The **gettitlestring** package

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2009/12/18 v1.3

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.

Contents

1 Documentation

1.1 Macros

\GetTitleStringSetup {⟨*key value list*⟩}

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

> \GetTitleString {⟨text⟩}
> \GetTitleStringExpand {⟨text⟩}
> \GetTitleStringNonExpand {⟨text⟩}

Macro \GetTitleString tries to remove unwanted stuff from ⟨text⟩ the result is stored in Macro \GetTitleStringResult. Two methods are available:

\GetTitleStringExpand: The ⟨text⟩ 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 ⟨text⟩ is not expanded. Thus the removal of unwanted material is more difficult. It is especially removed at the start of the ⟨text⟩ 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 {⟨code⟩}

The ⟨code⟩ 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 ⟨code⟩ 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

1 ⟨*package⟩

Reload check, especially if the package is not used with LaTeX.

```
2 \begingroup
3   \catcode44 12 % ,
4   \catcode45 12 % -
5   \catcode46 12 % .
6   \catcode58 12 % :
7   \catcode64 11 % @
8   \catcode123 1 % {
9   \catcode125 2 % }
10  \expandafter\let\expandafter\x\csname ver@gettitlestring.sty\endcsname
11  \ifx\x\relax % plain-TeX, first loading
12  \else
13    \def\empty{}%
```

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```
14    \ifx\x\empty % LaTeX, first loading,
15      % variable is initialized, but \ProvidesPackage not yet seen
16    \else
17      \catcode35 6 % #
18      \expandafter\ifx\csname PackageInfo\endcsname\relax
19        \def\x#1#2{%
20          \immediate\write-1{Package #1 Info: #2.}%
21        }%
22      \else
23        \def\x#1#2{\PackageInfo{#1}{#2, stopped}}%
24      \fi
25      \x{gettitlestring}{The package is already loaded}%
26      \aftergroup\endinput
27    \fi
28  \fi
29 \endgroup
```
Package identification:
```
30 \begingroup
31  \catcode35 6 % #
32  \catcode40 12 % (
33  \catcode41 12 % )
34  \catcode44 12 % ,
35  \catcode45 12 % -
36  \catcode46 12 % .
37  \catcode47 12 % /
38  \catcode58 12 % :
39  \catcode64 11 % @
40  \catcode91 12 % [
41  \catcode93 12 % ]
42  \catcode123 1 % {
43  \catcode125 2 % }
44  \expandafter\ifx\csname ProvidesPackage\endcsname\relax
45    \def\x#1#2#3[#4]{\endgroup
46      \immediate\write-1{Package: #3 #4}%
47      \xdef#1{#4}%
48    }%
49  \else
50    \def\x#1#2[#3]{\endgroup
51      #2[{#3}]%
52      \ifx#1\@undefined
53        \xdef#1{#3}%
54      \fi
55      \ifx#1\relax
56        \xdef#1{#3}%
57      \fi
58    }%
59  \fi
60 \expandafter\x\csname ver@gettitlestring.sty\endcsname
61 \ProvidesPackage{gettitlestring}%
62   [2009/12/18 v1.3 Cleanup title references (HO)]
63 \begingroup
64  \catcode123 1 % {
65  \catcode125 2 % }
66  \def\x{\endgroup
67    \expandafter\edef\csname GTS@AtEnd\endcsname{%
68      \catcode35 \the\catcode35\relax
69      \catcode64 \the\catcode64\relax
70      \catcode123 \the\catcode123\relax
71      \catcode125 \the\catcode125\relax
72    }%
73  }%
74 \x
```

```
75 \catcode35 6 % #
76 \catcode64 11 % @
77 \catcode123 1 % {
78 \catcode125 2 % }
79 \def\TMP@EnsureCode#1#2{%
80   \edef\GTS@AtEnd{%
81     \GTS@AtEnd
82     \catcode#1 \the\catcode#1\relax
83   }%
84   \catcode#1 #2\relax
85 }
86 \TMP@EnsureCode{42}{12}% *
87 \TMP@EnsureCode{44}{12}% ,
88 \TMP@EnsureCode{45}{12}% -
89 \TMP@EnsureCode{46}{12}% .
90 \TMP@EnsureCode{47}{12}% /
91 \TMP@EnsureCode{61}{12}% =
92 \TMP@EnsureCode{91}{12}% [
93 \TMP@EnsureCode{93}{12}% ]
```

2.1   Options

```
 94 \RequirePackage{kvoptions}[2009/07/17]
 95 \SetupKeyvalOptions{%
 96   family=gettitlestring,%
 97   prefix=GTS@%
 98 }
 99 \newcommand*{\GetTitleStringSetup}{%
100   \setkeys{gettitlestring}%
101 }
102 \DeclareBoolOption{expand}
103 \InputIfFileExists{gettitlestring.cfg}{}{}
104 \ProcessKeyvalOptions*\relax
```

2.2   \GetTitleString

\GetTitleString

```
105 \newcommand*{\GetTitleString}{%
106   \ifGTS@expand
107     \expandafter\GetTitleStringExpand
108   \else
109     \expandafter\GetTitleStringNonExpand
110   \fi
111 }
```

\GetTitleStringExpand

```
112 \newcommand{\GetTitleStringExpand}[1]{%
113   \def\GetTitleStringResult{#1}%
114   \begingroup
115     \GTS@DisablePredefinedCmds
116     \GTS@DisableHook
117     \edef\x{\endgroup
118       \noexpand\def\noexpand\GetTitleStringResult{%
119         \GetTitleStringResult
120       }%
121     }%
122   \x
123 }
```

\GetTitleString

```
124 \newcommand{\GetTitleStringNonExpand}[1]{%
125   \def\GetTitleStringResult{#1}%
126   \global\let\GTS@GlobalString\GetTitleStringResult
```

```
127    \begingroup
128      \GTS@RemoveLeft
129      \GTS@RemoveRight
130    \endgroup
131    \let\GetTitleStringResult\GTS@GlobalString
132 }
```

2.2.1 Expand method

\GTS@DisablePredefinedCmds

```
133 \def\GTS@DisablePredefinedCmds{%
134   \let\label\@gobble
135   \let\zlabel\@gobble
136   \let\zref@label\@gobble
137   \let\zref@labelbylist\@gobbletwo
138   \let\zref@labelbyprops\@gobbletwo
139   \let\index\@gobble
140   \let\glossary\@gobble
141   \let\markboth\@gobbletwo
142   \let\@mkboth\@gobbletwo
143   \let\markright\@gobble
144   \let\phantomsection\@empty
145   \def\addcontentsline{\expandafter\@gobble\@gobbletwo}%
146   \let\raggedright\@empty
147   \let\raggedleft\@empty
148   \let\centering\@empty
149   \let\protect\@unexpandable@protect
150 }
```

\GTS@DisableHook

```
151 \providecommand*{\GTS@DisableHook}{}
```

\GetTitleStringDisableCommands

```
152 \def\GetTitleStringDisableCommands{%
153   \begingroup
154     \makeatletter
155     \GTS@DisableCommands
156 }
```

\GTS@DisableCommands

```
157 \long\def\GTS@DisableCommands#1{%
158     \toks0=\expandafter{\GTS@DisableHook}%
159     \toks2={#1}%
160     \xdef\GTS@GlobalString{\the\toks0 \the\toks2}%
161   \endgroup
162   \let\GTS@DisableHook\GTS@GlobalString
163 }
```

2.2.2 Non-expand method

```
164 \def\GTS@RemoveLeft{%
165   \toks@\expandafter\expandafter\expandafter{%
166     \expandafter\GTS@Car\GTS@GlobalString{}{}{}{}\GTS@Nil
167   }%
168   \edef\GTS@Token{\the\toks@}%
169   \GTS@PredefinedLeftCmds
170   \expandafter\futurelet\expandafter\GTS@Token
171   \expandafter\GTS@TestLeftSpace\GTS@GlobalString\GTS@Nil
172   \GTS@End
173 }
174 \def\GTS@End{}
175 \long\def\GTS@TestLeft#1#2{%
```

```
176   \def\GTS@temp{#1}%
177   \ifx\GTS@temp\GTS@Token
178     \toks@\expandafter\expandafter\expandafter{%
179       \expandafter#2\GTS@GlobalString\GTS@Nil
180     }%
181     \expandafter\GTS@TestLeftEnd
182   \fi
183 }
184 \long\def\GTS@TestLeftEnd#1\GTS@End{%
185   \xdef\GTS@GlobalString{\the\toks@}%
186   \GTS@RemoveLeft
187 }
188 \long\def\GTS@Car#1#2\GTS@Nil{#1}
189 \long\def\GTS@Cdr#1#2\GTS@Nil{#2}
190 \long\def\GTS@CdrTwo#1#2#3\GTS@Nil{#3}
191 \long\def\GTS@CdrThree#1#2#3#4\GTS@Nil{#4}
192 \long\def\GTS@CdrFour#1#2#3#4#5\GTS@Nil{#5}
193 \long\def\GTS@TestLeftSpace#1\GTS@Nil{%
194   \ifx\GTS@Token\@sptoken
195     \toks@\expandafter{%
196       \romannumeral-0\GTS@GlobalString
197     }%
198     \expandafter\GTS@TestLeftEnd
199   \fi
200 }
```

\GTS@PredefinedLeftCmds

```
201 \def\GTS@PredefinedLeftCmds{%
202   \GTS@TestLeft\Hy@phantomsection\GTS@Cdr
203   \GTS@TestLeft\Hy@SectionAnchor\GTS@Cdr
204   \GTS@TestLeft\Hy@SectionAnchorHref\GTS@CdrTwo
205   \GTS@TestLeft\label\GTS@CdrTwo
206   \GTS@TestLeft\zlabel\GTS@CdrTwo
207   \GTS@TestLeft\index\GTS@CdrTwo
208   \GTS@TestLeft\glossary\GTS@CdrTwo
209   \GTS@TestLeft\markboth\GTS@CdrThree
210   \GTS@TestLeft\@mkboth\GTS@CdrThree
211   \GTS@TestLeft\addcontentsline\GTS@CdrFour
212 }
213 \def\GTS@RemoveRight{%
214   \toks@{}%
215   \expandafter\GTS@TestRightLabel\GTS@GlobalString
216       \label{}\GTS@Nil\@nil
217   \GTS@RemoveRightSpace
218 }
219 \begingroup
220   \def\GTS@temp#1{\endgroup
221     \def\GTS@RemoveRightSpace{%
222       \expandafter\GTS@TestRightSpace\GTS@GlobalString
223         \GTS@Nil#1\GTS@Nil\@nil
224     }%
225   }%
226 \GTS@temp{ }
227 \def\GTS@TestRightSpace#1 \GTS@Nil#2\@nil{%
228   \ifx\relax#2\relax
229   \else
230     \gdef\GTS@GlobalString{#1}%
231     \expandafter\GTS@RemoveRightSpace
232   \fi
233 }
234 \def\GTS@TestRightLabel#1\label#2#3\GTS@Nil#4\@nil{%
235   \def\GTS@temp{#3}%
```

```
236   \ifx\GTS@temp\@empty
237     \expandafter\gdef\expandafter\GTS@GlobalString\expandafter{%
238       \the\toks@
239       #1%
240     }%
241     \expandafter\@gobble
242   \else
243     \expandafter\@firstofone
244   \fi
245   {%
246     \toks@\expandafter{\the\toks@#1}%
247     \GTS@TestRightLabel#3\GTS@Nil\@nil
248   }%
249 }

250 \GTS@AtEnd
251 ⟨/package⟩
```

3   Test

3.1   Catcode checks for loading

```
252 ⟨*test1⟩
```

```
253 \catcode`\{=1 %
254 \catcode`\}=2 %
255 \catcode`\#=6 %
256 \catcode`\@=11 %
257 \expandafter\ifx\csname count@\endcsname\relax
258   \countdef\count@=255 %
259 \fi
260 \expandafter\ifx\csname @gobble\endcsname\relax
261   \long\def\@gobble#1{}%
262 \fi
263 \expandafter\ifx\csname @firstofone\endcsname\relax
264   \long\def\@firstofone#1{#1}%
265 \fi
266 \expandafter\ifx\csname loop\endcsname\relax
267   \expandafter\@firstofone
268 \else
269   \expandafter\@gobble
270 \fi
271 {%
272   \def\loop#1\repeat{%
273     \def\body{#1}%
274     \iterate
275   }%
276   \def\iterate{%
277     \body
278       \let\next\iterate
279     \else
280       \let\next\relax
281     \fi
282     \next
283   }%
284   \let\repeat=\fi
285 }%
286 \def\RestoreCatcodes{}
287 \count@=0 %
288 \loop
289   \edef\RestoreCatcodes{%
290     \RestoreCatcodes
291     \catcode\the\count@=\the\catcode\count@\relax
```

```
292    }%
293 \ifnum\count@<255 %
294    \advance\count@ 1 %
295 \repeat
296
297 \def\RangeCatcodeInvalid#1#2{%
298    \count@=#1\relax
299    \loop
300       \catcode\count@=15 %
301    \ifnum\count@<#2\relax
302       \advance\count@ 1 %
303    \repeat
304 }
305 \expandafter\ifx\csname LoadCommand\endcsname\relax
306    \def\LoadCommand{\input gettitlestring.sty\relax}%
307 \fi
308 \def\Test{%
309    \RangeCatcodeInvalid{0}{47}%
310    \RangeCatcodeInvalid{58}{64}%
311    \RangeCatcodeInvalid{91}{96}%
312    \RangeCatcodeInvalid{123}{255}%
313    \catcode'\@=12 %
314    \catcode'\\=0 %
315    \catcode'\{=1 %
316    \catcode'\}=2 %
317    \catcode'\#=6 %
318    \catcode'\[=12 %
319    \catcode'\]=12 %
320    \catcode'\%=14 %
321    \catcode'\ =10 %
322    \catcode13=5 %
323    \LoadCommand
324    \RestoreCatcodes
325 }
326 \Test
327 \csname @@end\endcsname
328 \end
329 ⟨/test1⟩
```

3.2   Test of non-expand method

```
330 ⟨*test2⟩
331 \NeedsTeXFormat{LaTeX2e}
332 \documentclass{minimal}
333 \usepackage{gettitlestring}[2009/12/18]
334 \usepackage{qstest}
335 \IncludeTests{*}
336 \LogTests{log}{*}{*}
337 \begin{document}
338 \begin{qstest}{non-expand}{non-expand}
339    \def\test#1#2{%
340       \sbox0{%
341          \GetTitleString{#1}%
342          \Expect{#2}*{\GetTitleStringResult}%
343       }%
344       \Expect{0.0pt}*{\the\wd0}%
345    }%
346    \test{}{}%
347    \test{ }{}%
348    \test{ x }{x}%
349    \test{ x y }{x y}%
350    \test{ \relax}{\relax}%
351    \test{\label{f}a}{a}%
```

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```
352   \test{ \label{f}a}{a}%
353   \test{\label{f} a}{a}%
354   \test{ \label{f} a}{a}%
355   \test{a\label{f}}{a}%
356   \test{a\label{f} }{a}%
357   \test{a \label{f}}{a}%
358   \test{a \label{f} }{a}%
359   \test{a\label{f}b\label{g}}{ab}%
360   \test{a \label{f}b \label{g} }{a b}%
361   \test{a\label{f} b \label{g} }{a b}%
362 \end{qstest}
363 \end{document}
364 ⟨/test2⟩
```

4 Installation

4.1 Download

Package. This package is available on CTAN[1]:

CTAN:macros/latex/contrib/oberdiek/gettitlestring.dtx The source file.

CTAN:macros/latex/contrib/oberdiek/gettitlestring.pdf Documentation.

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
```

---

[1] ftp://ftp.ctan.org/tex-archive/

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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 (teTeX, mikTeX, . . .) relies on file name databases, you must refresh these. For example, teTeX users run `texhash` or `mktexlsr`.

4.5   Some details for the interested

Attached source. The PDF documentation on CTAN also includes the `.dtx` source file. It can be extracted by AcrobatReader 6 or higher. Another option is `pdftk`, e.g. unpack the file into the current directory:

```
pdftk gettitlestring.pdf unpack_files output .
```

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 pdfLaTeX:

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

5   References

[1] Peter Wilson, Lars Madsen: *The Memoir Class*; 2009/11/17 v1.61803398c; CTAN:macros/latex/contrib/memoir/

[2] Donald Arsenau: *Titleref.sty*; 2001/04/05 ver 3.1; CTAN:macros/latex/contrib/misc/titleref.sty

[3] Heiko Oberdiek: *The zref package*; 2009/12/08 v2.7; CTAN:macros/latex/contrib/oberdiek/zref.pdf

6 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).

7 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; numbers in roman refer to the code lines where the entry is used.

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