WTRef Package (v0.3.2)

Takuto ASAKURA (wtsnjp)

January 17, 2017

Abstract

WT Series collects macros which author frequently use to create LaTeX documents. WTRef package is a part of this WT Series that extend LaTeX original cross-reference system. It makes enable to divide namespace and scope, further arrows users to customise reference formats. LaTeX 2ε on any kind of TeX engine is supported, and xkeyval package is required.

1 System Requirements

System requirements of WTRef are shown bellow:

- TeX engine: any engine
- TeX format: LaTeX 2ε
- Document class: any class
- Required package: xkeyval

2 Loading the WTRef Package

To use WTRef package, load `wtref.sty` file with `\usepackage` command in preamble. No package option is available.

```
\usepackage{wtref}
```

3 Cross-Reference Commands

3.1 Definition of New Cross-Reference Commands

`\newref` command creates a set of cross-reference commands. This command can only be used in preamble.

```
\newref[⟨options⟩]{⟨ref types⟩}
```

⟨*ref types*⟩ are comma-separated list of ⟨*ref type*⟩. All characters of ⟨*ref type*⟩ must be able to use in control sequence (only ordinary alphabet is recommended) and can not be empty. Notice that leading and trailing spaces and successive spaces arround commas are ignored.

`\newref` command defines two commands: `\`⟨*ref type*⟩`label`, `\`⟨*ref type*⟩`ref`. In this document, the formar are called **label commands** and the latter are called **reference commands**. `\newref` command overwrites existing commands, so ⟨*ref name*⟩ should be decided carefully.

In ⟨*options*⟩, you can set following parameters by key-value list:

`namespace=`⟨*string*⟩ Set ⟨*namespace*⟩ to "⟨*string*⟩:". If neither `namespace` nor `nonamespace` are specified, or in case ⟨*string*⟩ of `namespace` is empty, ⟨*namespace*⟩ is set to "⟨*ref type*⟩:".

`nonamespace` Set ⟨*namespace*⟩ to empty. That is to say, invalidation of function that dividing namespace. It should be noted that you can specify value for `nonamespace` and that will not make any errors, but the value will simply be ignored.

`scope=`⟨*counter*⟩ Specify counter which used as scope. You can specify any LaTeX counter to ⟨*counter*⟩ but one which has uniqueness in a document is desirable. This key sets ⟨*scope*⟩ to "`\the`⟨*counter*⟩:".

These optional settings apply to all cross-referece commands relate to ⟨*ref type*⟩ in specified ⟨*ref types*⟩.

Identically, if any keys do not specified in ⟨*options*⟩, ⟨*namespace*⟩ is set to "⟨*ref type*⟩" and ⟨*scope*⟩ is set to empty. In other words, the function of namespace is active and function of scope is inactive as default.

3.2 Label Commands

3.2.1 Function and Usage

Label commands are used to create new labels. Usage of those are same to `\label` command of standard LaTeX. Usage of `\exlabel` is shown bellow as an example:

```
\exlabel{⟨label⟩}
```

3.2.2 Internal Processing

Label commands finaly are expanded to following format:

```
\label{⟨namespace⟩⟨scope⟩⟨label⟩}
```

3.3 Reference Commands

Reference commands print contents of counters which labeled by label commands in specified formats. Usage of `\exref` is shown bellow as an example:

```
\exref[⟨the scope⟩]{⟨label list⟩}
```

The option argument ⟨*the scope*⟩ can be ommited when refering label exists in the same scope. You can refer outside of scope by writing down the output of proper `\the`⟨*counter*⟩. Notice that if the function of scope is inactive (i.e. in case `scope` key does not specified in ⟨*options*⟩ of `\newref`), this argument is always unnecessary, and in other words it will be ignored all the time.

In argument ⟨*label list*⟩, plural labels can be written in comma-separated. Note that leading and trailing spaces and successive spaces arround commas are ignored. If actually plural labels are filled in, pertinent counters should be printed out in comma-separate form in default. You can change this format flexibly with `\setrefstyle` command.

4 Setting Referece Style

The output format of reference commands can be customised with `\setrefstyle` command. The syntax of `\setrefstyle` is shown bellow:

`\setrefstyle{`⟨*ref types*⟩`}{`⟨*options*⟩`}`

The `\setrefstyle` command can be used any place of LaTeX document (not only preamble), and change reference format locally.

In ⟨*options*⟩, you can set following parameters by key-value list:

`refcmd=`⟨*command*⟩ Specified ⟨*command*⟩ repeated for the number of labels which filled in ⟨*label list*⟩ time. String `#1` in ⟨*command*⟩ may be replaced into appropriate label name. The default value is `\ref{#1}`.

`sep=`⟨*command*⟩ Specified ⟨*command*⟩ is output as a separater of each `refcmd` when more than three labels filled in ⟨*label list*⟩. Notice that last one separater is given by `last sep`. The default value is `{,\space}`.

`last sep`(`=`⟨*command*⟩) Specified ⟨*command*⟩ is output as a last separater when plura labels filled in ⟨*label list*⟩. Behind the `=` can be ommited, and in that case `last sep` is set to identical value of `sep` (and this is the default).

`prefix=`⟨*command*⟩ Specified ⟨*command*⟩ put out first when referece command used. The default value is `{}`.

`suffix=`⟨*command*⟩ Specified ⟨*command*⟩ put out last when referece command used. The default value is `{}`.

Parameters which do not set explicitly will not be changed.