabx)
20176 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
20177 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
20178 % LONG DASH; \rightbarharpoon (mathabx)
20179 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
20180 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
20181 % LONG DASH; \barrightharpoon (mathabx)
20182 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
20183 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWNWARDS HARPOON

20184 % WITH BARB RIGHT; \updownharpoons (mathabx)
20185 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
20186 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
WARDS HARPOON
20187 % WITH BARB RIGHT; \downupharpoons (mathabx)
20188 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
20189 % U+297F DOWN FISH TAIL
20190 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

51.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

20191 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparentthesis (stmaryrd)
20192 \DeclareTextCommand{\textlparentthesis}{PU}{\9051\207}%* U+2987
20193 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rparentthesis (stmaryrd)
20194 \DeclareTextCommand{\textrparentthesis}{PU}{\9051\210}%* U+2988
20195 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
20196 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
20197 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
20198 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
20199 %* \textobar -> \textvarobar (stmaryrd)
20200 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
20201 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
20202 %* \textobslash -> \circledbslash (txfonts/pxfonts)
20203 %* \textobslash -> \obackslash (mathabx)
20204 %* \textobslash -> \varobslash (stmaryrd)
20205 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
DIVIDED BY VERTICAL BAR; \obot (mathabx)
20206 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
20208 %* \textobot -> \odplus (ulsy)
20209 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (mar-
vosym)
20210 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
20211 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
20212 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
20213 %* \textolessthan -> \varolessthan (stmaryrd)
20214 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
20215 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
20216 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
20217 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
20218 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
20219 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
20220 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
20221 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
20222 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
20223 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
20224 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
20225 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
20226 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
20227 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
20228 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
20229 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
20230 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
20231 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
20232 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

51.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

20233 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
20234 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04

20235 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
20236 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
20237 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
20238 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
20239 % U+2A1D JOIN; \Join (latexsym, amssymb, mathabx, txfonts,
20240 % pxfonts, wasysym)
20241 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
20242 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
20243 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
20244 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
20245 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
20246 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
20247 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
20248 %* \textminusdot -> \divdot (mathabx)
20249 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
20250 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
20251 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
20252 % \dtimes (mathdesign)
20253 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
20254 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
20255 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
20256 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
20257 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
20258 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
20259 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
20260 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
20261 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
20262 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
20263 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
20264 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
20265 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
20266 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
20267 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
20268 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
20269 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
20270 %* \textdoublevee -> \merge (stmaryrd)
20271 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
20272 % \doublebarwedge (AmS)
20273 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
20274 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
20275 % \veedoublebar (mathabx)
20276 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
20277 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
20278 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
20279 % \neqdot (MnSymbol)
20280 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
20281 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
20282 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
20283 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
20284 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
20285 % \nleqslant (txfonts/pxfonts)
20286 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
20287 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
20288 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
20289 % \ngeqslant (txfonts/pxfonts)
20290 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
20291 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)

20292 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
20293 % \nlessapprox (txfonts/pxfonts)
20294 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
20295 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
20296 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
20297 % \ngtrapprox (txfonts/pxfonts)
20298 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
20299 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
20300 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
20301 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
20302 % \gneq (AmS)
20303 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
20304 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
20305 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
20306 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
20307 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
20308 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-
THAN;
20309 % \lesseqgtr (AmS)
20310 \DeclareTextCommand{\textlesseqgtr}{PU}{\9052\213}%* U+2A8B
20311 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-
THAN;
20312 % \gtreqless (AmS)
20313 \DeclareTextCommand{\textgtreqless}{PU}{\9052\214}%* U+2A8C
20314 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
20315 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
20316 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
20317 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
20318 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
20319 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
20320 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
20321 \DeclareTextCommand{\textrightslice}{PU}{\9052\247}%* U+2AA7
20322 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
Symbol)
20323 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
20324 % \npreceq (txfonts/pxfonts)
20325 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
20326 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
Symbol)
20327 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
20328 % \nsucceq (txfonts/pxfonts)
20329 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
20330 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \prec-
neq (mathabx)
20331 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
20332 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succ-
neq (mathabx)
20333 \DeclareTextCommand{\textsucneq}{PU}{\9052\262}%* U+2AB2
20334 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
20335 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
20336 % \npreceqq (txfonts/pxfonts)
20337 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
20338 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
20339 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
20340 % \nsucceqq (txfonts/pxfonts)
20341 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
20342 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)

20343 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
20344 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
20345 \DeclareTextCommand{\textsucneqq}{PU}{\9052\266}%* U+2AB6
20346 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
20347 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
20348 % \nprecapprox (txfonts/pxfonts)
20349 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
20350 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
20351 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
20352 % \nsuccapprox (txfonts/pxfonts)
20353 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
20354 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnap-
prox (AmS)
20355 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
20356 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnap-
prox (AmS)
20357 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
20358 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
20359 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
20360 % \nsubseteqq (txfonts/pxfonts, mathabx)
20361 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
20362 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
20363 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
20364 % \nsupseteqq (mathabx)
20365 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
20366 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
20367 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
20368 %* \textdashV -> \leftVdash (MnSymbol)
20369 % \ndashV (mathabx)
20370 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
20371 %* \textndashV -> \nleftVdash (MnSymbol)
20372 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
20373 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
20374 %* \textDashv -> \leftmodels (MnSymbol)
20375 % \nDashv (mathabx)
20376 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
20377 %* \textnDashv -> \nleftmodels (MnSymbol)
20378 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
20379 % \DashV (mathabx)
20380 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
20381 %* \textDashV -> \leftModels (MnSymbol)
20382 % \nDashV (mathabx)
20383 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
20384 %* \textnDashV -> \nleftModels (MnSymbol)
20385 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
20386 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
20387 % \ndownmodels (MnSymbol)
20388 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
20389 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
20390 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
20391 % \nupmodels (MnSymbol)
20392 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
20393 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
20394 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
20395 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
20396 % \interleave (stmaryrd)
20397 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4

20398 % U+2AFD DOUBLE SOLIDUS OPERATOR; \sslash (stmaryrd)
 20399 \DeclareTextCommand{\textsslash}{PU}{\9052\375}%* U+2AFD
 20400 %* \textsslash -> \varparallel (txfonts\pxfonts)

51.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

20401 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 20402 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 20403 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 20404 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

51.2.37 Latin Extended-C: U+2C60 to U+2C7F

20405 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 20406 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

51.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

20407 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 20408 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 20409 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 20410 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 20411 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 20412 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

51.2.39 Modifier Tone Letters: U+A700 to U+A71F

20413 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 20414 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 20415 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 20416 % \textdownstep (tipa)
 20417 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

51.2.40 Latin Extended-D: U+A720 to U+A7FF

20418 % U+A727 LATIN SMALL LETTER HENG; \texheng (tipx)
 20419 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
 20420 %* \textPUheng -> \texheng (tipx)
 20421 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \textlhookfour (tipx)
 20422 \DeclareTextCommand{\textPUIhookfour}{PU}{\9247\054}% U+A72C
 20423 %* \textPUIhookfour -> \textlhookfour (tipx)
 20424 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
 20425 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
 20426 %* \textPUscf -> \textscf (tipx)
 20427 % U+A735 LATIN SMALL LETTER AO; \textaoilig (tipx)
 20428 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
 20429 %* \textPUaolig -> \textaoilig (tipx)
 20430 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
 20431 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
 20432 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
 20433 \DeclareTextCommand{\textcircumlw}{PU}{\9247\210}% U+A788

51.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

20434 % U+FB01 LATIN SMALL LIGATURE FI; fi
 20435 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 20436 % U+FB02 LATIN SMALL LIGATURE FL; fl
 20437 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

51.2.42 Musical Symbols: U+1D100 to U+1D1FF

20438 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
 20439 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
 20440 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)

20441 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
20442 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
20443 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
20444 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
20445 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
20446 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
20447 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
20448 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
20449 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
20450 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
20451 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
20452 %* \textfullnote -> \Ganz (harmony)
20453 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
20454 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
20455 %* \texthalfnote -> \Halb (harmony)
20456 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
20457 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
20458 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
20459 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
20460 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
20461 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
20462 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
20463 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

51.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

20464 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
20465 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
20466 % U+1F319 CRESCENT MOON; \Moon (marvosym)
20467 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
20468 % U+1F468 MAN; \ManFace (marvosym)
20469 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
20470 % U+1F469 WOMAN; \WomanFace (marvosym)
20471 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
20472 %* \textWomanFace -> \Womanface (marvosym)
20473 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
20474 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
20475 %* \textFax -> \Faxmachine (marvosym)
20476 % U+1F525 FIRE; \Fire (ifsym)
20477 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

51.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

20478 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
20479 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
20480 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
20481 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
20482 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
20483 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

51.2.45 Miscellaneous

20484 \DeclareTextCommand{\SS}{PU}{SS}%
20485 % \textcopyleft (textcomp)
20486 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
20487 % \ccnc (ccllicenses)
20488 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
20489 % \ccnd (ccllicenses)
20490 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
20491 % \ccsa (ccllicenses)

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20492 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
20493 % \Info (marvosym, china2e)
20494 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
20495 % \CESign (marvosym)
20496 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
20497 %* \textCESign -> \CESign (marvosym)

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51.2.46 Aliases

Aliases (german.sty)

```

20498 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
20499 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
20500 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
20501 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
20502 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}%
20503 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}%
20504 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
20505 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

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Aliases (math names)

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20506 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
20507 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
20508 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
20509 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
20510 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
20511 </puenc>

```

51.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

20512 <*puvnenc>
20513 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
20514 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
20515 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
20516 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
20517 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
20518 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
20519 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
20520 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
20521 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
20522 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
20523 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
20524 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF
20525 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
20526 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
20527 \DeclareTextCompositeCommand{\ }{PU}{a}{\80\340}% U+00E0
20528 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
20529 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
20530 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
20531 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
20532 \DeclareTextCompositeCommand{\ }{PU}{\abreve}{\9036\261}% U+1EB1
20533 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
20534 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
20535 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
20536 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
20537 \DeclareTextCompositeCommand{\ }{PU}{\acircumflex}{\9036\247}% U+1EA7

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20538 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
20539 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
20540 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
20541 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
20542 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
20543 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
20544 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
20545 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
20546 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
20547 \DeclareTextCompositeCommand{\`}{PU}{\ecircumflex}{\9036\301}% U+1EC1
20548 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
20549 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
20550 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
20551 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
20552 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
20553 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
20554 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
20555 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
20556 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
20557 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
20558 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
20559 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
20560 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
20561 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
20562 \DeclareTextCompositeCommand{\`}{PU}{\ocircumflex}{\9036\323}% U+1ED3
20563 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
20564 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
20565 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
20566 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
20567 \DeclareTextCompositeCommand{\`}{PU}{\ohorn}{\9036\335}% U+1EDD
20568 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
20569 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
20570 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
20571 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
20572 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
20573 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
20574 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
20575 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
20576 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
20577 \DeclareTextCompositeCommand{\`}{PU}{\uhorn}{\9036\353}% U+1EEB
20578 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
20579 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
20580 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
20581 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
20582 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
20583 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
20584 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
20585 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
20586 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
20587 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
20588 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
20589 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
20590 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
20591 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
20592 \DeclareTextCompositeCommand{\`}{PU}{\ABREVE}{\9036\260}% U+1EB0
20593 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
20594 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4

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20595 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
20596 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
20597 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
20598 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
20599 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EA8
20600 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
20601 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
20602 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
20603 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
20604 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
20605 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
20606 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
20607 \DeclareTextCompositeCommand{\`}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
20608 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
20609 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
20610 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
20611 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
20612 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
20613 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
20614 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
20615 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
20616 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
20617 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
20618 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
20619 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
20620 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
20621 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
20622 \DeclareTextCompositeCommand{\`}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
20623 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
20624 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
20625 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
20626 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
20627 \DeclareTextCompositeCommand{\`}{PU}{\OHORN}{\9036\334}% U+1EDC
20628 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
20629 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
20630 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
20631 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
20632 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
20633 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
20634 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
20635 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
20636 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
20637 \DeclareTextCompositeCommand{\`}{PU}{\UHORN}{\9036\352}% U+1EEA
20638 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
20639 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
20640 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
20641 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
20642 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
20643 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
20644 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
20645 (/puvnc)

```

51.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```
20646 (*puarenc)
```

20647 % U+0621;afii57409;ARABIC LETTER HAMZA
20648 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
20649 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
20650 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
20651 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
20652 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
20653 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
20654 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
20655 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
20656 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
20657 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
20658 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
20659 % U+0627;afii57415;ARABIC LETTER ALEF
20660 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
20661 % U+0628;afii57416;ARABIC LETTER BEH
20662 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
20663 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
20664 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
20665 % U+062A;afii57418;ARABIC LETTER TEH
20666 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
20667 % U+062B;afii57419;ARABIC LETTER THEH
20668 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
20669 % U+062C;afii57420;ARABIC LETTER JEEM
20670 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
20671 % U+062D;afii57421;ARABIC LETTER HAH
20672 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
20673 % U+062E;afii57422;ARABIC LETTER KHAH
20674 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
20675 % U+062F;afii57423;ARABIC LETTER DAL
20676 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
20677 % U+0630;afii57424;ARABIC LETTER THAL
20678 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
20679 % U+0631;afii57425;ARABIC LETTER REH
20680 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
20681 % U+0632;afii57426;ARABIC LETTER ZAIN
20682 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
20683 % U+0633;afii57427;ARABIC LETTER SEEN
20684 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
20685 % U+0634;afii57428;ARABIC LETTER SHEEN
20686 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
20687 % U+0635;afii57429;ARABIC LETTER SAD
20688 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
20689 % U+0636;afii57430;ARABIC LETTER DAD
20690 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
20691 % U+0637;afii57431;ARABIC LETTER TAH
20692 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
20693 % U+0638;afii57432;ARABIC LETTER ZAH
20694 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
20695 % U+0639;afii57433;ARABIC LETTER AIN
20696 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
20697 % U+063A;afii57434;ARABIC LETTER GHAIN
20698 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
20699 % U+0640;afii57440;ARABIC TATWEEL
20700 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
20701 % U+0641;afii57441;ARABIC LETTER FEH
20702 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
20703 % U+0642;afii57442;ARABIC LETTER QAF

20704 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
20705 % U+0643;afii57443;ARABIC LETTER KAF
20706 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
20707 % U+0644;afii57444;ARABIC LETTER LAM
20708 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
20709 % U+0645;afii57445;ARABIC LETTER MEEM
20710 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
20711 % U+0646;afii57446;ARABIC LETTER NOON
20712 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
20713 % U+0647;afii57470;ARABIC LETTER HEH
20714 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
20715 % U+0648;afii57448;ARABIC LETTER WAW
20716 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
20717 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
20718 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
20719 % U+064A;afii57450;ARABIC LETTER YEH
20720 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A

20721 % U+064B;afii57451;ARABIC FATHATAN
20722 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
20723 % U+064C;afii57452;ARABIC DAMMATAN
20724 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
20725 % U+064D;afii57453;ARABIC KASRATAN
20726 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
20727 % U+064E;afii57454;ARABIC FATHA
20728 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
20729 % U+064F;afii57455;ARABIC DAMMA
20730 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
20731 % U+0650;afii57456;ARABIC KASRA
20732 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
20733 % U+0651;afii57457;ARABIC SHADDA
20734 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
20735 % U+0652;afii57458;ARABIC SUKUN
20736 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

Farsi
20737 % U+067E ARABIC LETTER PEH; afii57506
20738 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
20739 % U+0686 ARABIC LETTER TCHEH; afii57507
20740 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
20741 % U+0698 ARABIC LETTER JEH; afii57508
20742 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
20743 % U+06A9 ARABIC LETTER KEHEH
20744 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9
20745 % U+06AF ARABIC LETTER GAF; afii57509
20746 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
20747 % U+06CC ARABIC LETTER FARSI YEH
20748 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

20749 % U+200C ZERO WIDTH NON-JOINER; afii61664
20750 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C
20751 % U+200D ZERO WIDTH JOINER; afii301
20752 \DeclareTextCommand{\textEncodingNoboundary}{PU}{\9040\015}% U+200D

20753 (/puarenc)
20754 (*psdextra)
20755 \Hy@VersionCheck{psdextra.def}
20756 \newcommand*{\psdmapshortnames}{%
20757 \let\MVPlus\text\MVPlus

20758 \let\MVComma\textMVComma
20759 \let\MVMinus\textMVMinus
20760 \let\MVPeriod\textMVPeriod
20761 \let\MVDivision\textMVDivision
20762 \let\MVZero\textMVZero
20763 \let\MVOne\textMVOne
20764 \let\MVTwo\textMVTwo
20765 \let\MVThree\textMVThree
20766 \let\MVFour\textMVFour
20767 \let\MVFive\textMVFive
20768 \let\MVSix\textMVSix
20769 \let\MVSeven\textMVSeven
20770 \let\MVEight\textMVEight
20771 \let\MVNine\textMVNine
20772 \let\MVAt\textMVAt
20773 \let\copyright\textcopyright
20774 \let\twosuperior\texttwosuperior
20775 \let\threesuperior\textthreesuperior
20776 \let\onesuperior\textonesuperior
20777 \let\Thorn\textThorn
20778 \let\thorn\textthorn
20779 \let\hbar\texthbar
20780 \let\hausaB\texthausaB
20781 \let\hausaD\texthausaD
20782 \let\hausaK\texthausaK
20783 \let\bar\textbar
20784 \let\inve\textinve
20785 \let\slashc\textslashc
20786 \let\scripta\textscripta
20787 \let\openo\textopeno
20788 \let\rtaild\textrtaild
20789 \let\reve\textreve
20790 \let\schwa\textschwa
20791 \let\niepsilon\textniepsilon
20792 \let\repsilon\textrepsilon
20793 \let\rhookrepsilon\text\rhookrepsilon
20794 \let\scriptg\textscriptg
20795 \let\scg\textscg
20796 \let\ipagamma\textipagamma
20797 \let\babygamma\textbabygamma
20798 \let\bari\textbari
20799 \let\niota\textniota
20800 \let\sci\textsci
20801 \let\scn\textscn
20802 \let\niphi\textniphi
20803 \let\longlegr\textlonglegr
20804 \let\scr\textscr
20805 \let\invscr\textinvscr
20806 \let\esh\textesh
20807 \let\baru\textbaru
20808 \let\niupsilon\textniupsilon
20809 \let\scriptv\textscriptv
20810 \let\turnv\textturnv
20811 \let\turnw\textturnw
20812 \let\turny\textturny
20813 \let\scy\textscy
20814 \let\yogh\textyogh

20815 `\let\glotstop\textglotstop`
20816 `\let\revglotstop\textrevglotstop`
20817 `\let\invglotstop\textinvglotstop`
20818 `\let\Gamma\textGamma`
20819 `\let\Delta\textDelta`
20820 `\let\Theta\textTheta`
20821 `\let\Lambda\textLambda`
20822 `\let\Xi\textXi`
20823 `\let\Pi\textPi`
20824 `\let\Sigma\textSigma`
20825 `\let\Upsilon\textUpsilon`
20826 `\let\Phi\textPhi`
20827 `\let\Psi\textPsi`
20828 `\let\Omega\textOmega`
20829 `\let\alpha\textalpha`
20830 `\let\beta\textbeta`
20831 `\let\gamma\textgamma`
20832 `\let\delta\textdelta`
20833 `\let\epsilon\textepsilon`
20834 `\let\zeta\textzeta`
20835 `\let\eta\texteta`
20836 `\let\theta\texttheta`
20837 `\let\iota\textiota`
20838 `\let\kappa\textkappa`
20839 `\let\lambda\textlambda`
20840 `\let\mugreek\textmugreek`
20841 `\let\nu\textnu`
20842 `\let\xi\textxi`
20843 `\let\pi\textpi`
20844 `\let\rho\textrho`
20845 `\let\varsigma\textvarsigma`
20846 `\let\sigma\textsigma`
20847 `\let\tau\texttau`
20848 `\let\upsilon\textupsilon`
20849 `\let\phi\textphi`
20850 `\let\chi\textchi`
20851 `\let\psi\textpsi`
20852 `\let\omega\textomega`
20853 `\let\scd\textscd`
20854 `\let\scu\textscu`
20855 `\let\iinferior\textiinferior`
20856 `\let\rinferior\textrinferior`
20857 `\let\uinferior\textuinferior`
20858 `\let\vinferior\textvinferior`
20859 `\let\betainferior\textbetainferior`
20860 `\let\gammainferior\textgammainferior`
20861 `\let\rhoinferior\textrhoinferior`
20862 `\let\phiinferior\textphiinferior`
20863 `\let\chiinferior\textchiinferior`
20864 `\let\barsci\textbarsci`
20865 `\let\barp\textbarp`
20866 `\let\barscu\textbarscu`
20867 `\let\htrtaild\texthtrtaild`
20868 `\let\dagger\textdagger`
20869 `\let\bullet\textbullet`
20870 `\let\hdotfor\texthdotfor`
20871 `\let\prime\textprime`

20872 \let\second\textsecond
20873 \let\third\textthird
20874 \let\backprime\textbackprime
20875 \let\lefttherefore\textlefttherefore
20876 \let\fourth\textfourth
20877 \let\diamonddots\textdiamonddots
20878 \let\zerosuperior\textzerosuperior
20879 \let\isuperior\textisuperior
20880 \let\foursuperior\textfoursuperior
20881 \let\fivesuperior\textfivesuperior
20882 \let\sixsuperior\textsixsuperior
20883 \let\sevensuperior\textsevensuperior
20884 \let\eightsuperior\texteightsuperior
20885 \let\ninesuperior\textninesuperior
20886 \let\plussuperior\textplussuperior
20887 \let\minussuperior\textminussuperior
20888 \let\equalsuperior\textequalsuperior
20889 \let\parenleftsuperior\textparenleftsuperior
20890 \let\parenrightsuperior\textparenrightsuperior
20891 \let\nsuperior\textnsuperior
20892 \let\zeroinferior\textzeroinferior
20893 \let\oneinferior\textoneinferior
20894 \let\twoinferior\texttwoinferior
20895 \let\threeinferior\textthreeinferior
20896 \let\fourinferior\textfourinferior
20897 \let\fiveinferior\textfiveinferior
20898 \let\sixinferior\textsixinferior
20899 \let\seveninferior\textseveninferior
20900 \let\eightinferior\texteightinferior
20901 \let\nineinferior\textnineinferior
20902 \let\plusinferior\textplusinferior
20903 \let\minusinferior\textminusinferior
20904 \let\equalsinferior\textequalsinferior
20905 \let\parenleftinferior\textparenleftinferior
20906 \let\parenrightinferior\textparenrightinferior
20907 \let\ainferior\textainferior
20908 \let\einferior\texteinferior
20909 \let\oinferior\textoinferior
20910 \let\xinferior\textxinferior
20911 \let\schwainferior\textschwainferior
20912 \let\hinferior\texthinferior
20913 \let\kinferior\textkinferior
20914 \let\linferior\textlinferior
20915 \let\minferior\textminferior
20916 \let\ninferior\textninferior
20917 \let\pinferior\textpinferior
20918 \let\sinferior\textsinferior
20919 \let\тинferior\texttinferior
20920 \let\Deleatur\textDeleatur
20921 \let\hslash\texthslash
20922 \let\Im\textIm
20923 \let\ell\textell
20924 \let\wp\textwp
20925 \let\Re\textRe
20926 \let\mho\textmho
20927 \let\riota\textriota
20928 \let\Finv\textFinv

20929 \let\aleph\textaleph
20930 \let\beth\textbeth
20931 \let\gimel\textgimel
20932 \let\daleth\textdaleth
20933 \let\xfax\textfax
20934 \let\Game\textGame
20935 \let\leftarrow\textleftarrow
20936 \let\uparrow\textuparrow
20937 \let\rightarrow\textrightarrow
20938 \let\downarrow\textdownarrow
20939 \let\leftrightarrow\textleftrightarrow
20940 \let\updownarrow\textupdownarrow
20941 \let\nwarrow\textnwarrow
20942 \let\nearrow\textnearrow
20943 \let\searrow\textsearrow
20944 \let\swarrow\textswarrow
20945 \let\nleftarrow\textnleftarrow
20946 \let\nrightarrow\textnrightarrow
20947 \let\twoheadleftarrow\texttwoheadleftarrow
20948 \let\ntwoheadleftarrow\textntwoheadleftarrow
20949 \let\twoheaduparrow\texttwoheaduparrow
20950 \let\twoheadrightarrow\texttwoheadrightarrow
20951 \let\ntwoheadrightarrow\textntwoheadrightarrow
20952 \let\twoheaddownarrow\texttwoheaddownarrow
20953 \let\leftarrowtail\textleftarrowtail
20954 \let\rightarrowtail\textrightarrowtail
20955 \let\mapsto\textmapsto
20956 \let\hookleftarrow\texthookleftarrow
20957 \let\hookrightarrow\texthookrightarrow
20958 \let\looparrowleft\textlooparrowleft
20959 \let\looparrowright\textlooparrowright
20960 \let\nleftrightarrow\textnleftrightarrow
20961 \let\lightning\textlightning
20962 \let\dlsh\textdlsh
20963 \let\curvearrowleft\textcurvearrowleft
20964 \let\curvearrowright\textcurvearrowright
20965 \let\leftharpoonup\textleftharpoonup
20966 \let\leftharpoondown\textleftharpoondown
20967 \let\upharpoonright\textupharpoonright
20968 \let\upharpoonleft\textupharpoonleft
20969 \let\rightharpoonup\text\rightharpoonup
20970 \let\rightharpoondown\text\rightharpoondown
20971 \let\downharpoonright\textdownharpoonright
20972 \let\downharpoonleft\textdownharpoonleft
20973 \let\rightleftarrows\textrightleftarrows
20974 \let\updownarrows\textupdownarrows
20975 \let\leftrightarrows\textleftrightarrows
20976 \let\leftleftarrows\textleftleftarrows
20977 \let\upuparrows\textupuparrows
20978 \let\righttrightarrows\textrighttrightarrows
20979 \let\downdownarrows\textdowndownarrows
20980 \let\leftrightharpoons\textleftrightharpoons
20981 \let\rightleftharpoons\textrightleftharpoons
20982 \let\nLeftarrow\textnLeftarrow
20983 \let\nLeftrightarrow\textnLeftrightarrow
20984 \let\nRightarrow\textnRightarrow
20985 \let\Leftarrow\textLeftarrow

20986 `\let\Uparrow\textUparrow`
20987 `\let\Rightarrow\textRightarrow`
20988 `\let\Downarrow\textDownarrow`
20989 `\let\Leftrightarrow\textLeftrightarrow`
20990 `\let\Updownarrow\textUpdownarrow`
20991 `\let\Nwarrow\textNwarrow`
20992 `\let\Nearrow\textNearrow`
20993 `\let\SEarrow\textSEarrow`
20994 `\let\SEarrow\textSEarrow`
20995 `\let\Lleftarrow\textLleftarrow`
20996 `\let\Rrightarrow\textRrightarrow`
20997 `\let\leftsquigarrow\textleftsquigarrow`
20998 `\let\rightsquigarrow\textrightsquigarrow`
20999 `\let\dashleftarrow\textdashleftarrow`
21000 `\let\dasheduparrow\textdasheduparrow`
21001 `\let\dashrightarrow\textdashrightarrow`
21002 `\let\dasheddownarrow\textdasheddownarrow`
21003 `\let\pointer\textpointer`
21004 `\let\downuparrows\textdownuparrows`
21005 `\let\leftarrowtriangle\textleftarrowtriangle`
21006 `\let\rightarrowtriangle\textrightarrowtriangle`
21007 `\let\leftrightarrowtriangle\textleftrightarrowtriangle`
21008 `\let\forall\textforall`
21009 `\let\complement\textcomplement`
21010 `\let\partial\textpartial`
21011 `\let\exists\textexists`
21012 `\let\nexists\textnexists`
21013 `\let\emptyset\textemptyset`
21014 `\let\triangle\texttriangle`
21015 `\let\nabla\textnabla`
21016 `\let\in\textin`
21017 `\let\notin\textnotin`
21018 `\let\smallin\textsmallin`
21019 `\let\ni\textni`
21020 `\let\notowner\textnotowner`
21021 `\let\smallowns\textsmallowns`
21022 `\let\prod\textprod`
21023 `\let\amalg\textamalg`
21024 `\let\sum\textsum`
21025 `\let\mp\textmp`
21026 `\let\dotplus\textdotplus`
21027 `\let\Divides\textDivides`
21028 `\let\DividesNot\textDividesNot`
21029 `\let\setminus\textsetminus`
21030 `\let\ast\textast`
21031 `\let\circ\textcirc`
21032 `\let\surd\textsurd`
21033 `\let\propto\textpropto`
21034 `\let\infty\textinfty`
21035 `\let\angle\textangle`
21036 `\let\measuredangle\textmeasuredangle`
21037 `\let\sphericalangle\textsphericalangle`
21038 `\let\mid\textmid`
21039 `\let\nmid\textnmid`
21040 `\let\parallel\textparallel`
21041 `\let\nparallel\textnparallel`
21042 `\let\wedge\textwedge`

21043 `\let\owedge\textowedge`
21044 `\let\vee\textvee`
21045 `\let\ovee\textovee`
21046 `\let\cap\textcap`
21047 `\let\cup\textcup`
21048 `\let\int\textint`
21049 `\let\iint\textiint`
21050 `\let\iiint\textiiint`
21051 `\let\oint\textoint`
21052 `\let\oiint\textoiint`
21053 `\let\ointclockwise\textointclockwise`
21054 `\let\ointctrlockwise\textointctrlockwise`
21055 `\let\therefore\texttherefore`
21056 `\let\because\textbecause`
21057 `\let\vdotdot\textvdotdot`
21058 `\let\squaredots\textsquaredots`
21059 `\let\dotminus\textdotminus`
21060 `\let\eqcolon\texteqcolon`
21061 `\let\sim\textsim`
21062 `\let\backsim\textbacksim`
21063 `\let\nbacksim\textnbacksim`
21064 `\let\wr\textwr`
21065 `\let\nsim\textnsim`
21066 `\let\eqsim\texteqsim`
21067 `\let\neqsim\textneqsim`
21068 `\let\simeq\textsimeq`
21069 `\let\nsimeq\textnsimeq`
21070 `\let\cong\textcong`
21071 `\let\ncong\textncong`
21072 `\let\approx\textapprox`
21073 `\let\napprox\textnapprox`
21074 `\let\approxeq\textapproxeq`
21075 `\let\napproxeq\textnapproxeq`
21076 `\let\triplesim\texttriplesim`
21077 `\let\ntriplesim\textntriplesim`
21078 `\let\backcong\textbackcong`
21079 `\let\nbackcong\textnbackcong`
21080 `\let\asymp\textasymp`
21081 `\let\nasymp\textnasymp`
21082 `\let\Bumpeq\textBumpeq`
21083 `\let\nBumpeq\textnBumpeq`
21084 `\let\bumpeq\textbumpeq`
21085 `\let\nbumpeq\textnbumpeq`
21086 `\let\dotseq\textdotseq`
21087 `\let\ndotseq\textndotseq`
21088 `\let\dotseqdot\textdotseqdot`
21089 `\let\NDotseq\textNDotseq`
21090 `\let\fallingdotseq\textfallingdotseq`
21091 `\let\nfallingdotseq\textnfallingdotseq`
21092 `\let\risingdotseq\textrisingdotseq`
21093 `\let\nrisingdotseq\textnrisingdotseq`
21094 `\let\colonequals\textcolonequals`
21095 `\let\equalscolon\textequalscolon`
21096 `\let\eqcirc\texteqcirc`
21097 `\let\neqcirc\textneqcirc`
21098 `\let\circeq\textcirceq`
21099 `\let\ncirceq\textncirceq`

21100 $\backslash\text{hateq}$
21101 $\backslash\text{nhateq}$
21102 $\backslash\text{triangleeq}$
21103 $\backslash\text{neq}$
21104 $\backslash\text{ne}$
21105 $\backslash\text{equiv}$
21106 $\backslash\text{nequiv}$
21107 $\backslash\text{leq}$
21108 $\backslash\text{le}$
21109 $\backslash\text{geq}$
21110 $\backslash\text{ge}$
21111 $\backslash\text{leqq}$
21112 $\backslash\text{nleqq}$
21113 $\backslash\text{geqq}$
21114 $\backslash\text{ngeqq}$
21115 $\backslash\text{lneqq}$
21116 $\backslash\text{gneqq}$
21117 $\backslash\text{ll}$
21118 $\backslash\text{nll}$
21119 $\backslash\text{gg}$
21120 $\backslash\text{ngg}$
21121 $\backslash\text{between}$
21122 $\backslash\text{nless}$
21123 $\backslash\text{ngtr}$
21124 $\backslash\text{nleq}$
21125 $\backslash\text{ngeq}$
21126 $\backslash\text{lesssim}$
21127 $\backslash\text{gtrsim}$
21128 $\backslash\text{nlesssim}$
21129 $\backslash\text{ngtrsim}$
21130 $\backslash\text{lessgtr}$
21131 $\backslash\text{gtrless}$
21132 $\backslash\text{ngtrless}$
21133 $\backslash\text{nlessgtr}$
21134 $\backslash\text{prec}$
21135 $\backslash\text{succ}$
21136 $\backslash\text{preccurlyeq}$
21137 $\backslash\text{succurlyeq}$
21138 $\backslash\text{precsim}$
21139 $\backslash\text{nprecsim}$
21140 $\backslash\text{succsim}$
21141 $\backslash\text{nsuccsim}$
21142 $\backslash\text{nprec}$
21143 $\backslash\text{nsucc}$
21144 $\backslash\text{subset}$
21145 $\backslash\text{supset}$
21146 $\backslash\text{nsubset}$
21147 $\backslash\text{nsupset}$
21148 $\backslash\text{subseteq}$
21149 $\backslash\text{supseteq}$
21150 $\backslash\text{nsubseteq}$
21151 $\backslash\text{nsupseteq}$
21152 $\backslash\text{subsetneq}$
21153 $\backslash\text{supsetneq}$
21154 $\backslash\text{cupdot}$
21155 $\backslash\text{cupplus}$
21156 $\backslash\text{sqsubset}$

21157 `\let\nsqsubset\textnsqsubset`
21158 `\let\sqsupset\textsqsupset`
21159 `\let\nsqsupset\textnsqsupset`
21160 `\let\sqssubseteq\textsqssubseteq`
21161 `\let\nsqsubseteq\textnsqsubseteq`
21162 `\let\sqsupseteq\textsqsupseteq`
21163 `\let\nsqsupseteq\textnsqsupseteq`
21164 `\let\sqcap\textsqcap`
21165 `\let\sqcup\textsqcup`
21166 `\let\oplus\textoplus`
21167 `\let\ominus\textominus`
21168 `\let\otimes\textotimes`
21169 `\let\oslash\textoslash`
21170 `\let\odot\textodot`
21171 `\let\circledcirc\textcircledcirc`
21172 `\let\circledast\textcircledast`
21173 `\let\circleddash\textcircleddash`
21174 `\let\boxplus\textboxplus`
21175 `\let\boxminus\textboxminus`
21176 `\let\boxtimes\textboxtimes`
21177 `\let\boxdot\textboxdot`
21178 `\let\vdash\textvdash`
21179 `\let\dashv\textdashv`
21180 `\let\ndashv\textndashv`
21181 `\let\top\texttop`
21182 `\let\ndownvdash\textndownvdash`
21183 `\let\bot\textbot`
21184 `\let\nupvdash\textnupvdash`
21185 `\let\VDash\textVDash`
21186 `\let\Vdash\textVdash`
21187 `\let\Vvdash\textVvdash`
21188 `\let\NVdash\textNVdash`
21189 `\let\VDash\textVDash`
21190 `\let\Nvdash\textNvdash`
21191 `\let\NVDash\textNVDash`
21192 `\let\NVdash\textNVdash`
21193 `\let\NVDash\textNVDash`
21194 `\let\lhd\textlhd`
21195 `\let\rhd\textrhd`
21196 `\let\unlhd\textunlhd`
21197 `\let\unrhd\textunrhd`
21198 `\let\multimapdotbothA\textmultimapdotbothA`
21199 `\let\multimapdotbothB\textmultimapdotbothB`
21200 `\let\multimap\textmultimap`
21201 `\let\veebar\textveebar`
21202 `\let\barwedge\textbarwedge`
21203 `\let\star\textstar`
21204 `\let\divideontimes\textdivideontimes`
21205 `\let\bowtie\textbowtie`
21206 `\let\ltimes\textltimes`
21207 `\let\rtimes\textrtimes`
21208 `\let\leftthreetimes\textleftthreetimes`
21209 `\let\rightthreetimes\textrightthreetimes`
21210 `\let\backsimeq\textbacksimeq`
21211 `\let\Nbacksimeq\textNbacksimeq`
21212 `\let\curlyvee\textcurlyvee`
21213 `\let\curlywedge\textcurlywedge`

21214 `\let\Subset\textSubset`
21215 `\let\nSubset\textnSubset`
21216 `\let\Supset\textSupset`
21217 `\let\nSupset\textnSupset`
21218 `\let\Cap\textCap`
21219 `\let\Cup\textCup`
21220 `\let\pitchfork\textpitchfork`
21221 `\let\lessdot\textlessdot`
21222 `\let\gtrdot\textgtrdot`
21223 `\let\lll\textlll`
21224 `\let\ggg\textggg`
21225 `\let\lesseqgtr\textlesseqgtr`
21226 `\let\gtreqless\textgtreqless`
21227 `\let\curlyeqprec\textcurlyeqprec`
21228 `\let\ncurlyeqprec\textncurlyeqprec`
21229 `\let\curlyeqsucc\textcurlyeqsucc`
21230 `\let\ncurlyeqsucc\textncurlyeqsucc`
21231 `\let\preccurlyeq\textpreccurlyeq`
21232 `\let\nsuccurlyeq\textnsuccurlyeq`
21233 `\let\nqsubseteq\textnqsubseteq`
21234 `\let\nqsupseteq\textnqsupseteq`
21235 `\let\sqsubsetneq\textsqsubsetneq`
21236 `\let\sqsupsetneq\textsqsupsetneq`
21237 `\let\lnsim\textlnsim`
21238 `\let\gnsim\textgnsim`
21239 `\let\precnsim\textprecnsim`
21240 `\let\succnsim\textsuccnsim`
21241 `\let\ntriangleleft\textntriangleleft`
21242 `\let\ntriangleright\textntriangleright`
21243 `\let\ntrianglelefteq\textntrianglelefteq`
21244 `\let\ntrianglerighteq\textntrianglerighteq`
21245 `\let\vdots\textvdots`
21246 `\let\cdots\textcdots`
21247 `\let\udots\textudots`
21248 `\let\ddots\textddots`
21249 `\let\barin\textbarin`
21250 `\let\diameter\textdiameter`
21251 `\let\backneg\textbackneg`
21252 `\let\wasylozenge\textwasylozenge`
21253 `\let\invbackneg\textinvbackneg`
21254 `\let\clock\textclock`
21255 `\let\ulcorner\textulcorner`
21256 `\let\urcorner\texturcorner`
21257 `\let\llcorner\textllcorner`
21258 `\let\lrcorner\textlrcorner`
21259 `\let\frown\textfrown`
21260 `\let\smile\textsmile`
21261 `\let\Keyboard\textKeyboard`
21262 `\let\langle\textlangle`
21263 `\let\rangle\textrangle`
21264 `\let\APLin\textAPLin`
21265 `\let\Tumbler\textTumbler`
21266 `\let\notslash\textnotslash`
21267 `\let\notbackslash\textnotbackslash`
21268 `\let\boxbackslash\textboxbackslash`
21269 `\let\APLleftarrowbox\textAPLleftarrowbox`
21270 `\let\APLrightarrowbox\textAPLrightarrowbox`

21271 \let\APLuparrowbox\textAPLuparrowbox
21272 \let\APLdownarrowbox\textAPLdownarrowbox
21273 \let\APLinput\textAPLinput
21274 \let\Request\textRequest
21275 \let\Beam\textBeam
21276 \let\hexagon\texthexagon
21277 \let\APLbox\textAPLbox
21278 \let\ForwardToIndex\textForwardToIndex
21279 \let\RewindToIndex\textRewindToIndex
21280 \let\bbslash\textbbslash
21281 \let\CircledA\textCircledA
21282 \let\CleaningF\textCleaningF
21283 \let\CleaningFF\textCleaningFF
21284 \let\CleaningP\textCleaningP
21285 \let\CleaningPP\textCleaningPP
21286 \let\CuttingLine\textCuttingLine
21287 \let\UParrow\textUParrow
21288 \let\bigtriangleup\textbigtriangleup
21289 \let\Forward\textForward
21290 \let\triangleright\texttriangleright
21291 \let\RHD\textRHD
21292 \let\DOWNarrow\textDOWNarrow
21293 \let\bigtriangledown\textbigtriangledown
21294 \let\Rewind\textRewind
21295 \let\triangleleft\texttriangleleft
21296 \let\LHD\textLHD
21297 \let\diamond\textdiamond
21298 \let\lozenge\textlozenge
21299 \let\LEFTCIRCLE\textLEFTCIRCLE
21300 \let\RIGHTCIRCLE\textRIGHTCIRCLE
21301 \let\openbullet\textopenbullet
21302 \let\boxbar\textboxbar
21303 \let\bigcircle\textbigcircle
21304 \let\Cloud\textCloud
21305 \let\FiveStar\textFiveStar
21306 \let\FiveStarOpen\textFiveStarOpen
21307 \let\Phone\textPhone
21308 \let\boxempty\textboxempty
21309 \let\Checkedbox\textCheckedbox
21310 \let\Crossedbox\textCrossedbox
21311 \let\Coffeecup\textCoffeecup
21312 \let\HandCuffLeft\textHandCuffLeft
21313 \let\HandCuffRight\textHandCuffRight
21314 \let\HandLeft\textHandLeft
21315 \let\HandRight\textHandRight
21316 \let\Radioactivity\textRadioactivity
21317 \let\Biohazard\textBiohazard
21318 \let\Ankh\textAnkh
21319 \let\YinYang\textYinYang
21320 \let\frownie\textfrownie
21321 \let\smiley\textsmiley
21322 \let\blacksmiley\textblacksmiley
21323 \let\sun\textsun
21324 \let\leftmoon\textleftmoon
21325 \let\rightmoon\textrightmoon
21326 \let\mercury\textmercury
21327 \let\earth\textearth

21328 \let\male\textmale
21329 \let\jupiter\textjupiter
21330 \let\saturn\textsaturn
21331 \let\uranus\texturanus
21332 \let\neptune\textneptune
21333 \let\pluto\textpluto
21334 \let\aries\textaries
21335 \let\taurus\texttaurus
21336 \let\gemini\textgemini
21337 \let\cancer\textcancer
21338 \let\leo\textleo
21339 \let\virgo\textvirgo
21340 \let\libra\textlibra
21341 \let\scorpio\textscorpio
21342 \let\sagittarius\textsagittarius
21343 \let\capricornus\textcapricornus
21344 \let\aquarius\textaquarius
21345 \let\pisces\textpisces
21346 \let\quarternote\textquarternote
21347 \let\twonotes\texttwonotes
21348 \let\sixteenthnote\textsixteenthnote
21349 \let\flat\textflat
21350 \let\natural\textnatural
21351 \let\sharp\textsharp
21352 \let\recycle\textrecycle
21353 \let\Wheelchair\textWheelchair
21354 \let\Flag\textFlag
21355 \let\MineSign\textMineSign
21356 \let\ds\textds
21357 \let\dsmedical\textdsmedical
21358 \let\dsjuridical\textdsjuridical
21359 \let\dschemical\textdschemical
21360 \let\dsbiological\textdsbiological
21361 \let\dscommercial\textdscommercial
21362 \let\manstar\textmanstar
21363 \let\danger\textdanger
21364 \let\FemaleFemale\textFemaleFemale
21365 \let\MaleMale\textMaleMale
21366 \let\FemaleMale\textFemaleMale
21367 \let\Hermaphrodite\textHermaphrodite
21368 \let\Neutral\textNeutral
21369 \let\hexstar\texthexstar
21370 \let\SunCload\textSunCload
21371 \let\Rain\textRain
21372 \let\noway\textnoway
21373 \let\Mountain\textMountain
21374 \let\Tent\textTent
21375 \let\ScissorRight\textScissorRight
21376 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
21377 \let\ScissorHollowRight\textScissorHollowRight
21378 \let\PhoneHandset\textPhoneHandset
21379 \let\Tape\textTape
21380 \let\Plane\textPlane
21381 \let\Envelope\textEnvelope
21382 \let\Peace\textPeace
21383 \let\WritingHand\textWritingHand
21384 \let\PencilRightDown\textPencilRightDown

21385 \let\PencilRight\textPencilRight
21386 \let\PencilRightUp\textPencilRightUp
21387 \let\NibRight\textNibRight
21388 \let\NibSolidRight\textNibSolidRight
21389 \let\Checkmark\textCheckmark
21390 \let\CheckmarkBold\textCheckmarkBold
21391 \let\XSolid\textXSolid
21392 \let\XSolidBold\textXSolidBold
21393 \let\XSolidBrush\textXSolidBrush
21394 \let\PlusOutline\textPlusOutline
21395 \let\Plus\textPlus
21396 \let\PlusThinCenterOpen\textPlusThinCenterOpen
21397 \let\PlusCenterOpen\textPlusCenterOpen
21398 \let\Cross\textCross
21399 \let\CrossOpenShadow\textCrossOpenShadow
21400 \let\CrossOutline\textCrossOutline
21401 \let\CrossMaltese\textCrossMaltese
21402 \let\DavidStar\textDavidStar
21403 \let\FourAsterisk\textFourAsterisk
21404 \let\JackStar\textJackStar
21405 \let\JackStarBold\textJackStarBold
21406 \let\CloverTips\textCloverTips
21407 \let\FourStar\textFourStar
21408 \let\FourStarOpen\textFourStarOpen
21409 \let\FiveStarOpenCircled\textFiveStarOpenCircled
21410 \let\FiveStarCenterOpen\textFiveStarCenterOpen
21411 \let\FiveStarOpenDotted\textFiveStarOpenDotted
21412 \let\FiveStarOutline\textFiveStarOutline
21413 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
21414 \let\FiveStarConvex\textFiveStarConvex
21415 \let\FiveStarShadow\textFiveStarShadow
21416 \let\AsteriskBold\textAsteriskBold
21417 \let\AsteriskCenterOpen\textAsteriskCenterOpen
21418 \let\EightStarTaper\textEightStarTaper
21419 \let\EightStarConvex\textEightStarConvex
21420 \let\SixStar\textSixStar
21421 \let\EightStar\textEightStar
21422 \let\EightStarBold\textEightStarBold
21423 \let\TwelveStar\textTwelveStar
21424 \let\SixteenStarLight\textSixteenStarLight
21425 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
21426 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
21427 \let\Asterisk\textAsterisk
21428 \let\SixFlowerAlternate\textSixFlowerAlternate
21429 \let\FiveFlowerPetal\textFiveFlowerPetal
21430 \let\FiveFlowerOpen\textFiveFlowerOpen
21431 \let\EightFlowerPetal\textEightFlowerPetal
21432 \let\SunshineOpenCircled\textSunshineOpenCircled
21433 \let\SixFlowerAltPetal\textSixFlowerAltPetal
21434 \let\SnowflakeChevron\textSnowflakeChevron
21435 \let\Snowflake\textSnowflake
21436 \let\SnowflakeChevronBold\textSnowflakeChevronBold
21437 \let\Sparkle\textSparkle
21438 \let\SparkleBold\textSparkleBold
21439 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
21440 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
21441 \let\EightAsterisk\textEightAsterisk

21442 `\let\CircleShadow\textCircleShadow`
21443 `\let\SquareShadowBottomRight\textSquareShadowBottomRight`
21444 `\let\SquareTopRight\textSquareTopRight`
21445 `\let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight`
21446 `\let\SquareCastShadowTopRight\textSquareCastShadowTopRight`
21447 `\let\DiamandSolid\textDiamandSolid`
21448 `\let\RectangleThin\textRectangleThin`
21449 `\let\Rectangle\textRectangle`
21450 `\let\RectangleBold\textRectangleBold`
21451 `\let\perp\textperp`
21452 `\let\notperp\textnotperp`
21453 `\let\veedot\textveedot`
21454 `\let\wedgedot\textwedgedot`
21455 `\let\leftspoon\textleftspoon`
21456 `\let\lbrackdbl\textlbrackdbl`
21457 `\let\rbrackdbl\textrbrackdbl`
21458 `\let\circlearrowleft\textcirclearrowleft`
21459 `\let\circlearrowright\textcirclearrowright`
21460 `\let\longleftarrow\textlongleftarrow`
21461 `\let\longrightarrow\textlongrightarrow`
21462 `\let\longleftrightarrow\textlongleftrightarrow`
21463 `\let\Longleftarrow\textLongleftarrow`
21464 `\let\Longrightarrow\textLongrightarrow`
21465 `\let\Longleftrightarrow\textLongleftrightarrow`
21466 `\let\longmapsto\textlongmapsto`
21467 `\let\Longmapsfrom\textLongmapsfrom`
21468 `\let\Longmapsto\textLongmapsto`
21469 `\let\nwsearrow\textnwsearrow`
21470 `\let\neswarrow\textneswarrow`
21471 `\let\hooknwarrow\texthooknwarrow`
21472 `\let\rhooknearrow\texthooknearrow`
21473 `\let\hooksearrow\texthooksearrow`
21474 `\let\rhookswarrow\texthookswarrow`
21475 `\let\leadsto\textleadsto`
21476 `\let\rcurvearrowne\textrcurvearrowne`
21477 `\let\lcurvearrowse\textlcurvearrowse`
21478 `\let\lcurvearrowsw\textlcurvearrowsw`
21479 `\let\rcurvearrowse\textrcurvearrowse`
21480 `\let\lcurvearrowdown\textlcurvearrowdown`
21481 `\let\rcurvearrowdown\textrcurvearrowdown`
21482 `\let\rcurvearrowleft\textrcurvearrowleft`
21483 `\let\rcurvearrowright\textrcurvearrowright`
21484 `\let\leftrightharpoon\textleftrightharpoon`
21485 `\let\rightleftharpoon\textrightleftharpoon`
21486 `\let\updownharpoonrightleft\textupdownharpoonrightleft`
21487 `\let\updownharpoonleftright\textupdownharpoonleftright`
21488 `\let\leftleftharpoons\textleftleftharpoons`
21489 `\let\upupharpoons\textupupharpoons`
21490 `\let\rightightharpoons\textrightightharpoons`
21491 `\let\downdownharpoons\textdowndownharpoons`
21492 `\let\leftbarharpoon\textleftbarharpoon`
21493 `\let\barleftharpoon\textbarleftharpoon`
21494 `\let\rightbarharpoon\textrightbarharpoon`
21495 `\let\barrightharpoon\textbarrightharpoon`
21496 `\let\updownharpoons\textupdownharpoons`
21497 `\let\downupharpoons\textdownupharpoons`
21498 `\let\moo\textmoo`

21499 `\let\llparenthesis\textllparenthesis`
21500 `\let\rrparenthesis\textrrparenthesis`
21501 `\let\invdiameter\textinvdiameter`
21502 `\let\obar\textobar`
21503 `\let\obslash\textobslash`
21504 `\let\obot\textobot`
21505 `\let\NoChemicalCleaning\textNoChemicalCleaning`
21506 `\let\olessthan\textolessthan`
21507 `\let\ogreaterthan\textogreaterthan`
21508 `\let\boxslash\textboxslash`
21509 `\let\boxbslash\textboxbslash`
21510 `\let\boxast\textboxast`
21511 `\let\boxcircle\textboxcircle`
21512 `\let\boxbox\textboxbox`
21513 `\let\Valve\textValve`
21514 `\let\multimapboth\textmultimapboth`
21515 `\let\shuffle\textshuffle`
21516 `\let\uplus\textuplus`
21517 `\let\bigdoublewedge\textbigdoublewedge`
21518 `\let\bigdoublevee\textbigdoublevee`
21519 `\let\Join\textJoin`
21520 `\let\fatsemi\textfatsemi`
21521 `\let\circplus\textcircplus`
21522 `\let\minusdot\textminusdot`
21523 `\let\dotimes\textdotimes`
21524 `\let\dtimes\textdtimes`
21525 `\let\odiv\textodiv`
21526 `\let\invneg\textinvneg`
21527 `\let\sqdoublecap\textsqdoublecap`
21528 `\let\capdot\textcapdot`
21529 `\let\sqdoublecup\textsqdoublecup`
21530 `\let\doublewedge\textdoublewedge`
21531 `\let\doublevee\textdoublevee`
21532 `\let\doublebarwedge\textdoublebarwedge`
21533 `\let\veedoublebar\textveedoublebar`
21534 `\let\eqdot\texteqdot`
21535 `\let\neqdot\textneqdot`
21536 `\let\coloncolonequals\textcoloncolonequals`
21537 `\let\leqslant\textleqslant`
21538 `\let\lneqslant\textlneqslant`
21539 `\let\geqslant\textgeqslant`
21540 `\let\ngeqslant\textngeqslant`
21541 `\let\lessapprox\textlessapprox`
21542 `\let\nlessapprox\textnlessapprox`
21543 `\let\gtrapprox\textgtrapprox`
21544 `\let\ngtrapprox\textngtrapprox`
21545 `\let\lneq\textlneq`
21546 `\let\gneq\textgneq`
21547 `\let\lnapprox\textlnapprox`
21548 `\let\gnapprox\textgnapprox`
21549 `\let\lesseqgtr\textlesseqgtr`
21550 `\let\gtreqqlless\textgtreqqlless`
21551 `\let\eqslantless\texteqslantless`
21552 `\let\eqslantgtr\texteqslantgtr`
21553 `\let\leftslice\textleftslice`
21554 `\let\rightslice\textrightslice`
21555 `\let\preceq\textpreceq`

21556 \let\npreceq\textnpreceq
21557 \let\succeq\textsucceq
21558 \let\nsucceq\textnsucceq
21559 \let\precneq\textprecneq
21560 \let\succneq\textsuccneq
21561 \let\preceqq\textpreceqq
21562 \let\npreceqq\textnpreceqq
21563 \let\succeqq\textsucceqq
21564 \let\nsucceqq\textnsucceqq
21565 \let\precneqq\textprecneqq
21566 \let\succneqq\textsuccneqq
21567 \let\precapprox\textprecapprox
21568 \let\nprecapprox\textnprecapprox
21569 \let\succapprox\textsuccapprox
21570 \let\nsuccapprox\textnsuccapprox
21571 \let\precnapprox\textprecnapprox
21572 \let\succnapprox\textsuccnapprox
21573 \let\subseteqq\textsubseteqq
21574 \let\nsubseteqq\textnsubseteqq
21575 \let\supseteqq\textsupseteqq
21576 \let\nsupseteqq\textnsupseteqq
21577 \let\dashV\textdashV
21578 \let\ndashV\textndashV
21579 \let\Dashv\textDashv
21580 \let\nDashv\textnDashv
21581 \let\DashV\textDashV
21582 \let\nDashV\textnDashV
21583 \let\downmodels\textdownmodels
21584 \let\ndownmodels\textndownmodels
21585 \let\upmodels\textupmodels
21586 \let\nupmodels\textnupmodels
21587 \let\upspoon\textupspoon
21588 \let\interleave\textinterleave
21589 \let\slash\textslash
21590 \let\pentagon\textpentagon
21591 \let\varhexagon\textvarhexagon
21592 \let\jinferior\textjinferior
21593 \let\slashdiv\textslashdiv
21594 \let\fivedots\textfivedots
21595 \let\oo\textoo
21596 \let\GaPa\textGaPa
21597 \let\HaPa\textHaPa
21598 \let\ViPa\textViPa
21599 \let\AcPa\textAcPa
21600 \let\SePa\textSePa
21601 \let\ZwPa\textZwPa
21602 \let\fullnote\textfullnote
21603 \let\halfnote\texthalfnote
21604 \let\Vier\textVier
21605 \let\Acht\textAcht
21606 \let\Sech\textSech
21607 \let\Zwdr\textZwdr
21608 \let\Mundus\textMundus
21609 \let\Moon\textMoon
21610 \let\ManFace\textManFace
21611 \let\WomanFace\textWomanFace
21612 \let\Fax\textFax

21613 \let\Fire\textFire
21614 \let\Bicycle\textBicycle
21615 \let\Gentsroom\textGentsroom
21616 \let\Ladiesroom\textLadiesroom
21617 \let\ccnc\textccnc
21618 \let\ccsa\textccsa
21619 \let\Info\textInfo
21620 \let\CESign\textCESign
21621 \let\neg\textneg
21622 \let\times\texttimes
21623 \let\div\textdiv
21624 \let\pm\textpm
21625 \let\cdot\textcdot
21626 }% \psdmapshortnames
21627 \newcommand*{\psdaliasnames}{%
21628 \let\epsdice\HyPsd@DieFace
21629 \let\fcdice\HyPsd@DieFace
21630 \let\MoonPha\HyPsd@MoonPha
21631 \let\mathdollar\textdollar
21632 \let\EyesDollar\textdollar
21633 \let\binampersand\textampersand
21634 \let\with\textampersand
21635 \let\mathunderscore\textunderscore
21636 \let\textvertline\textbar
21637 \let\mathsterling\textsterling
21638 \let\pounds\textsterling
21639 \let\brokenvert\textbrokenbar
21640 \let\mathsection\textsection
21641 \let\S\textsection
21642 \let\mathparagraph\textparagraph
21643 \let\MultiplicationDot\textperiodcentered
21644 \let\Squaredot\textperiodcentered
21645 \let\vartimes\textmultiply
21646 \let\MVMultiplication\textmultiply
21647 \let\eth\dh
21648 \let\crossd\textcrd
21649 \let\textbard\textcrd
21650 \let\bard\textcrd
21651 \let\textcrh\texthbar
21652 \let\crossh\texthbar
21653 \let\planck\texthbar
21654 \let\eng\ng
21655 \let\engma\ng
21656 \let\crossb\textcrb
21657 \let\textbarb\textcrb
21658 \let\barb\textcrb
21659 \let\Florin\textflorin
21660 \let\hv\texthvlig
21661 \let\hausak\texthtk
21662 \let\crossnilambda\textcrlambda
21663 \let\barlambda\textcrlambda
21664 \let\lambdabar\textcrlambda
21665 \let\lambdash\textcrlambda
21666 \let\textnrleg\textPUnrleg
21667 \let\textpipevar\textpipe
21668 \let\textdoublepipevar\textdoublepipe
21669 \let\textdoublebarpipevar\textdoublebarpipe

21670 \let\textcrg\textgslash
21671 \let\textdblig\textPUdblig
21672 \let\textqplig\textPUqplig
21673 \let\textcentoldstyle\textslashc
21674 \let\textbarc\textslashc
21675 \let\inva\textturna
21676 \let\vara\textscripta
21677 \let\invscripta\textturnscripta
21678 \let\rotvara\textturnscripta
21679 \let\hookb\texthtb
21680 \let\hausab\texthtb
21681 \let\varopeno\textopeno
21682 \let\curlyc\textctc
21683 \let\taild\textrtaild
21684 \let\hookd\texthtd
21685 \let\hausad\texthtd
21686 \let\er\textrhookschwa
21687 \let\epsi\textniepsilon
21688 \let\hookrepsilon\textrhookrepsilon
21689 \let\closedrepsilon\textcloserepsilon
21690 \let\barj\textbardotlessj
21691 \let\hookg\texthtg
21692 \let\varg\textscriptg
21693 \let\vod\textipagamma
21694 \let\invh\textturnh
21695 \let\udesc\textturnh
21696 \let\hookh\texthth
21697 \let\voicedh\texthth
21698 \let\hookheng\texththeng
21699 \let\ibar\textbari
21700 \let\vari\textniota
21701 \let\tildel\textltilde
21702 \let\latfric\textbeltl
21703 \let\tail\textrtail
21704 \let\lz\textlyoghlig
21705 \let\invm\textturnm
21706 \let\rotm\textturnm
21707 \let\legm\textturnmleg
21708 \let\labdentalnas\textltailm
21709 \let\emgma\textltailm
21710 \let\nj\textltailn
21711 \let\enya\textltailn
21712 \let\tailn\textrtailn
21713 \let\closedniomega\textcloseomega
21714 \let\varomega\textcloseomega
21715 \let\invr\textturnr
21716 \let\rotr\textturnr
21717 \let\invlegr\textturnlonglegr
21718 \let\tailinvr\textturnrrtail
21719 \let\legr\textlonglegr
21720 \let\tailr\textrtailr
21721 \let\flapr\textfishhookr
21722 \let\flap\textfishhookr
21723 \let\tails\textrtails
21724 \let\curlyesh\textctesh
21725 \let\clickt\textturnt
21726 \let\tailt\textrtailt

21727 \let\ubar\textbaru
21728 \let\rotOmega\textniupsilon
21729 \let\invv\textturnv
21730 \let\pwedge\textturnv
21731 \let\invvw\textturnw
21732 \let\rotw\textturnw
21733 \let\invy\textturny
21734 \let\roty\textturny
21735 \let\tailz\textrtailz
21736 \let\curlyz\textctz
21737 \let\curlyyogh\textctyogh
21738 \let\ejective\textglotstop
21739 \let\glottal\textglotstop
21740 \let\reveject\textrevglotstop
21741 \let\clickc\textstretchc
21742 \let\textstretchcvar\textstretchc
21743 \let\clickb\textbullseye
21744 \let\textObullseye\textbullseye
21745 \let\textctjvar\textctj
21746 \let\textturnsck\textturnk
21747 \let\dz\textdzlig
21748 \let\tesh\textteshlig
21749 \let\digamma\textdigammagreek
21750 \let\hardsign\cyrhrdsn
21751 \let\softsign\cyrsoftsn
21752 \let\hebsin\hebshin
21753 \let\textsck\textPUscK
21754 \let\textscm\textPUscm
21755 \let\textscp\textPUscp
21756 \let\textrevscr\textPUrevscr
21757 \let\textrhoKa\textPURhooka
21758 \let\textrhoKe\textPURhooke
21759 \let\textrhoKepsilon\textPURhookepsilon
21760 \let\textrhoKopeno\textPURhookopeno
21761 \let\textdoublevertline\textbardbl
21762 \let\dag\textdagger
21763 \let\ddagger\textdaggerdbl
21764 \let\ddag\textdaggerdbl
21765 \let\mathellipsis\textellipsis
21766 \let\EurDig\texteuro
21767 \let\EURdig\texteuro
21768 \let\EurHv\texteuro
21769 \let\EURhv\texteuro
21770 \let\EurCr\texteuro
21771 \let\EURcr\texteuro
21772 \let\EurTm\texteuro
21773 \let\EURtm\texteuro
21774 \let\Eur\texteuro
21775 \let\Denarius\textDeleatur
21776 \let\agemO\textmho
21777 \let\EstimatedSign\textestimated
21778 \let\Ecommerce\textestimated
21779 \let\bindnasrepma\textinvamp
21780 \let\parr\textinvamp
21781 \let\MVRightArrow\textrightarrow
21782 \let\MVRightarrow\textrightarrow
21783 \let\MVArrowDown\textdownarrow

21784 $\text{\let\Force\textdownarrow}$
21785 $\text{\let\textglobrise\textnearrow}$
21786 $\text{\let\textglobfall\textsearrow}$
21787 $\text{\let\Lightning\textlightning}$
21788 $\text{\let\Conclusion\textrightarrow}$
21789 $\text{\let\dashedleftarrow\textdashleftarrow}$
21790 $\text{\let\dashedrightarrow\textdashrightarrow}$
21791 $\text{\let\varnothing\textemptyset}$
21792 \let\owns\textni
21793 $\text{\let\notni\textnotowner}$
21794 $\text{\let\varprop\textpropto}$
21795 $\text{\let\varangle\text{sphericalangle}}$
21796 $\text{\let\AngleSign\text{sphericalangle}}$
21797 $\text{\let\AngleSign\text{sphericalangle}}$
21798 $\text{\let\notdivides\textnmid}$
21799 $\text{\let\varowedge\texttowedge}$
21800 $\text{\let\varovee\texttovee}$
21801 $\text{\let\varint\textint}$
21802 $\text{\let\varoint\textoint}$
21803 $\text{\let\downtherefore\textbecause}$
21804 $\text{\let\textdotdiv\textdotminus}$
21805 \let\AC\textsim
21806 $\text{\let\wreath\textwr}$
21807 $\text{\let\nthickapprox\textnapprox}$
21808 $\text{\let\VHF\texttriplesim}$
21809 $\text{\let\notasymp\textnasymp}$
21810 $\text{\let\Doteq\textdoteqdot}$
21811 $\text{\let\corresponds\texthateq}$
21812 $\text{\let\Corresponds\texthateq}$
21813 $\text{\let\nequal\textneq}$
21814 $\text{\let\Congruent\textequiv}$
21815 $\text{\let\NotCongruent\textnequiv}$
21816 $\text{\let\notequiv\textnequiv}$
21817 $\text{\let\LessOrEqual\textleq}$
21818 $\text{\let\LargerOrEqual\textgeq}$
21819 $\text{\let\apprle\textlesssim}$
21820 $\text{\let\apprge\textgtrsim}$
21821 $\text{\let\varoplus\texttoplus}$
21822 $\text{\let\varominus\texttominus}$
21823 $\text{\let\varotimes\texttotimes}$
21824 $\text{\let\varoslash\textoslash}$
21825 $\text{\let\varodot\textodot}$
21826 $\text{\let\ocirc\textcircledcirc}$
21827 $\text{\let\varocircle\textcircledcirc}$
21828 $\text{\let\varoast\textcircledast}$
21829 $\text{\let\oasterisk\textcircledast}$
21830 $\text{\let\rightvdash\textvdash}$
21831 $\text{\let\leftvdash\textdashv}$
21832 $\text{\let\nleftvdash\textndashv}$
21833 $\text{\let\downvdash\texttop}$
21834 $\text{\let\upvdash\textbot}$
21835 $\text{\let\nperp\textnupvdash}$
21836 $\text{\let\models\textvDash}$
21837 $\text{\let\rightmodels\textvDash}$
21838 $\text{\let\rightVdash\textVdash}$
21839 $\text{\let\rightModels\textVDash}$
21840 $\text{\let\nrightvdash\textnvdash}$

21841 `\let\nrightmodels\textnvDash`
21842 `\let\nmodels\textnvDash`
21843 `\let\nrightVdash\textnVdash`
21844 `\let\nrightModels\textnVDash`
21845 `\let\lessclosed\textlhd`
21846 `\let\gtrclosed\textrhd`
21847 `\let\leqclosed\textunlhd`
21848 `\let\trianglelefteq\textunlhd`
21849 `\let\geqclosed\textunrhd`
21850 `\let\trianglerighteq\textunrhd`
21851 `\let\Bowtie\textbowtie`
21852 `\let\varcurlyvee\textcurlyvee`
21853 `\let\varcurlywedge\textcurlywedge`
21854 `\let\doublecap\textCap`
21855 `\let\doublecup\textCup`
21856 `\let\varsqsubsetneq\textsqsubsetneq`
21857 `\let\varsqsupsetneq\textsqsupsetneq`
21858 `\let\nlessclosed\textntriangleleft`
21859 `\let\ngtrclosed\textntriangleright`
21860 `\let\Clocklogo\textclock`
21861 `\let\ClockLogo\textclock`
21862 `\let\baro\textstmaryrdbaro`
21863 `\let\varparallelinv\textbbslash`
21864 `\let\CleaningA\textCircledA`
21865 `\let\Kutline\textCuttingLine`
21866 `\let\CutLine\textCuttingLine`
21867 `\let\Cutline\textCuttingLine`
21868 `\let\MoveUp\textUParrow`
21869 `\let\APLup\textbigtriangleup`
21870 `\let\Bleech\textbigtriangleup`
21871 `\let\MoveDown\textDOWNarrow`
21872 `\let\APLdown\textbigtriangledown`
21873 `\let\Diamond\textdiamond`
21874 `\let\varbigcirc\textbigcircle`
21875 `\let\Telefon\textPhone`
21876 `\let\Box\textboxempty`
21877 `\let\CheckedBox\textCheckedbox`
21878 `\let\XBox\textCrossedbox`
21879 `\let\CrossedBox\textCrossedbox`
21880 `\let\rightpointleft\textHandLeft`
21881 `\let\leftpointright\textHandRight`
21882 `\let\PointingHand\textHandRight`
21883 `\let\Pointinghand\textHandRight`
21884 `\let\Radiation\textRadioactivity`
21885 `\let\Yinyang\textYinYang`
21886 `\let\YingYang\textYinYang`
21887 `\let\Yingyang\textYinYang`
21888 `\let\Frowny\textfrownie`
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21893 `\let\female\textPUfemale`
21894 `\let\venus\textPUfemale`
21895 `\let\Venus\textPUfemale`
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21898 \let\mars\textmale
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21900 \let\Male\textmale
21901 \let\Jupiter\textjupiter
21902 \let\Saturn\textsaturn
21903 \let\Uranus\texturanus
21904 \let\Neptune\textneptune
21905 \let\Pluto\textpluto
21906 \let\Aries\textaries
21907 \let\Taurus\texttaurus
21908 \let\Gemini\textgemini
21909 \let\Cancer\textcancer
21910 \let\Leo\textleo
21911 \let\Virgo\textvirgo
21912 \let\Libra\textlibra
21913 \let\Scorpio\textscorpio
21914 \let\Sagittarius\textsagittarius
21915 \let\Capricorn\textcapricornus
21916 \let\Aquarius\textaquarius
21917 \let\Pisces\textpisces
21918 \let\spadesuit\textspadesuitblack
21919 \let\Heart\textheartsuitwhite
21920 \let\heartsuit\textheartsuitwhite
21921 \let\diamondsuit\textdiamondsuitwhite
21922 \let\clubsuit\textclubsuitblack
21923 \let\eighthnote\textmusicalnote
21924 \let\Recycling\textrecycle
21925 \let\VarFlag\textFlag
21926 \let\textxswup\textdsmilitary
21927 \let\textuncrfemale\textPUuncrfemale
21928 \let\Football\textSoccerBall
21929 \let\CutLeft\textScissorRightBrokenBottom
21930 \let\Cutright\textScissorRightBrokenBottom
21931 \let\RightScissors\textScissorRight
21932 \let\Leftscissors\textScissorRight
21933 \let\Letter\textEnvelope
21934 \let\Writinghand\textWritingHand
21935 \let\checkmark\textCheckmark
21936 \let\ davidstar\textDavidStar
21937 \let\llbracket\textlbrackdbl
21938 \let\rrbracket\textrrbrackdbl
21939 \let\RightTorque\textlcurvearrowdown
21940 \let\Righttorque\textlcurvearrowdown
21941 \let\LeftTorque\textrcurvearrowdown
21942 \let\Lefttorque\textrcurvearrowdown
21943 \let\textvarobar\textobar
21944 \let\circledbslash\textobslash
21945 \let\obackslash\textobslash
21946 \let\varobslash\textobslash
21947 \let\odplus\textobot
21948 \let\varolessthan\textolessthan
21949 \let\varogreaterthan\textogreaterthan
21950 \let\divdot\textminusdot
21951 \let\doublesqcap\textsqdoublingcap
21952 \let\doublesqcup\textsqdoublingcup
21953 \let\merge\textdoublevee
21954 \let\leftVdash\textdashV

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21957 \let\nleftmodels\textnDashv
21958 \let\leftModels\textDashV
21959 \let\nleftModels\textnDashV
21960 \let\varparallel\textsslash
21961 \let\textheng\textPUheng
21962 \let\textlhookfour\textPUlhookfour
21963 \let\textscf\textPUscf
21964 \let\textaoilig\textPUaoilig
21965 \let\Ganz\textfullnote
21966 \let\Halb\texthalfnote
21967 \let\Womanface\textWomanFace
21968 \let\Faxmachine\textFax
21969 \let\CEsign\textCESign
21970 }% \psdaliasnames
21971 </psdextra>
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21973 \typeout{}
21974 \begin{document}
21975 \end{document}
21976 </check>
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