The **gettitlestring** package

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Abstract

The \LaTeX{} package addresses packages that are dealing with references to titles (\section, \caption, …). The package tries to remove \label and other commands from title strings.

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∗Please report any issues at https://github.com/ho-tex/oberdiek/issues
1 Documentation

1.1 Macros

\GetTitleStringSetup {\langle key value list\rangle}

The options are given as comma separated key value pairs. See section 1.2.

\GetTitleString \langle{text}\rangle
\GetTitleStringExpand \langle{text}\rangle
\GetTitleStringNonExpand \langle{text}\rangle

Macro \GetTitleString tries to remove unwanted stuff from \langle{text}\rangle the result is stored in Macro \GetTitleStringResult. Two methods are available:

\GetTitleStringExpand: The \langle{text}\rangle is expanded in a context where the unwanted macros are redefined to remove themselves. This is the method used in packages titleref [2], zref-titleref [3] or class memoir [1]. \protect is supported, but fragile material might break.

\GetTitleStringNonExpand: The \langle{text}\rangle is not expanded. Thus the removal of unwanted material is more difficult. It is especially removed at the start of the \langle{text}\rangle and spaces are removed from the end. Currently only \label is removed in the whole string, if it is not hidden inside curly braces or part of macro definitions. Thus the removal of unwanted stuff might not be complete, but fragile material will not break. (But the result string can break at a later time, of course).

Option expand controls which method is used by macro \GetTitleString.

\GetTitleStringDisableCommands \langle{code}\rangle

The \langle{code}\rangle is called right before the text is expanded in \GetTitleStringExpand. Additional definitions can be given for macros that should be removed. Keep in mind that expansion means that the definitions must work in expandable context. Macros like \@ifstar or \@ifnextchar or optional arguments will not work. The macro names in \langle{code}\rangle may contain the at sign @, it has catcode 11 (letter).

1.2 Options

expand: Boolean option, takes values true or false. No value means true. The option specifies the method to remove unwanted stuff from the title string, see below.

Options can be set at the following places:

- \usepackage
- Configuration file gettitlestring.cfg
- \GetTitleStringSetup

2 Implementation

\begin{verbatim}
\textcopyright{package}
\end{verbatim}

Reload check, especially if the package is not used with \LaTeX.\textcopyright{package}

\begin{verbatim}
\begingroup\catcode61\catcode48\catcode32=10\relax%
\end{verbatim}

\begin{verbatim}
\catcode13=5 % ^^M
\end{verbatim}
\ProvidesPackage{gettitlestring} %
[2016/05/16 v1.5 Cleanup title references (HO)]%
\begingroup\catcode61\catcode48\catcode32=10\relax%
\catcode13=13 %
\catcode123=1 % {
\catcode125=2 % }
\catcode64=11 % @
\def\x{\endgroup
\expandafter\edef\csname GTS@AtEnd\endcsname{%
\endlinechar=\the\endlinechar\relax
\catcode13=\the\catcode13\relax
\catcode32=\the\catcode32\relax
\catcode35=\the\catcode35\relax
\catcode61=\the\catcode61\relax
\catcode64=\the\catcode64\relax
\catcode123=\the\catcode123\relax
\catcode125=\the\catcode125\relax
}%
\x\endgroup
\expandafter\edef\csname GTS@AtEnd\endcsname{%
\endlinechar=\the\endlinechar\relax
\catcode13=\the\catcode13\relax
\catcode32=\the\catcode32\relax
\catcode35=\the\catcode35\relax
\catcode61=\the\catcode61\relax
\catcode64=\the\catcode64\relax
\catcode123=\the\catcode123\relax
\catcode125=\the\catcode125\relax
}%
\x\catcode61\catcode48\catcode32=10\relax%
\catcode13=5 % ^^M
\endlinechar=13 %
\catcode35=6 % #
\catcode64=11 % @
\catcode123=1 % {
\catcode125=2 % }
\def\TMP@EnsureCode#1#2{%
\edef\GTS@AtEnd{\GTS@AtEnd
\catcode#1=\the\catcode#1\relax
\catcode#1=#2\relax
}\GTS@AtEnd
\catcode#1=\the\catcode#1\relax
\catcode#1=\the\catcode#1\relax
}{%*
\TMP@EnsureCode{42}{12}% *
\TMP@EnsureCode{44}{12}% ,
\TMP@EnsureCode{45}{12}% -
\TMP@EnsureCode{46}{12}% .
\TMP@EnsureCode{47}{12}% /
\TMP@EnsureCode{91}{12}% [
\TMP@EnsureCode{93}{12}% ]
\edef\GTS@AtEnd{\GTS@AtEnd\noexpand\endinput}
\RequirePackage{kvoptions}[2009/07/17]
\SetupKeyvalOptions{%
family=gettitlestring,%
prefix=GTS@%
}
\newcommand*{\GetTitleStringSetup}{%
\setkeys{gettitlestring}%
}
\DeclareBoolOption{expand}
\InputIfFileExists{gettitlestring.cfg}{}{}%
\ProcessKeyvalOptions*\relax

2.1 Options
\GetTitleString
\newcommand*{\GetTitleString}{%\ifGTS@expand

2.2.1 Expand method

\GTS@DisablePredefinedCmds

\GTS@DisableHook

\GTS@DisableCommands
\long\def\GTS@DisableCommands#1{% 
\toks0=\expandafter{\GTS@DisableHook}% 
\toks2=(#1)% 
\xdef\GTS@GlobalString{\the\toks0 \the\toks2}% 
\endgroup 
\let\GTS@DisableHook\GTS@GlobalString 
}%

\long\def\GTS@RemoveLeft{% 
\toks0=\expandafter\expandafter\expandafter{\GTS@Car\GTS@GlobalString{}{}{}}\GTS@Nil 
}% 
\edef\GTS@Token{\the\toks0}% 
\GTS@PredefinedLeftCmds 
\expandafter\futurelet\expandafter\GTS@Token 
\expandafter\GTS@TestLeftSpace\GTS@GlobalString\GTS@Nil 
\GTS@End 
}%

\long\def\GTS@End{} 
\long\def\GTS@TestLeft#1#2{% 
\def\GTS@temp{#1}% 
\ifx\GTS@temp\GTS@Token 
\toks0=\expandafter\expandafter\expandafter{\GTS@GlobalString{\the\toks0}}\GTS@Nil 
\fi 
}% 
\long\def\GTS@TestLeftEnd#1\GTS@End{% 
\xdef\GTS@GlobalString{\the\toks0}% 
\GTS@RemoveLeft 
}% 
\long\def\GTS@Car#1#2\GTS@Nil{#1} 
\long\def\GTS@Cdr#1#2\GTS@Nil{#2} 
\long\def\GTS@CdrTwo#1#2#3\GTS@Nil{#3} 
\long\def\GTS@CdrThree#1#2#3#4\GTS@Nil{#4} 
\long\def\GTS@CdrFour#1#2#3#4#5\GTS@Nil{#5} 
\long\def\GTS@TestLeftSpace#1\GTS@Nil{% 
\ifx\GTS@Token@\@sptoken 
\toks0=\expandafter{\romannumeral-0\GTS@GlobalString} 
\fi 
}% 
\GTS@PredefinedLeftCmds 
\long\def\GTS@PredefinedLeftCmds{% 
\GTS@TestLeft\Hy@phantomsection\GTS@Cdr 
\GTS@TestLeft\Hy@SectionAnchor\GTS@Cdr 
\GTS@TestLeft\Hy@SectionAnchorHref\GTS@CdrTwo 
\GTS@TestLeft\label\GTS@CdrTwo 
\GTS@TestLeft\zlabel\GTS@CdrTwo 
\GTS@TestLeft\index\GTS@CdrTwo 
\GTS@TestLeft\glossary\GTS@CdrTwo 
\GTS@TestLeft\markboth\GTS@CdrThree 
\GTS@TestLeft\@mkboth\GTS@CdrThree 
\GTS@TestLeft\addcontentsline\GTS@CdrFour 
\GTS@TestLeft\enit@format\GTS@Cdr % package enumitem 
}%
\def\GTS@RemoveRight{\%}
\toks@{}\%
\expandafter\GTS@TestRightLabel\GTS@GlobalString
\label{}\GTS@Nil\@nil
\GTS@RemoveRightSpace
}\%
\begingroup
\def\GTS@temp#1\{endgroup
\def\GTS@RemoveRightSpace{\%
\expandafter\GTS@TestRightSpace\GTS@GlobalString
\GTS@Nil#1\GTS@Nil\@nil\%
\}%
\GTS@temp{ }
\def\GTS@TestRightSpace#1 \GTS@Nil#2\@nil{\%
\ifx\relax#2\relax\else\gdef\GTS@GlobalString{#1}\%
\expandafter\GTS@RemoveRightSpace\fi
\}%
\def\GTS@TestRightLabel#1\label#2#3\GTS@Nil#4\@nil{\%
\def\GTS@temp{#3}\%
\ifx\GTS@temp\@empty\%
\expandafter\gdef\expandafter\GTS@GlobalString\expandafter{\the\toks@#1}\%
\expandafter\@gobble\else\%
\expandafter\@firstofone\fi
{\toks@\expandafter{\the\toks@#1}\GTS@TestRightLabel#3\GTS@Nil\@nil
}\%
\} \GTS@AtEnd%
\}
\GTS@AtEnd%

\langle/\package\rangle

3 Test

3.1 Catcode checks for loading

\"test1\"
\catcode\'{=1%
\catcode\'}=2%
\catcode\#=6%
\catcode\@=11%
\expandafter\ifx\csname count@\endcsname\relax% 
\countdef\count@=255%
\fi
\expandafter\ifx\csname \@gobble\endcsname\relax%
\long\def\@gobble#1{}%
\fi
\expandafter\ifx\csname \@firstofone\endcsname\relax%
\long\def\@firstofone#1{#1}%
\fi
\expandafter\ifx\csname loop\endcsname\relax%
\expandafter\@firstofone
\else%
\expandafter\ifx\csname \the\toks@\#1\endcsname\relax%
\GTS@TestRightLabel\#3\GTS@Nil\@nil%
\}
\}
\GTS@AtEnd%
\}
\expandafter\@gobble
\fi
\def\loop#1\repeat{%
  \def\body{#1}%
  \iterate
}
\def\iterate{%
  \body
  \let\next\iterate
  \else
  \let\next\relax
  \fi
  \next
}
\let\repeat=\fi
\def\RestoreCatcodes{}%\count@=0 %
\loop
  \edef\RestoreCatcodes{\RestoreCatcodes\catcode\the\count@=\the\catcode\count@\relax}
\ifnum\count@<255 %
  \advance\count@ 1 %
\repeat
\def\RangeCatcodeInvalid#1#2{%
  \count@=#1\relax
  \loop
    \catcode\count@=15 %
    \ifnum\count@<#2\relax
    \advance\count@ 1 %
  \repeat
}
\def\RangeCatcodeCheck#1#2#3{%
  \count@=#1\relax
  \loop
    \ifnum#3=\catcode\count@
    \else
      \errmessage{Character \the\count@ with wrong catcode \the\catcode\count@ instead of \number#3%}
    \fi
    \ifnum\count@<#2\relax
    \advance\count@ 1 %
  \repeat
}
\def\space{ }
\expandafter\ifx\csname LoadCommand\endcsname\relax
\def\LoadCommand{\input gettitlestring.sty}\relax%
\fi
\def\Test{%
  \RangeCatcodeInvalid{0}\{47}\%
  \RangeCatcodeInvalid{58}\{64}\%
  \RangeCatcodeInvalid{91}\{96}\%
  \RangeCatcodeInvalid{123}\{255}\%
  \catcode`\@=12 %
  \catcode`\\=0 %
3.2 Test of non-expand method

\NeedsTeXFormat{LaTeX2e}
\documentclass{minimal}
\usepackage{gettitlestring}[2016/05/16]
\usepackage{qstest}
\IncludeTests{*}
\LogTests{log}{*}{*}
\begin{document}
\begin{qstest}{non-expand}{non-expand}
\def\test#1#2{\sbox0{\GetTitleString{#1}\Expect{#2}*{\GetTitleStringResult}}\Expect{0.0pt}*{\the\wd0}}
\test{}{}
\test{ }{}
\test{ x }{x}
\test{ x y }{x y}
\test{ \relax}{\relax}
\test{ \label{f}a}{a}
\test{ \label{f}a}{a}
\test{ a \label{f} }{a}
\test{ a \label{f} }{a}
\test{ a \label{f} }{a}
\test{ a \label{f} }{a}
\test{ a \label{f} b \label{g}}{ab}
\test{ a \label{f} b \label{g} }{a b}
\test{ a \label{f} b \label{g} }{a b}
\end{qstest}
\end{document}
4 Installation

4.1 Download

Package. This package is available on CTAN\(^1\):


Bundle. All the packages of the bundle ‘oberdiek’ are also available in a TDS compliant ZIP archive. There the packages are already unpacked and the documentation files are generated. The files and directories obey the TDS standard.

CTAN:install/macros/latex/contrib/oberdiek.tds.zip

TDS refers to the standard “A Directory Structure for \TeX Files” (CTAN:tds/tds.pdf). Directories with `texmf` in their name are usually organized this way.

4.2 Bundle installation

Unpacking. Unpack the oberdiek.tds.zip in the TDS tree (also known as `texmf` tree) of your choice. Example (Linux):

```
unzip oberdiek.tds.zip -d ~/texmf
```

Script installation. Check the directory TDS:scripts/oberdiek/ for scripts that need further installation steps. Package `attachfile2` comes with the Perl script `pdfatfi.pl` that should be installed in such a way that it can be called as `pdfatfi`. Example (Linux):

```
chmod +x scripts/oberdiek/pdfatfi.pl
cp scripts/oberdiek/pdfatfi.pl /usr/local/bin/
```

4.3 Package installation

Unpacking. The `.dtx` file is a self-extracting docstrip archive. The files are extracted by running the `.dtx` through plain \TeX:

```
tex gettitlestring.dtx
```

TDS. Now the different files must be moved into the different directories in your installation TDS tree (also known as `texmf` tree):

```
gettitlestring.sty → tex/generic/oberdiek/gettitlestring.sty
gettitlestring.pdf → doc/latex/oberdiek/gettitlestring.pdf
test/gettitlestring-test1.tex → doc/latex/oberdiek/test/gettitlestring-test1.tex
test/gettitlestring-test2.tex → doc/latex/oberdiek/test/gettitlestring-test2.tex
gettitlestring.dtx → source/latex/oberdiek/gettitlestring.dtx
```

If you have a docstrip.cfg that configures and enables docstrip’s TDS installing feature, then some files can already be in the right place, see the documentation of docstrip.

4.4 Refresh file name databases

If your TeX distribution (te\TeX, m\TeX, …) relies on file name databases, you must refresh these. For example, te\TeX users run `texhash` or `mktexlar`.

\(^1\)http://ctan.org/pkg/gettitlestring
4.5 Some details for the interested

Unpacking with \LaTeX. The .dtx chooses its action depending on the format:

- **plain \TeX**: Run docstrip and extract the files.
- **\LaTeX**: Generate the documentation.

If you insist on using \LaTeX for docstrip (really, docstrip does not need \LaTeX), then inform the autodetect routine about your intention:

```
latex \let\install=y\input{gettitlestring.dtx}
```

Do not forget to quote the argument according to the demands of your shell.

Generating the documentation. You can use both the .dtx or the .drv to generate the documentation. The process can be configured by the configuration file ltxdoc.cfg. For instance, put this line into this file, if you want to have A4 as paper format:

```
\PassOptionsToClass{a4paper}{article}
```

An example follows how to generate the documentation with pdf\LaTeX:

```
pdflatex gettitlestring.dtx
makeindex -s gind.ist gettitlestring.idx
pdflatex gettitlestring.dtx
makeindex -s gind.ist gettitlestring.idx
pdflatex gettitlestring.dtx
```

5 Catalogue

The following XML file can be used as source for the \TeX Catalogue. The elements `caption` and `description` are imported from the original XML file from the Catalogue. The name of the XML file in the Catalogue is `gettitlestring.xml`.

```
<triple cataloguesystem='*catalogue'><triple version='1.0' encoding='us-ascii'/>
<triple DOCTYPE entry SYSTEM 'catalogue.dtd'/>
<triple entry datestamp='$Date$' modifier='$Author$' id='gettitlestring'/>
<triple name='gettitlestring'/>
<triple caption='Clean up title references.'/>
<triple authorref id='auth:oberdiek'/>
<triple copyright owner='Heiko Oberdiek' year='2009,2010'/>
<triple license type='lppl1.3'/>
<triple version number='1.5'/>
<triple description>
<triple Cleans up the title string (removing \texttt{\label} commands) for packages (such as \xmlref{\nameref}{nameref}\nameref{\xref}) that typeset such strings.>
<triple paragraph> The package is part of the \xmlref{\nameref}{oberdiek}\nameref{\xref} bundle.>
<triple documentation details='Package documentation' href='ctan:/macros/latex/contrib/oberdiek/gettitlestring.pdf'/>
<triple ctan file='true' path='\ctanfile{\macro\latex\contrib\oberdiek\gettitlestring.dtx}'>
<triple miktex location='oberdiek'/>
<triple texlive location='oberdiek'/>
<triple install path='\miktex\macro\latex\contrib\oberdiek\oberdiek.tds.zip'/>
<triple </entry>/
<triple </triple cataloguesystem='*catalogue'/>
```

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6 References


7 History

[2009/12/08 v1.0]
- The first version.

[2009/12/12 v1.1]
- Short info shortened.

[2009/12/13 v1.2]
- Forgotten third argument for \InputIfFileExists added.

[2009/12/18 v1.3]
- \Hy@SectionAnchorHref added for filtering (hyperref 2009/12/18 v6.79w).

[2010/12/03 v1.4]
- Support of package enumitem: removing \enit@format from title string (problem report by GL).

[2016/05/16 v1.5]
- Documentation updates.

8 Index

Numbers written in italic refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; plain numbers refer to the code lines where the entry is used.

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