The KOMA-Script package

tocstyle*

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While the main classes of the KOMA-Script bundle were made, there where several ideas for formating the table of contents and lists of floats, but almost none of them where implemented. One reason was, that the KOMA-Script author didn't like to change the LATEX kernel at a class, because this may result in serveral problems with other packages. The package tocstyle will fill the gap. If it conflicts with another package, you simply may decide not to use it.

Contents

- 1 How It Works 1
- **2 Optional Features** 2
- 3 Using TOC Styles 3
- 4 Setting-up Single Features 5
- 5 Defining New TOC Styles 5
- 6 Implementation 7
 - 6.1 Option 7
 - 6.2 Body 9
 - 6.2.1 Redefining LATEX Kernel Macros 9
 - 6.2.2 Redefining Class Macros 13
 - 6.2.3 New Macros 16
 - 6.2.4 Defining Some TOC Styles 23

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A Examples for the Different TOC Styles 26

- A.1 Graduated Versions 26
 - A.1.1 standard with Option tocgraduated 26
 - A.1.2 KOMAlike with Option tocgraduated 2'
 - A.1.3 classic with Option tocgraduated 28
 - A.1.4 allwithdot with Option tocgraduated 29
 - A.1.5 noonewithdot with Option tocgraduated 30
 - A.1.6 nopagecolumn with Option tocgraduated 31
- A.2 Flat Versions 32
 - A.2.1 standard with Option tocflat 32
 - A.2.2 KOMAlike with Option tocflat 33
 - A.2.3 classic with Option tocflat 34
 - A.2.4 allwithdot with Option tocflat 35
 - A.2.5 noonewithdot with Option tocflat 36
 - A.2.6 nopagecolumn with Option tocflat 37
- A.3 Fullflat Versions 38
 - A.3.1 standard with Option tocfullflat 38
 - A.3.2 KOMAlike with Option tocfullflat 39
 - A.3.3 classic with Option tocfullflat 40
 - A.3.4 allwithdot with Option tocfullflat 41
 - A.3.5 noonewithdot with Option tocfullflat 42
 - A.3.6 nopagecolumn with Option tocfullflat 43

1 How It Works

Loading the package tocstyle will redefine the kernel macro \@starttoc. Using the redefined \@starttoc will redefine \@dottedtocline, \l@part down to \l@subparagraph, \l@figure, and \l@table, if and only if tocstyle wasn't deactivated for all TOCs or this TOC. Usage the redefined \@dottedtocline will redefine \numberline.

Redefining \@starttoc, \@dottedtocline, and \numberline will activate the features of tocstyle for all lists that uses these, e.g. table of contents, list of figures and list of tables at the standard or the KOMA-Script classes. But while not all classes uses \@dottedtocline and \@numberline for all entries to table of contents and list of floats the package redefines some other macros that are typically used for those entries. These are e.g. \l@part, \l@chapter and some more. If the class even does not use those macros, you may not use tocstyle to change the lists. The term TOC will be used for all kind of list, that may be processed by tocstyle. The package tests wether the original kernel macros \@starttoc, \@dottedtocline, and \numberline were used or not and warns if not.

Package tocstyle needs some more information. For the standard and the KOMA-Script classes these informations may be detected by the package. If the result is not the expected, you may configure these informations manually.

The entries of every TOC hat a depth. See the counter tocdepth for more information about the depth. You may change several settings for the entries of either all depths of all TOCs, all depths of one TOC, or one depth of one TOC.

But most users will not need to set up tocstyle at this low level. They simply will select one of the predefined styles and maybe select one of the optional features.

2 Optional Features

Optional features will be selected using a package option while loading the package or using the package option as a global option loading the class using \documentclass. Optional features change generall behaviour of all TOCs.

tocindentauto tocindentmanual

With option tocindentauto all widths at the TOCs are calculated by tocstyle. The calculation of the width needs at least one LATEX run with all TOC entries. So you need at least three LATEX runs:

- one to write all the TOC entries to the TOC file
- one with the known TOC entries from the TOC file but unknown widths
- one with the known TOC entries from the TOC file and known widths

If the TOC entries changed between the second and the third run—e.g. because of page numbers changed—you'll need one more run (and so on).

Note: The widths of all entries of same depth and same TOC are same. Don't ask for less width of page numbers at the first than the last TOC page!

tocgraduated
 tocflat
tocfullflat

The option tocgraduated selects the graduated version of all TOCs. You know the graduated version from the standard classes. Entries of lower depth are indented against entries of higher depth. This may e.g. look like:

1	How It Works	1
2	Optional Features	2
3	Using TOC Styles	3
4	Setting-up Single Features	5

5 Defining New TOC Styles	5
6 Implementation	7
6.1 Option	7
6.2 Body	9
6.2.1 Redefining LATEX Kernel Macros	9
6.2.2 Redefining Class Macros	13
6.2.3 New Macros	16
6.2.4 Defining Some TOC Styles	23
6.2.5 Defining Some TOC Styles	25
A Examples for the Different TOC Styles	26
A.1 Graduated Versions	26
A.2 Flat Versions	32
A.3 Fullflat Versions	38
The option tocflat selects the flat—aka left aligned—versi TOCs. You know the flat version from the KOMA-Script clas option tocleft. This may e.g. look like:	
1 How It Works	1
2 Optional Features	2
3 Using TOC Styles	3
4 Setting-up Single Features	5
5 Defining New TOC Styles	5
6 Implementation	7
6.1 Option	7
6.2 Body	9
6.2.1 Redefining LATEX Kernel Macros	9
6.2.2 Redefining Class Macros	13
6.2.3 New Macros	16
6.2.4 Defining Some TOC Styles	23
6.2.5 Defining Some TOC Styles	25
A Examples for the Different TOC Styles	26
A.1 Graduated Versions	26
A.2 Flat Versions	32
A.3 Fullflat Versions	38

The option tocfullflat is similar to flat version of all TOCs, but there is even no box of same width for the numbers of all entries. This may e.g. look like:

1 How It Works	1
2 Optional Features	2
3 Using TOC Styles	3
4 Setting-up Single Features	5
5 Defining New TOC Styles	5
6 Implementation	7
6.1 Option	7
6.2 Body	9
6.2.1 Redefining IATEX Kernel Macros	9
6.2.2 Redefining Class Macros	13
6.2.3 New Macros	16
6.2.4 Defining Some TOC Styles	23
6.2.5 Defining Some TOC Styles	25
A Examples for the Different TOC Styles	26
A.1 Graduated Versions	26
A.2 Flat Versions	32
A.3 Fullflat Versions	38

Default is option tocgraduated.

tocbreaksstrict tocbreakscareless Default option tocbreaksstrict sets a lot of penalties before and after TOC entries to avoid page break between a TOC entry and it's parent. But sometimes you may like to allow more page breaks. You may use option tocbreakscareless for this.

toctextentriesindented toctextentriesleft

With default option toctextentriesleft unnumbered TOC entries, e.g. from KOMA-Script command \addchap, are indented only as wide as the number of numbered TOC entries of the same level are. But with option toctextentriesindented these are indented as if they have an empty number.

3 Using TOC Styles

\usetocstyle

Package tocstyle hat several predefined toc styles. Most users will never need to define their own toc style but only select one of the predefined and maybe configure it by one of the options described at the previsous section.

You may set the style of one or all TOCs. If you want to set the style of all TOCs, you'd simply say $\scalebox{usetocstyle}{\langle style \rangle}$. This will set all settings of the given style to all TOCs. Individual settings will overwrite this generall setting.

standard

A style similar to the standard classes. All width are predefined to the width of the standard classes, but may be overwritten by the general options (see section 2). The depth -1 (part) and 0 (chapter) are set in bold face (\bfseries). If no depth 0 was found at the TOC, depth 1 (section) will be set in bold face, too. All other depth will be set in normal font. Depth -1 (part) will be set using \large. The font changes are valid for the page numbers, too.

KOMAlike

A style similar to the KOMA-Script classes. This is almost the same like standard, but instead of bold face \usekomafont{disposition} will be used if \usekomafont was defined and sans serif, bold face (\sffamily\bfseries) if not.

classic

Like KOMAlike but all page numbers are set using normal font.

allwithdot

Like classic but dots between entry text and page numbers are used at all depths.

noonewithdot

Like classic but not dots between entry text and page numbers are used.

nopagecolumn

Like noonewithdot but also the gap between text and page numbers is omited. This means, that the page numbers are set 1 em after the text.

The table 1 shows the predefined styles, that may be used as mandatory argument of **\tocstyle**. The optional argument $\langle TOC \rangle$ is the shortcut (file extension) of the TOC. Examples of known shortcuts are shown at table 2.

Note: Before you're setting a style the style of the TOCs are unspecified. This means that some entries may be set using tocstyle others may not.

\deactivatetocstyle \reactivatetocstyle Both commands have one optional argument $\langle TOC \rangle$. You may deactive the influence of tocstyle for a TOC and reactivate it. If you use \deactivatetocstyle without the optional argument or empty optional argument, the influence of tocstyle for all TOCs will be deactivated and may reactivated only using \reactivatetocstyle without the optional argument or empty optional argument too.

toc

Table of contents of almost all known classes.

lof

List of figures of almost all known classes.

lot

List of tables of almost all known classes.

101

List of listings of package listings. Currently the usability of listings with tocstyle is not recomended. Maybe it works, maybe not. Maybe you should try \deactivatetocstyle[lol].

After deactivation of tocstyle for one TOC or all TOCs you may continue configuring TOCs. All these changes will be used after reactivation.

4 Setting-up Single Features

At the previous section you've learned how to select a predefined TOC style. You were also told, that you may change one ore more features against the used predefined TOC style for one or all depth of one ore all TOCs. Now you will learn how to do this.

\settocfeature \settocstylefeature These commands are used to set a single feature eiher of all depth of all TOCs (\settocfeature {\langle feature \rangle} {\langle command \rangle} \) or \settocstylefeature {\langle feature \rangle} {\langle command \rangle} \), or of all depth of a single TOC (\settocfeature $[\langle TOC \rangle]$ {\langle feature \rangle} {\langle command \rangle} \}, or of a single depth of all TOCs (\settocstylefeature $[\langle depth \rangle]$ {\langle feature \rangle} {\langle command \rangle} \}, or of a single depth of a single TOC (\settocfeature $[\langle TOC \rangle]$ $[\langle depth \rangle]$ {\langle feature \rangle} {\langle command \rangle} \}.

Parameter $\langle commands \rangle$ is a list of commands. In most cases these must not be commands, that need an argument. So you should e.g. not use \textbf but \bfseries to switch to bold face. Parameter $\langle feature \rangle$ is the feature, that may be configured with parameter $\langle commands \rangle$. All known features are show at table 3.

The order of used commands for a feature is

- 1. commands for all depths of all TOCs,
- 2. commands for all depth of a single TOC,
- 3. commands for a single depth of all TOCs,
- 4. commands for a single depth of a single TOC,

and settings of \usetocstyle may be overwritten by \settocfeature und \settocstylefeature.

Table 3: Features that May Be Set

dothook

will be executed before any dot of the dot line

entryhook

hook before the entry will be set

entryvskip

initial vertical skip amount (if not set 0pt plus .2pt will be used)

leaders

commands for fillin the gap between entry text and page number (if not set the default leaders command with dots will be used)

pagenumberbox

the box command for setting the page number (if not set the default box of with \@pnumwidth will be used); note, that this has to be a command with exactly one argument

pagenumberhook

hook before the page number will be set at the page number box parfillskip

add this amount to the default value of **\parfillskip** after setting up all lengths

raggedhook

the only allowed values here are \raggedright or nothing

${\tt space after number}$

amount of minimum space after the entry number, if the needed width will be calculated automaticly

5 Defining New TOC Styles

Now you know how to select a prefedined TOC style and how to change single features. But wouldn't it be nice to define your own TOC style?

\newtocstyle

You may do this using $\ensuremath{\verb|newtocstyle||} {\langle style name \rangle} {\langle s$

The second optional argument is a comma seperated list of feature names. If it is used, these features of the parent style (and all ancestors of the parent) will not be part of the new style.

There's another feature for new toc styles. If there's a file tocstyle.cfg it will be loaded at the end of the package. This is usefull to define your own toc styles.

6 Implementation

- 1 \PackageWarningNoLine{tocstyle}{%
- 2 THIS IS AN ALPHA VERSION!\MessageBreak
- 3 USAGE OF THIS VERSION IS ON YOUR OWN RISK!\MessageBreak
- 4 EVERYTHING MAY HAPPEN!\MessageBreak
- 5 EVERYTHING MAY CHANGE IN FUTURE!\MessageBreak
- 6 THERE IS NO SUPPORT, IF YOU USE THIS PACKAGE!\MessageBreak
- 7 Maybe it would be better, not to load this package%

8 }

6.1 Option

Options change general behaviour of TOCs.

\selecttocstyleoption

9 \newif\if@tocstyle@penalties 10 \newif\iftocstyle@autolength 11 \newif\iftocstyle@indentnotnumbered 12 \newcount\tocstyle@indentstyle\tocstyle@indentstyle=\z@ 13 \newcommand*{\selecttocstyleoption}[1]{% 14 \begingroup \edef\@tempa{#1}% 15 \edef\@tempb{tocbreaksstrict}% 16 \ifx\@tempa\@tempb\aftergroup\@tocstyle@penaltiestrue\else 17 18 \edef\@tempb{tocbreakscareless}% \ifx\@tempa\@tempb\aftergroup\@tocstyle@penaltiesfalse\else 19 \edef\@tempb{tocindentauto} 20

```
21
                                    \ifx\@tempa\@tempb\aftergroup\tocstyle@autolengthtrue\else
                                      \edef\@tempb{tocindentmanual}%
                         22
                                      \ifx\@tempa\@tempb\aftergroup\tocstyle@autolengthfalse\else
                         23
                                        \edef\@tempb{tocgraduated}%
                         24
                         25
                                        \ifx\@tempa\@tempb
                                          \aftergroup\tocstyle@indentstyle\aftergroup\z@
                         26
                         27
                                        \else
                                          \edef\@tempb{tocflat}%
                         28
                                          \ifx\@tempa\@tempb
                         29
                                            \aftergroup\tocstyle@indentstyle\aftergroup\@ne
                         30
                                            \aftergroup\relax
                         31
                         32
                                          \else
                         33
                                            \edef\@tempb{tocfullflat}%
                                            \ifx\@tempa\@tempb
                         34
                                              \aftergroup\tocstyle@indentstyle\aftergroup\tw@
                         35
                                              \aftergroup\relax
                         36
                         37
                                               \edef\@tempb{toctextentriesindented}%
                         38
                                              \ifx\@tempa\@tempb\aftergroup\tocstyle@indentnotnumberedtrue
                         39
                                              \else
                         40
                                                 \edef\@tempb{toctextentriesleft}%
                         41
                                                 \ifx\@tempa\@tempb
                         42
                         43
                                                   \aftergroup\tocstyle@indentnotnumberedfalse
                                                 \else
                         44
                                                   \PackageError{tocstyle}{unknown option '#1'}{%
                         45
                                                     You've told me to select toc style option
                         46
                                                     '#1',\MessageBreak
                         47
                         48
                                                     but tocstyle doesn't know an option named '#1'}%
                                                 \fi
                         49
                                              \fi
                         50
                                            \fi
                         51
                         52
                                          \fi
                                        \fi
                         53
                                      \fi
                         54
                                    \fi
                         55
                                  \fi
                         56
                                \fi
                         57
                              \endgroup
                         58
                         59 }
                         Switch on extended pernalties.
       tocbreaksstrict
     tocbreakscareless
                         60 \DeclareOption{tocbreaksstrict}{\selecttocstyleoption\CurrentOption}
                         61 \DeclareOption{tocbreakscareless}{\selecttocstyleoption\CurrentOption}
         tocindentauto
       tocindentmanual
                         62 \DeclareOption{tocindentauto}{\selecttocstyleoption\CurrentOption}
                         63 \DeclareOption{tocindentmanual}{\selecttocstyleoption\CurrentOption}
toctextentriesindented
    toctextentriesleft
```

```
64 \DeclareOption{toctextentriesindented}{\selecttocstyleoption\CurrentOption}
              65 \DeclareOption{toctextentriesleft}{\selecttocstyleoption\CurrentOption}
tocgraduated
     tocflat
              66 \DeclareOption{tocgraduated}{\selecttocstyleoption\CurrentOption}
              67 \DeclareOption{tocflat}{\selecttocstyleoption\CurrentOption}
 tocfullflat
              68 \DeclareOption{tocfullflat}{\selecttocstyleoption\CurrentOption}
                Defaults and others:
              69 \ExecuteOptions{tocbreaksstrict,tocindentauto,tocgraduated,%
              70 toctextentriesleft}
              71 \ProcessOptions\relax
              72 \ifcsname if@tocleft\endcsname
                  \expandafter\let\csname if@tempswa\expandafter\endcsname
                  \csname if@tocleft\endcsname
              75 \else
                  \@tempswafalse
              76
              77\fi
              78 \if@tempswa
                  \PackageWarningNoLine{tocstyle}{%
                    You should not use class option 'toc=flat'!\MessageBreak
              80
                    This may result in errors or unexpected results.\MessageBreak
              81
                    I'll try to deactivate 'toc=flat', now.\MessageBreak
              82
                    You may use package options 'tocflat' and Message Break
              83
                    'tocindentauto' instead of 'toc=flat'}%
```

6.2 Body

85 \ 86 \fi

There are two parts at tocstyle:

• redefining internal LATEX kernel macros,

\csname @tocleftfalse\endcsname

• defining new macros and redefining class macros.

Redefining LATEX kernel macros may not be switched of. But redefining class macros will only be on demand.

6.2.1 Redefining LATEX Kernel Macros

Some IATEX kernel macros must be redefined to add the new functionality. Before redefining them, we test against the definition at kernel 2005/12/01

\@starttoc \tocstyle@saved@@starttoc The original definition will be extended by defaults for \parskip, \parindent and \parfillskip and storage of the shortcut of the current TOC.

```
87 \newcommand*\tocstyle@saved@starttoc{}
88 \let\tocstyle@saved@starttoc\@starttoc
```

```
89 \renewcommand*{\@starttoc}[1]{%
                                     \tocstyle@pre@starttoc{#1}%
                                     \tocstyle@saved@starttoc{#1}%
                                 91
                                     \tocstyle@post@starttoc{#1}%
                                 92
                                 93 }
\tocstyle@saved@dottedtocline
                                 For saving the unchanged definition (at \begindocument):
                                 94 \newcommand*{\tocstyle@saved@dottedtocline}{}
                                 Implement new definition and redefine:
      \tocstyle@dottedtocline
                                 95 \newcommand*{\tocstyle@dottedtocline}[5]{%
                                     \let\numberline\tocstyle@numberline
                                 96
                                 97
                                     \ifnum #1>\c@tocdepth \else
                                 Penalty feature: no page break between higher and lower depths.
                                       \if@tocstyle@penalties
                                 98
                                 99
                                         \begingroup
                                            \@tempcnta 20010
                                100
                                101
                                            \advance \@tempcnta by -#1
                                            \ifnum \@tempcnta>\lastpenalty
                                102
                                103
                                              \aftergroup\penalty\aftergroup\@lowpenalty
                                104
                                         \endgroup
                                105
                                       \fi
                                106
                                 Activation of all features for this TOC and depth:
                                       \edef\tocstyledepth{#1}%
                                107
                                       \tocstyle@activate@features
                                108
                                 Similar to kernel command but if feature entryvskip was set use \addvspace:
                                       \ifx\tocstyle@feature@entryvskip\relax
                                110
                                         \vskip \z@ \@plus.2\p@
                                       \else
                                111
                                         \addvspace{\tocstyle@feature@entryvskip}%
                                112
                                       \fi
                                113
                                114
                                       {%
                                 Preinitialization of lengths and skips and then call a hook
                                          \parskip \z0 \parindent \z0 \leftskip \z0 \rightskip \z0
                                115
                                         \tocstyle@feature@raggedhook
                                116
                                117 %
                                         \end{macrocode}
                                118 % Set number indent to \cs{Otempdimb} and text indent to \cs{Otempdima}.
                                119 %
                                         \begin{macrocode}
                                120
                                         \@tempdima #3\relax
                                         \@tempdimb #2\relax
                                121
                                               \typeout{m (\tocstyleTOC, \tocstyledepth): \the\@tempdima}%
                                122 (trace)
                                         \end{macrocode}
                                123 %
                                124 % Calc auto lengths
                                125 %
                                         \begin{macrocode}
                                         \  \finum #1>\z@\relax
                                126
```

\@tempcnta #1\relax \advance\@tempcnta \m@ne

127

```
\ifcsname tocstyle@skipwidth@\tocstyleTOC @\the\@tempcnta\endcsname
128
129
              \ifcsname tocstyle@numwidth@\tocstyleTOC @\the\@tempcnta\endcsname
                \@tempdimb
130
                \csname tocstyle@skipwidth@\tocstyleTOC @\the\@tempcnta\endcsname
131
                \advance\@tempdimb
132
                \csname tocstyle@numwidth@\tocstyleTOC @\the\@tempcnta\endcsname
133
             \fi
134
           \fi
135
         \fi
136
137 (trace)
               \typeout{C (\tocstyleTOC, \tocstyledepth): \the\@tempdimb}%
         \ifcsname tocstyle@skipwidth@\tocstyleTOC @#1\endcsname
138
139
           \ifdim \@tempdimb>
140
           \csname tocstyle@skipwidth@\tocstyleTOC @#1\endcsname\relax
              \expandafter\xdef\csname tocstyle@skipwidth@\tocstyleTOC
141
             @#1\endcsname{\the\@tempdimb}%
142
143
           \fi
         \else
144
           \expandafter\xdef\csname tocstyle@skipwidth@\tocstyleTOC
145
           @#1\endcsname{\the\@tempdimb}%
146
         \fi
147
         \iftocstyle@autolength
148
           \ifcsname tocstyle@maxskipwidth@\tocstyleTOC @#1\endcsname
149
150
              \@tempdimb \csname tocstyle@maxskipwidth@\tocstyleTOC @#1\endcsname
              \relax
151
152
           \ifcsname tocstyle@maxnumwidth@\tocstyleTOC @#1\endcsname
153
              \@tempdima \csname tocstyle@maxnumwidth@\tocstyleTOC @#1\endcsname
154
155
           \fi
156
                 \typeout{a (\tocstyleTOC, \tocstyledepth): \the\@tempdima}%
157 (trace)
                 \typeout{A (\tocstyleTOC, \tocstyledepth): \the\@tempdimb}%
158 (trace)
159
         \else
           \@tempdimb #2\relax
160
                 \typeout{M (\tocstyleTOC, \tocstyledepth): \the\@tempdimb}%
161 (trace)
         \fi
162
         \ifcsname tocstyle@unumwidth@\tocstyleTOC @\endcsname
163
           \ifdim \@tempdima>
164
           \csname tocstyle@unumwidth@\tocstyleTOC @\endcsname\relax
165
              \expandafter\xdef\csname tocstyle@unumwidth@\tocstyleTOC
166
              @\endcsname{\the\@tempdima}%
167
           \fi
168
169
         \else
           \expandafter\xdef\csname tocstyle@unumwidth@\tocstyleTOC
170
           @\endcsname{\the\@tempdima}%
171
172
         \ifcase\tocstyle@indentstyle\relax\else
173
           \@tempdimb \z@
174
           \ifcsname tocstyle@maxunumwidth@\tocstyleTOC @\endcsname
175
176
              \@tempdima \csname tocstyle@maxunumwidth@\tocstyleTOC @\endcsname
```

```
177
              \relax
            \fi
178
179 (trace)
                 \typeout{s (\tocstyleTOC, \tocstyledepth): \the\@tempdima}%
                 \typeout{S (\tocstyleTOC, \tocstyledepth): \the\@tempdimb}%
180 (trace)
181
         \fi
         \end{macrocode}
182 %
183 % Advance instead of set, because of the hook above:
        \begin{macrocode}
184 %
         \advance\parindent \@tempdimb\@afterindenttrue
185
         \advance\leftskip \parindent
186
         \advance\rightskip \@tocrmarg
187
188
         \parfillskip -\rightskip
189
         \ifx\tocstyle@feature@parfillskip\relax\else
190
           \advance\parfillskip \tocstyle@feature@parfillskip\relax
         \fi
191
         \interlinepenalty\@M
192
         \leavevmode
193
194
         \advance\leftskip \@tempdima
         \null\nobreak
195
\hskip\-leftskip optional moved to \numberline
         \iftocstyle@indentnotnumbered\else
196
197
            \hskip -\leftskip
198
         \fi
Change at start of the entry
         \tocstyle@feature@entryhook
Similar to kernel command but if feature leaders was set use this in-
stead of the default leaders. And if feature dothook was set (default is
\normalfont) use this at the default leaders.
200
         {#4}\nobreak
         \ifx\tocstyle@feature@leaders\relax
201
           \label{leadershbox{m@th}} \label{leadershbox{m@th}}
202
              \mkern \@dotsep mu\hbox{\tocstyle@feature@dothook .}%
203
204
              \mkern \@dotsep mu$}\hfill
205
         \else
206
            \tocstyle@feature@leaders
         \fi
207
         \nobreak
208
         \ifx\tocstyle@feature@pagenumberbox\relax
209
            \hb@xt@\@pnumwidth{\hfil\tocstyle@feature@pagenumberhook #5}%
210
211
212
           \tocstyle@feature@pagenumberbox{\tocstyle@feature@pagenumberhook #5}%
         \fi
213
214
         \par
       }%
215
Last change is, another penalty change:
       \if@tocstyle@penalties
         \bgroup
217
```

```
\advance\@tempcnta by -#1
                            220
                                        \edef\reserved@a{\egroup\penalty\the\@tempcnta\relax}%
                            221
                                     \reserved@a
                            222
                                   \fi
                                 \fi}
                             Define a new \numberline, that will do all the job after \begindocument
\tocstyle@saved@numberline
                             and one to save the original definition.
      \tocstyle@numberline
                            224 \newcommand*{\tocstyle@saved@numberline}{}
                            225 \newcommand*{\tocstyle@numberline}[1]{%
                                 \begingroup
                            226
                                    \ifx\tocstyle@feature@spaceafternumber\relax
                            227
                            228
                                     \settowidth\@tempdima{\tocstyle@@numberline{#1}\enskip}%
                            229
                                     \verb|\costyle@@numberline{#1}}|%
                            230
                            231
                                     \advance \@tempdima \tocstyle@feature@spaceafternumber\relax
                            232
                                   \ifcsname tocstyle@numwidth@\tocstyleTOC @\tocstyledepth\endcsname
                            233
                                     \ifdim \@tempdima >
                            234
                                     \csname tocstyle@numwidth@\tocstyleTOC @\tocstyledepth\endcsname\relax
                            235
                            236
                                        \expandafter\xdef\csname tocstyle@numwidth@\tocstyleTOC
                            237
                                        @\tocstyledepth\endcsname{\the\@tempdima}%
                                     \fi
                            238
                                   \else
                            239
                                     \expandafter\xdef\csname tocstyle@numwidth@\tocstyleTOC
                            240
                                     @\tocstyledepth\endcsname{\the\@tempdima}%
                            241
                            242
                                 \endgroup
                            243
                                 \iftocstyle@indentnotnumbered
                            244
                            245
                                    \hskip -\leftskip
                            246
                            247
                                 \ifcase \tocstyle@indentstyle
                                    \hb@xt@\@tempdima{\tocstyle@@numberline{#1}\hfil}%
                            248
                            249
                                 \or
                                    \hb@xt@\@tempdima{\tocstyle@@numberline{#1}\hfil}%
                            250
                            251
                                 \else
                            252
                                   \ifx\tocstyle@feature@spaceafternumber\relax
                            253
                                     \hbox{\tocstyle@@numberline{#1}\enskip}%
                                   \else
                            254
                                      \hbox{\tocstyle@@numberline{#1}\hskip
                            255
                                        \tocstyle@feature@spaceafternumber\relax}%
                            256
                                   \fi
                            257
                                 \fi
                            258
                            259 }
                            Do the main work!
     \tocstyle@@numberline
                            260 \newcommand*{\tocstyle@@numberline}[1]{%
```

218

219

\@tempcnta 20009

#1\csname autodot\endcsname

6.2.2 Redefining Class Macros

```
Try to redefine the toc commands at startup.
         \1@part
      \l0chapter _{263} \AtBeginDocument{%
      \l@section 264
                       \ifcsname l@part\endcsname
                         \ifcsname l@chapter\endcsname
   \l0subsection ^{265}
                           \setbox\@tempboxa\vbox{\hsize\maxdimen
\label{eq:loss_266} \
                              \l@part{\tocstyle@l@define{part}{-1}}{}}%
                  267
    \1@paragraph
                  268
\1@subparagraph
                  269
                            \setbox\@tempboxa\vbox{\hsize\maxdimen
        \l@table
                  270
                              \l@part{\tocstyle@l@define{part}{0}}{}}%
       \l0figure _{271}
                         \fi
                  272
                       \fi
                       \ifcsname l@chapter\endcsname
                  273
                  274
                         \setbox\@tempboxa\vbox{\hsize\maxdimen
                  275
                            \l@chapter{\tocstyle@l@define{chapter}{0}}{}}%
                  276
                       \ifcsname l@section\endcsname
                  277
                         \setbox\@tempboxa\vbox{\hsize\maxdimen
                  278
                  279
                            \l@section{\tocstyle@l@define{section}{1}}{}}%
                       \fi
                  280
                       \ifcsname l@subsection\endcsname
                  281
                  282
                         \setbox\@tempboxa\vbox{\hsize\maxdimen
                            \l@subsection{\tocstyle@l@define{subsection}{2}}{}}%
                  283
                  284
                       \ifcsname l@subsubsection\endcsname
                  285
                  286
                         \setbox\@tempboxa\vbox{\hsize\maxdimen
                            \l@subsubsection{\tocstyle@l@define{subsubsection}{3}}{}}}%
                  287
                  288
                       \fi
                  289
                       \ifcsname l@paragraph\endcsname
                         \setbox\@tempboxa\vbox{\hsize\maxdimen
                  290
                            \l@paragraph{\tocstyle@l@define{paragraph}{4}}{}}%
                  291
                       \fi
                  292
                       \ifcsname l@subparagraph\endcsname
                  293
                  294
                         \setbox\@tempboxa\vbox{\hsize\maxdimen
                  295
                            \l@subparagraph{\tocstyle@l@define{subparagraph}{5}}{}}%
                       \fi
                  296
                       \ifcsname l@table\endcsname
                  297
                         \setbox\@tempboxa\vbox{\hsize\maxdimen
                  298
                           \l@table{\tocstyle@l@define{table}{1}}{}}%
                  299
                  300
                       \ifcsname l@figure\endcsname
                  301
                          \setbox\@tempboxa\vbox{\hsize\maxdimen
                  302
                  303
                            \l@figure{\tocstyle@l@define{figure}{1}}{}}%
                       \fi
                  304
```

\@dottedtocline This will be used even for undotted toc lines. First check the definition,

```
then redefine.
                                    \def\@tempa#1#2#3#4#5{%
                                      \ifnum #1>\c@tocdepth \else
                              306
                                        \ \vskip \z0 \@plus.2\p0
                              307
                                        {\leftskip #2\relax \rightskip \@tocrmarg \parfillskip -\rightskip
                              308
                              309
                                         \parindent #2\relax\@afterindenttrue
                                         \interlinepenalty\@M
                              310
                              311
                                         \leavevmode
                              312
                                         \@tempdima #3\relax
                              313
                                         \advance\leftskip \@tempdima \null\nobreak\hskip -\leftskip
                                         {#4}\nobreak
                              314
                                         \leaders\hbox{$\m@th
                              315
                                            \mkern \@dotsep mu\hbox{.}\mkern \@dotsep
                              316
                              317
                                            mu$}\hfill
                                         \nobreak
                              318
                                         \hb@xt@\@pnumwidth{\hfil \normalfont \normalcolor #5}%
                              319
                                         \par}%
                              320
                              321
                                      \fi}%
                              322
                                    \ifx\@dottedtocline\@tempa\else
                              323
                                      \tocstyle@macrochangewarning\@dottedtocline
                              324
                                    \let\tocstyle@saved@dottedtocline\@dottedtocline
                              325
                               This macro needed to be redefined to calculate the with of the numbers.
                  \numberline
                               First of all: check the definition. This is a bit more difficult, because of
                               respecting KOMA-Script:
                                    \def\@tempa#1{\hb@xt@\@tempdima{#1\autodot\hfil}}%
                              326
                                    \ifx\numberline\@tempa\else
                              327
                              328
                                      \def\@tempa#1{\hb@xt@\@tempdima{#1\hfil}}%
                                      \ifx\numberline@tempa\else
                              329
                                        \tocstyle@macrochangewarning\numberline
                              330
                                      \fi
                              331
                              332
                                    \fi
                              333
                                    \let\tocstyle@saved@numberline\numberline
                              334 }
\tocstyle@macrochangewarning
                              335 \newcommand*{\tocstyle@macrochangewarning}[1]{%
                                    \PackageWarningNoLine{tocstyle}{%
                                      unexpected \string#1\space definition!\MessageBreak
                              337
                                      You are either using an unknown LaTeX kernel\MessageBreak
                              338
                              339
                                      version, an unknown class or package, that redefines\MessageBreak
                                      \string#1, or a \string#1\space
                              340
                                      redefinition\MessageBreak
                              341
                                      at the document preamble.\MessageBreak
                              342
                                      Because of this you may get unexpected results!\MessageBreak
                              343
```

Maybe it would be better not to use package tocstyle}% \PackageInfo{tocstyle}{Unexpected definition is:\MessageBreak

345

346

\meaning#1}%

```
347 }
```

```
\tocstyle@l@define
\tocstyle@activate@all@1 348 \newcommand*{\tocstyle@activate@all@1}{}
                          349 \newcommand*{\tocstyle@l@define}[2]{%
                               \advance\leftskip-\@tempdima
                               \edef\@tempa{%
                          351
                          352
                                 \noexpand\global\noexpand\let
                          353
                                 \expandafter\noexpand\csname tocstyle@saved@1@#1\endcsname
                          354
                                 \expandafter\noexpand\csname 10#1\endcsname
                                 \noexpand\gdef
                          355
                                 \expandafter\noexpand\csname tocstyle@l@#1\endcsname{%
                          356
                                   \noexpand\@dottedtocline{#2}{\the\leftskip}{\the\@tempdima}}%
                          357
                                 \noexpand\g@addto@macro\noexpand\tocstyle@activate@all@1{%
                          358
                                   \noexpand\let\expandafter\noexpand\csname l@#1\endcsname
                          359
                                   \expandafter\noexpand\csname tocstyle@l@#1\endcsname
                          360
                                 }%
                          361
                          362
                               }%
                               \PackageInfo{tocstyle}{prepare \expandafter\string
                          363
                          364
                                 \csname 10#1\endcsname\space for redefinition}%
                          365
                               \@tempa
                          366 }
```

6.2.3 New Macros

\showtoc

```
367 \mbox{ } [2] [\aliastoc\tocstyleTOC\tocstyleAliasTOC] {\%}
     \ifcsname tocstyle@copyname@#2\endcsname
368
369
       \@tempcnta \csname tocstyle@copyname@#2\endcsname\relax
       \advance\@tempcnta \@ne
370
       \expandafter\xdef\csname tocstyle@copyname@#2\endcsname{\the\@tempcnta}%
371
     \else
372
       \expandafter\xdef\csname tocstyle@copyname@#2\endcsname{1}%
373
374
375
     \ifx\@dofilelist\relax\let\@dofilelist\@empty\fi
376
     \edef\@tempa{\noexpand\g@addto@macro\noexpand\@dofilelist{%
377
         \noexpand\tocstyle@copy@toc{#2}{\csname
           tocstyle@copyname@#2\endcsname}}%
378
     }\@tempa%
379
     \begingroup
380
       \edef\tocstyleAliasTOC{#2}%
381
       \edef\tocstyleTOC{#2\csname tocstyle@copyname@#2\endcsname}%
382
383
       \tocstyle@pre@starttoc{#2\csname tocstyle@copyname@#2\endcsname}%
384
       \makeatletter
385
       \@input{\jobname.#2\csname tocstyle@copyname@#2\endcsname}%
386
       \@nobreakfalse
387
       \tocstyle@post@starttoc{#2\csname tocstyle@copyname@#2\endcsname}%
388
     \endgroup
389
```

```
390 }
\tocstyle@copy@toc
391 \
```

```
391 \newcommand*{\tocstyle@copy@toc}[2]{%
                         392
                              \if@filesw
                         393
                                 \begingroup
                                   \endlinechar=\m@ne
                         394
                         395 % While \LaTeX{} does not close the files, we have to do it know.
                                   \immediate\closeout\csname tf@#1\endcsname
                         397
                                   \immediate\openin\@inputcheck \jobname.#1
                                   \immediate\openout\@partaux \jobname.#1#2
                         398
                                   \loop\unless\ifeof\@inputcheck
                         399
                                     \immediate\readline\@inputcheck to \@tempa
                         400
                                     401
                                   \repeat
                         402
                                   \immediate\closeout\@partaux
                         403
                                   \immediate\closein\@inputcheck
                         404
                         405
                                 \endgroup
                         406
                              \fi
                         407 }
              \aliastoc Internal use not the real TOC shortcut but another one.
                         408 \newcommand*{\aliastoc}[2]{%
                              \expandafter\edef\csname tocstyle@alias@TOC@#1\endcsname{#2}%
                         410 }
 \tocstyle@pre@starttoc Commands before and after the original \@starttoc.
\label{lem:command*} $$ \costyle@post@starttoc = 411 \newcommand*{\tocstyle@pre@starttoc}[1]{%} $$
                              \begingroup
                         412
                                 \expandafter\ifx\csname tocstyle@deactivated@\endcsname\relax
                         413
                                   \expandafter\ifx\csname tocstyle@deactivated@#1\endcsname\relax\relax
                         414
                                     \tocstyle@activetrue
                         415
                         416
                                   \else
                                     \tocstyle@activefalse
                         417
                                   \fi
                         418
                         419
                                \else
                                   \tocstyle@activefalse
                         420
                         421
                                \fi
                                \iftocstyle@active
                         422
                                   \let\@dottedtocline\tocstyle@dottedtocline
                         423
                                   \parskip \z@
                         424
                                   \parindent \z@
                         425
                                   \parfillskip \z@\@plus 1fil
                         426
                         427
                                   \ifcsname tocstyle@alias@TOC@#1\endcsname
                                     \edef\tocstyleAliasTOC{\csname tocstyle@alias@TOC@#1\endcsname}%
                         428
                                   \else
                         429
                                     \edef\tocstyleAliasTOC{#1}%
                         430
                         431
                                   \edef\tocstyleTOC{#1}%
                         432
```

```
433
                               \tocstyle@activate@all@l
                     434
                     435 }
                     436 \newcommand*{\tocstyle@post@starttoc}[1]{%
                             \iftocstyle@active
                     437
                               \if@filesw
                     438
                                 \ifcsname tocstyle@unumwidth@#1@\endcsname
                     439
                                   \protected@write\@auxout{}{%
                     440
                                     \protect\tocstyle@set@width{unum}{#1}{}{%
                     441
                                       \csname tocstyle@unumwidth@#1@\endcsname}%
                     442
                                   }%
                     443
                     444
                                 \fi
                     445
                                 \expandafter\let\expandafter\@tempa
                                   \csname tocstyle@depthlist@#1\endcsname
                     446
                                 \ifx\@tempa\relax\else
                     447
                                   \expandafter\@for \expandafter\@tempa\expandafter:\expandafter=\@tempa
                     448
                     449
                                     \ifcsname tocstyle@numwidth@#1@\@tempa\endcsname
                     450
                                       \protected@write\@auxout{}{%
                     451
                                          \protect\tocstyle@set@width{num}{#1}{\@tempa}{%
                     452
                                            \csname tocstyle@numwidth@#1@\@tempa\endcsname}%
                     453
                                       }%
                     454
                                     \fi
                     455
                                     \ifcsname tocstyle@skipwidth@#1@\@tempa\endcsname
                     456
                                       \protected@write\@auxout{}{%
                     457
                                          \protect\tocstyle@set@width{skip}{#1}{\@tempa}{%
                     458
                                            \csname tocstyle@skipwidth@#1@\@tempa\endcsname}%
                     459
                     460
                                       }%
                                     \fi
                     461
                                   }%
                     462
                     463
                                 \fi
                     464
                               \fi
                             \fi
                     465
                     466
                           \endgroup
                     467 }
 tocstyle@set@width
                     468 \newcommand*{\tocstyle@set@width}[4]{%
                          \expandafter\gdef\csname tocstyle@max#1width@#2@#3\endcsname{#4}%
                     470 }
                     Shortcut of the current processed TOC. Empty outside of TOCs.
       \tocstyleTOC
  \tocstyleAliasTOC 471 \newcommand*{\tocstyleTOC}{}
                     472 \newcommand*{\tocstyleAliasTOC}{}
                     Current depth of the current processed TOC entry.
     \tocstyledepth
                     473 \newcommand*{\tocstyledepth}{}
                      You may (de)activate all influence of tocstyle either for one or all TOCs.
\deactivatetocstyle
\reactivatetocstyle
```

```
474 \newif\iftocstyle@active
                   475 \newcommand*{\deactivatetocstyle}[1][]{%
                        \expandafter\let\csname tocstyle@deactivated@#1\endcsname\@empty}
                   477 \newcommand*{\reactivatetocstyle}[1][]{%
                        \expandafter\let\csname tocstyle@deactivated@#1\endcsname\relax}
                   The primary command to set the features of a depth of a TOC.
   \settocfeature
  \@settocfeature 479 \newcommand*{\@settocfeature}[1][]{%
\@@@settocfeature 480
                        \@ifnextchar[ {\@@settocfeature[{#1}]}{\@@settocfeature[{#1}]]}
                   481 }
                   482 \def\@@settocfeature[#1][#2]#3#4{%
                   483 (trace) \typeout{exclude: \tocstyle@feature@excludelist}%
                        \@expandtwoargs\in@{,#3,}{,\tocstyle@feature@excludelist,}%
                   485
                        \ifin@\else
                          \expandafter\ifcsname tocstyle@feature@#3\endcsname
                   486
                            \@namedef{tocstyle@feature@#3@#1@#2}{#4}%
                   487
                   488
                            \begingroup
                              \expandafter\let\expandafter\@tempa
                   489
                   490
                              \csname tocstyle@commandlist@#1\endcsname
                              \@expandtwoargs\in0{,tocstyle@feature@#3@#1@#2,}{,\@tempa,}%
                   491
                              \ifin@\let\@tempa\endgroup\else
                   492
                                \edef\@tempa{\endgroup
                   493
                                  \noexpand\expandafter\noexpand\ifx
                   494
                                  \noexpand\csname tocstyle@commandlist@#1\noexpand\endcsname\relax
                   495
                   496
                                    \noexpand\expandafter\noexpand\expandafter\noexpand\expandafter
                                    \noexpand\def
                   497
                                  \noexpand\else
                   498
                                    \noexpand\expandafter\noexpand\expandafter\noexpand\expandafter
                   499
                                    \noexpand\l@addto@macro
                   500
                   501
                                  \noexpand\fi
                                  \noexpand\csname tocstyle@commandlist@#1\noexpand\endcsname%
                   502
                                  {tocstyle@feature@#3@#1@#2,}}%
                   503
                              \fi
                   504
                            \@tempa
                   505
                   506
                          \else
                            \PackageError{tocstyle}{unkown feature '#3'}{%
                   507
                              You've told me to set up toc style feature '#3', \MessageBreak
                   508
                              but I don't know this feature.\MessageBreak
                   509
                   510
                              See the tocstyle manual for all known feature.\MessageBreak
                   511
                            }%
                   512
                          \fi
                        \fi
                   513
                   514 }
                   515 \newcommand*{\settocfeature}{}
                   516 \let\settocfeature\@settocfeature
                   Something like \g@addto@macro but only with local effect. While other
   \l@addto@macro
```

packages or classes may also define this, \providecommand will be used.

517 \providecommand{\l@addto@macro}[2]{%

```
\edef#1{\unexpanded\expandafter{#1#2}}%
                                                                 519 }%
                                                                   Same as above without TOC argument.
                     \settocstylefeature
                   \verb|\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\command*{\c
                                                                            \@ifnextchar[ {\@settocfeature[]}{\@settocfeature[][]}%
                                                                 522 }
                                                                 523 \newcommand*{\settocstylefeature}{}
                                                                 524 \let\settocstylefeature\@settocstylefeature
                                                                        Different commands will be defined:
                                                                   Global feature (all TOCs all depths).
ocstyle@feature@!<feature!>@@
feature@@!<feature!>@!<TOC!>@
                                                                   All depth feature for one TOC.
                                                                   All TOCs feature for one depth.
ature@@!<feature!>@@!<depth!>
                                                                   One depth of one TOC feature.
!!<feature!>@!<TOC!>@!<depth!>
                                                                   Activates the features
    \tocstyle@activate@features
                                                                 525 \newcommand*{\tocstyle@activate@features}{%
                                                                            \expandafter\ifx\csname tocstyle@depthlist@\tocstyleTOC\endcsname\relax
                                                                 526
                                                                                 \expandafter\xdef\csname tocstyle@depthlist@\tocstyleTOC\endcsname{%
                                                                 527
                                                                                     \tocstyledepth}%
                                                                 528
                                                                            \else
                                                                 529
                                                                                 \expandafter\let\expandafter\@tempa
                                                                 530
                                                                 531
                                                                                 \csname tocstyle@depthlist@\tocstyleTOC\endcsname
                                                                                 \@expandtwoargs\in@{,\tocstyledepth,}{,\@tempa,}%
                                                                 532
                                                                                 \ifin@\else
                                                                 533
                                                                                     \expandafter\xdef\csname tocstyle@depthlist@\tocstyleTOC\endcsname{%
                                                                 534
                                                                 535
                                                                                          \csname tocstyle@depthlist@\tocstyleTOC\endcsname,\tocstyledepth}%
                                                                 536
                                                                                 \fi
                                                                            \fi
                                                                 537
                                                                 538
                                                                            \expandafter\@for \expandafter\@tempa
                                                                            \expandafter:\expandafter=\tocstyle@featurelist \do
                                                                 539
                                                                 540
                                                                                 \@ifundefined{tocstyle@feature@\@tempa @\tocstyleAliasTOC @\tocstyledepth}{%
                                                                 541
                                                                                     \@ifundefined{tocstyle@feature@\@tempa @@\tocstyledepth}{%
                                                                 542
                                                                                          \@ifundefined{tocstyle@feature@\@tempa @\tocstyleAliasTOC @}{%
                                                                 543
                                                                                              \@ifundefined{tocstyle@feature@\@tempa @@}{%
                                                                 544
                                                                                                  \expandafter\let\csname tocstyle@feature@\@tempa\endcsname\relax
                                                                 545
                                                                 546
                                                                                             }{%
                                                                                                  \expandafter\let\csname tocstyle@feature@\@tempa
                                                                 547
                                                                                                  \expandafter\endcsname
                                                                 548
                                                                                                  \csname tocstyle@feature@\@tempa @@\endcsname
                                                                 549
                                                                                             }%
                                                                 550
                                                                                         }{%
                                                                 552
                                                                                              \expandafter\let\csname tocstyle@feature@\@tempa
```

\expandafter\endcsname

553

```
\csname tocstyle@feature@\@tempa @\tocstyleAliasTOC @\endcsname
             555
                         }%
                       }{%
             556
                         \expandafter\let\csname tocstyle@feature@\@tempa
             557
                         \expandafter\endcsname
             558
                         \csname tocstyle@feature@\@tempa @@\tocstyledepth\endcsname
             559
                       }%
             560
                     }{%
             561
                       \expandafter\let\csname tocstyle@feature@\@tempa
             562
                       \expandafter\endcsname
             563
                       \csname tocstyle@feature@\@tempa @\tocstyleAliasTOC @\tocstyledepth\endcsn
             564
                     }%
             565
             566
                   }%
             567 }
              Defining a new TOC style. First optional argument is a TOC style, that
\newtocstyle
              will be activated before the new definitions. Note that all new definitions
              will overwirte the parent's definitions. So a new TOC style, that defines
              all features doesn't need a parent.
             568 \newcommand*{\newtocstyle}{%
                   \@ifnextchar [{\@newtocstyle}{\@newtocstyle[]}}
             570 \newcommand*{\@newtocstyle}{}
             571 \def\@newtocstyle[#1]{%
                   \@ifnextchar [{\@@newtocstyle[{#1}]}{\@newtocstyle[{#1}]]}}
             573 \newcommand*{\@@newtocstyle}{}
             574 \def\@@newtocstyle[#1][#2]#3#4{%
                   \@ifundefined{tocstyle@style@#3}{%
             575
                     \@ifundefined{tocstyle@style@#1}{%
             576
                       \ifx \relax#1\relax\else
             577
                         \PackageError{tocstyle}{unknown parent TOC style '#1'}{%
             578
                           You've told me to inheritate parent TOC style '#1', \MessageBreak
             579
                           but there's no TOC style '#1' defined.}%
             580
             581
                       \fi
                       \expandafter\def\csname tocstyle@style@#3\endcsname{#4}%
             582
             583
                       \expandafter\def\csname tocstyle@style@#3\endcsname{%
             584
                         \edef\reserved@a{%
             585
                           \noexpand\l@addto@macro\noexpand\tocstyle@feature@excludelist{#2}%
             586
                           \noexpand\@usetocstyle{#1}%
             587
                           \noexpand\def\noexpand\tocstyle@feature@excludelist{%
             588
                             \tocstyle@feature@excludelist}%
                         }\reserved@a
             590
                         #4%
             591
             592
                       }%
                     }%
             593
             594
                   }{%
                     \PackageError{tocstyle}{TOC style '#3' already defined}{%
             595
                       You've tried to define a new TOC style '#3', \MessageBreak
             596
                       but there's already a TOC style named '#3'.}%
```

554

```
599 }
              600 \newcommand*{\tocstyle@feature@excludelist}{}
               Use the predefined TOC style. You may define \tocstyle@deprecated@style@foo
\usetocstyle
               to mark TOC style foo to be deprecated. If \tocstyle@deprecated@style@foo
\@usetocstyle
               is \@empty TOC style deprecated@foo will be used instead almost silently.
               Otherwise TOC style \tocstyle@deprecated@style@foo will be used in-
               stead and the user will be told about this change.
              601 \newcommand*{\usetocstyle}[2][]{%
                   \@ifundefined{tocstyle@deprecated@style@#2}{%
              602
                      \@ifundefined{tocstyle@style@#2}{%
              603
              604
                       \PackageError{tocstyle}{unknown TOC style '#2'}{%
                         You've told me to use TOC style '#2', \MessageBreak
              605
                         but there's no TOC style '#2' defined.}%
              606
              607
                     }{%
                       \def\settocfeature{%
              608
                         \@ifnextchar[ {\@@settocfeature[{#1}]}{\@@settocfeature[{#1}]]}%
              609
              610
                       }%
                       \let\settocstylefeature\settocfeature
              611
               Deactivate all known features for this TOC
              612
                       \expandafter\ifx\csname tocstyle@commandlist@#1\endcsname\relax
              613
                          \expandafter\expandafter\expandafter\@for
              614
                          \expandafter\expandafter\@tempa
              615
              616
                          \expandafter\expandafter:%
                          \expandafter\expandafter\expandafter=%
              617
                          \csname tocstyle@commandlist@#1\endcsname
              618
              619
                            \expandafter\let\csname \@tempa\endcsname\relax
              620
                         ጉ%
              621
               So there are no more known features for this TOC.
                          \expandafter\let\csname tocstyle@commandlist@#1\endcsname\relax
              622
               Activate all known features for this style and TOC
                       \@usetocstyle{#2}%
              624
                       \let\settocfeature\@settocfeature
              625
              626
                       \let\settocstylefeature\@settocstylefeature
                     }%
              627
                   }{%
              628
                      \expandafter\ifx\csname tocstyle@deprecated@style@#2\endcsname\@empty
              629
                       \PackageWarning{tocstyle}{%
              630
                         deprecated TOC style '#2'!\MessageBreak
              631
                         You should not longer use this style,\MessageBreak
              632
                         because it will be removed soon.\MessageBreak
              633
```

598

635

}%

You should select another TOC style}%

\usetocstyle[{#1}]{deprecated@#2}%

```
\else
                                                               636
                                                               637
                                                                                 \PackageWarning{tocstyle}{%
                                                                                     deprecated TOC style '#2'!\MessageBreak
                                                               638
                                                                                     You should use TOC style '\csname
                                                               639
                                                                                      tocstyle@deprecated@style@#2\endcsname'\MessageBreak
                                                               640
                                                                                      instead of '#2'}%
                                                               641
                                                                             \fi
                                                               642
                                                                         }%
                                                               643
                                                               644 }
                                                               645 \newcommand*{\Qusetocstyle}[1]{%
                                                                         \csname tocstyle@style@#1\endcsname
                                                               647 }
                 \tocstyle@featurelist
                                                                Comma seperated list of all known features
                                                               648 \newcommand*{\tocstyle@featurelist}{%
                                                                         pagenumberhook, entryhook, dothook, entryvskip, leaders, raggedhook, %
                                                                         spaceafternumber, parfillskip, pagenumberbox, %
                                                               650
                                                               651 }
cstyle@feature@pagenumberhook
\verb|cstyle0feature0pagenumberhook|| 652 \verb| newcommand*{\tocstyle0feature0pagenumberhook}{}| for each of the command of the com
    \tocstyle@feature@entryhook
                                                               653 \let\tocstyle@feature@pagenumberhook\relax
                                                              654 \newcommand*{\tocstyle@feature@pagenumberbox}{}
        \tocstyle@feature@dothook
                                                               655 \let\tocstyle@feature@pagenumberbox\relax
  \tocstyle@feature@entryvskip
                                                               656 \newcommand*{\tocstye@feature@entryhook}{}
        \tocstyle@feature@leaders
                                                               657 \let\tocstyle@feature@entryhook\relax
\tocstyle@feature@parfillskip
                                                               658 \newcommand*{\tocstye@feature@dothook}{}
  \tocstyle@feature@raggedhook
                                                              659 \let\tocstyle@feature@dothook\relax
tyle@feature@spaceafternumber
                                                              660 \newcommand*{\tocstye@feature@entryvskip}{}
                                                               661 \let\tocstyle@feature@entryvskip\relax
                                                               662 \newcommand*{\tocstye@feature@leaders}{}
                                                               663 \let\tocstyle@feature@leaders\relax
                                                               664 \newcommand*{\tocstye@feature@parfillskip}{}
                                                               665 \let\tocstyle@feature@parfillskip\relax
                                                               666 \newcommand*{\tocstye@feature@raggedhook}{}
                                                               667 \let\tocstyle@feature@raggedhook\relax
                                                               668 \newcommand*{\tocstye@feature@spaceafternumber}{}
                                                               669 \let\tocstyle@feature@spaceafternumber\relax
                               \iftochasdepth
                                                                Uses \t Costyle@depthlist@(TOC) to test, if the TOC has the depth
                                                                already.
                                                               670 \newcommand*{\iftochasdepth}[2]{%
                                                               671
                                                                         \begingroup
                                                                             \expandafter\let\expandafter\@tempa\csname tocstyle@depthlist@#1\endcsname
                                                               672
                                                                             \ifx\@tempa\relax
                                                               673
                                                                                 \aftergroup\@secondoftwo
                                                               674
                                                                             \else
                                                               675
                                                                                  \@expandtwoargs\in@{,#2,}{,\@tempa}%
                                                               676
                                                                                 \expandafter\aftergroup\ifin@
                                                               677
```

```
678 \@firstoftwo
679 \else
680 \@secondoftwo
681 \fi
682 \fi
683 \endgroup
684 }
```

6.2.4 Defining Some TOC Styles

```
685 \newtocstyle{standard}{%
     \settocfeature{dothook}{\normalfont}%
687
     \settocfeature[-1]{entryhook}{\bfseries}%
688
     \settocfeature[-1]{entryvskip}{2.25em\@plus\p@}%
     \settocfeature[-1]{leaders}{\hfill}%
689
     \settocfeature[0]{entryvskip}{1em\@plus\p@}%
690
     \settocfeature[0]{leaders}{\hfill}%
691
692
     \settocfeature[0]{entryhook}{%
       \begingroup
693
         \edef\@tempa{toc}%
694
         \ifx\tocstyleAliasTOC\@tempa\aftergroup\bfseries\fi
695
       \endgroup
696
     }%
697
698
     \begingroup\expandafter\expandafter\expandafter\endgroup
     \expandafter\ifx\csname l@chapter\endcsname\relax
699
       \settocfeature[1]{entryvskip}{1em\@plus\p@}%
700
       \settocfeature[1]{leaders}{\hfill}%
701
702
       \settocfeature[1]{entryhook}{%
703
         \begingroup
           \edef\@tempa{toc}%
704
           \ifx\tocstyleAliasTOC\@tempa\aftergroup\bfseries\fi
705
706
         \endgroup
707
       }%
708
     \fi
709 }
710 \begingroup\expandafter\expandafter\expandafter\endgroup
711 \expandafter\ifx\csname sectfont\endcsname\relax
     \newtocstyle{KOMAlike}{%
712
713
       \settocfeature{dothook}{\normalfont}%
       \settocfeature[-1]{entryhook}{\sffamily\bfseries}%
714
       \settocfeature[-1]{entryvskip}{2.25em\@plus\p@}%
715
       \settocfeature[-1]{leaders}{\hfill}%
716
717
       \settocfeature[0]{entryvskip}{1em\@plus\p@}%
       \settocfeature[0]{leaders}{\hfill}%
718
719
       \settocfeature[0]{entryhook}{%
         \begingroup
720
           \edef\@tempa{toc}%
721
           \ifx\tocstyleAliasTOC\@tempa\aftergroup\sffamily\bfseries\fi
722
723
         \endgroup
```

```
724
       \begingroup\expandafter\expandafter\expandafter\endgroup
725
       \expandafter\ifx\csname l@chapter\endcsname\relax
726
         \settocfeature[1]{entryvskip}{1em\@plus\p@}%
727
728
         \settocfeature[1]{leaders}{\hfill}%
         \settocfeature[1]{entryhook}{%
729
           \begingroup
730
              \edef\@tempa{toc}%
731
              \ifx\tocstyleAliasTOC\@tempa\aftergroup\sffamily\bfseries\fi
732
733
           \endgroup
         }%
734
735
       \fi
736
     }
737 \else
     \newtocstyle{KOMAlike}{%
738
       \settocfeature{dothook}{\normalfont}%
739
       \settocfeature[-1]{entryhook}{\sectfont}%
740
741
       \settocfeature[-1]{entryvskip}{2.25em\@plus\p@}%
       \settocfeature[-1]{leaders}{\hfill}%
742
       \settocfeature[0]{entryvskip}{1em\@plus\p@}%
743
       \settocfeature[0]{leaders}{\hfill}%
744
       \settocfeature[0]{entryhook}{%
745
746
         \begingroup
747
           \edef\@tempa{toc}%
           \ifx\tocstyleAliasTOC\@tempa\aftergroup\sectfont\fi
748
         \endgroup
749
       }%
750
751
       \begingroup\expandafter\expandafter\expandafter\endgroup
       \expandafter\ifx\csname l@chapter\endcsname\relax
752
         \settocfeature[1]{entryvskip}{1em\@plus\p@}%
753
         \settocfeature[1]{leaders}{\hfill}%
754
755
         \settocfeature[1]{entryhook}{%
           \begingroup
756
              \edef\@tempa{toc}%
757
              \ifx\tocstyleAliasTOC\@tempa\aftergroup\sectfont\fi
758
           \endgroup
759
760
         }%
       \fi
761
762
     }
764 \newcommand*{\tocstyle@deprecated@style@KOMAScript}{KOMAlike}%
765 \newtocstyle[KOMAlike]{classic}{%
     \settocfeature{pagenumberhook}{\normalfont\normalcolor}%
     \settocfeature{raggedhook}{\raggedright}%
767
768 }
769 \newtocstyle[classic][leaders]{allwithdot}{}
770 \newtocstyle[allwithdot] {noonewithdot} {%
     \settocfeature{leaders}{\hfill}%
772 }
```

```
773 \newtocstyle[classic][leaders]{\nopagecolumn}{%
774 \settocfeature{leaders}{\quad}%
775 \settocfeature{parfillskip}{\z@ plus 1fil}%
776 \settocfeature{pagenumberbox}{\hbox}%
777 }
```

6.2.5 Defining Some TOC Styles

```
Loading a optional configuration file.

778 \InputIfFileExists{tocstyle.cfg}{%

779 \PackageInfo{tocstyle}{using tocstyle.cfg}%

780 }{%

781 \PackageInfo{tocstyle}{no tocstyle.cfg found}%

782 }
```

A Examples for the Different TOC Styles

Here you will find the table of contents of this document set in the different TOC styles. All are set with option tocindentauto.

A.1 Graduated Versions

First of all all graduated versions of the table of contents

A.1.1 standard with Option tocgraduated

Τ	How It Works	Т
2	Optional Features	2
3	Using TOC Styles	3
4	Setting-up Single Features	5
5	Defining New TOC Styles	5
6	Implementation	7
	6.1 Option	7
	6.2 Body	9
	6.2.1 Redefining LATEX Kernel Macros	9
	6.2.2 Redefining Class Macros	13
	6.2.3 New Macros	16
	6.2.4 Defining Some TOC Styles	23
	6.2.5 Defining Some TOC Styles	25
\mathbf{A}	Examples for the Different TOC Styles	26
	A.1 Graduated Versions	26
	A.2 Flat Versions	32
	A.3 Fullflat Versions	38

$\textbf{A.1.2} \ \texttt{KOMAlike} \ \textbf{with} \ \textbf{Option} \ \texttt{tocgraduated}$

1	How It Works	1
2	Optional Features	2
3	Using TOC Styles	3
4	Setting-up Single Features	5
5	Defining New TOC Styles	5
6	Implementation	7
	6.1 Option	7
	6.2 Body	9
	6.2.1 Redefining LATEX Kernel Macros	9
	6.2.2 Redefining Class Macros	13
	6.2.3 New Macros	16
	6.2.4 Defining Some TOC Styles	23
	6.2.5 Defining Some TOC Styles	25
Α	Examples for the Different TOC Styles	26
	A.1 Graduated Versions	26
	A.2 Flat Versions	32
	A 3 Fullflat Versions	38

$\textbf{A.1.3} \ \texttt{classic} \ \textbf{with} \ \textbf{Option} \ \texttt{tocgraduated}$

1	How It Works	1
2	Optional Features	2
3	Using TOC Styles	3
4	Setting-up Single Features	5
5	Defining New TOC Styles	5
6	•	7
	6.1 Option	7
	6.2 Body	9
	6.2.1 Redefining LATEX Kernel Macros	9
	6.2.2 Redefining Class Macros	13
	6.2.3 New Macros	16
	6.2.4 Defining Some TOC Styles	23
	6.2.5 Defining Some TOC Styles	25
Α	Examples for the Different TOC Styles	26
	A.1 Graduated Versions	26
	A.2 Flat Versions	32
	A 3 Fullflat Versions	38

$\textbf{A.1.4} \hspace{0.1cm} \textbf{allwithdot} \hspace{0.1cm} \textbf{with} \hspace{0.1cm} \textbf{Option} \hspace{0.1cm} \textbf{tocgraduated}$

1	How It Works	1
2	Optional Features	2
3	Using TOC Styles	3
4	Setting-up Single Features	5
5	Defining New TOC Styles	5
6	Implementation	7
	6.1 Option	7
	6.2 Body	9
	6.2.1 Redefining LATEX Kernel Macros	9
	6.2.2 Redefining Class Macros	13
	6.2.3 New Macros	16
	6.2.4 Defining Some TOC Styles	23
	6.2.5 Defining Some TOC Styles	25
Α	Examples for the Different TOC Styles	26
	A.1 Graduated Versions	26
	A.2 Flat Versions	32
	A.3 Fullflat Versions	38

A.1.5 noonewithdot with Option tocgraduated

1	How It Works	1
2	Optional Features	2
3	Using TOC Styles	3
4	Setting-up Single Features	5
5	Defining New TOC Styles	5
6	Implementation	7
	6.1 Option	7
	6.2 Body	9
	6.2.1 Redefining LATEX Kernel Macros	9
	6.2.2 Redefining Class Macros	13
	6.2.3 New Macros	16
	6.2.4 Defining Some TOC Styles	23
	6.2.5 Defining Some TOC Styles	25
Α	Examples for the Different TOC Styles	26
	A.1 Graduated Versions	26
	A.2 Flat Versions	32
	A.3 Fullflat Versions	38

A.1.6 nopagecolumn with Option tocgraduated

- 1 How It Works 1**Optional Features** 3 Using TOC Styles 3 4 Setting-up Single Features 5 **Defining New TOC Styles** 5 **6** Implementation 76.1 Option 7 6.2 Body 9 6.2.1Redefining LATEX Kernel Macros 9 6.2.2 Redefining Class Macros 13 6.2.3 New Macros 16 6.2.4 Defining Some TOC Styles 23 Defining Some TOC Styles 25 6.2.5
- A Examples for the Different TOC Styles 26
 - A.1 Graduated Versions 26
 - A.2 Flat Versions 32
 - A.3 Fullflat Versions 38

A.2 Flat Versions

Now, all flat versions of the table of contents

$\boldsymbol{A.2.1}$ standard with \boldsymbol{Option} tocflat

1	How It Works	1
2	Optional Features	2
3	Using TOC Styles	3
4	Setting-up Single Features	5
5	Defining New TOC Styles	5
6	Implementation	7
6.1	Option	7
6.2		9
6.2	2.1 Redefining LATEX Kernel Macros	9
	2.2 Redefining Class Macros	13
	2.3 New Macros	16
	2.4 Defining Some TOC Styles	23
6.2		$\frac{1}{25}$
\mathbf{A}	Examples for the Different TOC Styles	2 6
A.	1 Graduated Versions	26
Α.	2 Flat Versions	32
	3 Fullflat Versions	38

$\boldsymbol{A.2.2}$ KOMAlike with \boldsymbol{Option} tocflat

1	How It Works	1
2	Optional Features	2
3	Using TOC Styles	3
4	Setting-up Single Features	5
5	Defining New TOC Styles	5
6	Implementation	7
6.1	Option	7
6.2	Body	9
6.2	-	9
6.2		13
6.2		16
6.2		23
6.2		25
Α	Examples for the Different TOC Styles	26
Α.	1 Graduated Versions	26
A.:	2 Flat Versions	32
Α.:	3 Fullflat Versions	38

A.2.3 classic with $Option\ \texttt{tocflat}$

1	How It Works	1
2	Optional Features	2
3	Using TOC Styles	3
4	Setting-up Single Features	5
5	Defining New TOC Styles	5
6	Implementation	7
6.1	Option	7
6.2	Body	9
6.2	•	9
6.2	G E	13
6.2	6	16
6.2		23
6.2		25
Α	Examples for the Different TOC Styles	26
Α.	1 Graduated Versions	26
Α.:	2 Flat Versions	32
Α :	3 Fullflat Versions	38

$\textbf{A.2.4} \hspace{0.1cm} \textbf{allwithdot} \hspace{0.1cm} \textbf{with} \hspace{0.1cm} \textbf{Option} \hspace{0.1cm} \textbf{tocflat}$

1	How It Works	1
2	Optional Features	2
3	Using TOC Styles	3
4	Setting-up Single Features	5
5	Defining New TOC Styles	5
6	•	7
6.1	Option	7
6.2	Body	9
6.2	.1 Redefining LATEX Kernel Macros	9
6.2		3
6.2	-	6
6.2		3
6.2	e v	
Α	Examples for the Different TOC Styles	6
	1 Graduated Versions	6
	2 Flat Versions	2
Α.:	B Fullflat Versions	8

$\boldsymbol{A.2.5}$ noonewithdot with \boldsymbol{Option} tocflat

1 How It Works	1
2 Optional Features	2
3 Using TOC Styles	3
4 Setting-up Single Features	5
5 Defining New TOC Styles	5
6 Implementation	7
6.1 Option	7
6.2 Body	S
6.2.1 Redefining LATEX Kernel Macros	S
6.2.2 Redefining Class Macros	13
6.2.3 New Macros	16
6.2.4 Defining Some TOC Styles	23
6.2.5 Defining Some TOC Styles	25
A Examples for the Different TOC Styles	26
A.1 Graduated Versions	26
A.2 Flat Versions	32
A 3 Fullflat Versions	38

A.2.6 nopagecolumn with Option tocflat

1 How It Works 1**Optional Features** 3 Using TOC Styles 3 Setting-up Single Features 5 **Defining New TOC Styles** 5 **6** Implementation 76.1 Option 7 6.2 Body 9 6.2.1Redefining LATEX Kernel Macros 9 6.2.2Redefining Class Macros 13 6.2.3 New Macros 16 6.2.4 Defining Some TOC Styles 23 6.2.5Defining Some TOC Styles 25

A Examples for the Different TOC Styles 20

- A.1 Graduated Versions 26
- A.2 Flat Versions 32
- A.3 Fullflat Versions 38

A.3 Fullflat Versions

Now, all full-flat versions of the table of contents

$A.3.1\ \mbox{standard}$ with $Option\ \mbox{tocfullflat}$

1 How It Works	1
2 Optional Features	2
3 Using TOC Styles	3
4 Setting-up Single Features	5
5 Defining New TOC Styles	5
6 Implementation	7
6.1 Option	7
6.2 Body	9
6.2.1 Redefining LATEX Kernel Macros	9
6.2.2 Redefining Class Macros	13
6.2.3 New Macros	16
6.2.4 Defining Some TOC Styles	23
6.2.5 Defining Some TOC Styles	25
A Examples for the Different TOC Styles	26
A.1 Graduated Versions	26
A.2 Flat Versions	32
A 3 Fullflat Versions	38

$\textbf{A.3.2} \ \, \texttt{KOMAlike} \,\, \textbf{with} \,\, \textbf{Option} \,\, \texttt{tocfullflat}$

1 How It Works	1
2 Optional Features	2
3 Using TOC Styles	3
4 Setting-up Single Features	5
5 Defining New TOC Styles	5
6 Implementation	7
6.1 Option	7
6.2 Body	9
6.2.1 Redefining LATEX Kernel Macros	9
6.2.2 Redefining Class Macros	13
6.2.3 New Macros	16
6.2.4 Defining Some TOC Styles	23
6.2.5 Defining Some TOC Styles	$\frac{25}{25}$
A Examples for the Different TOC Styles	26
A.1 Graduated Versions	26
A.2 Flat Versions	32
A.3 Fullflat Versions	38

$\textbf{A.3.3} \ \textbf{classic} \ \textbf{with} \ \textbf{Option} \ \textbf{tocfullflat}$

1 How It Works	1
2 Optional Features	2
3 Using TOC Styles	3
4 Setting-up Single Features	5
5 Defining New TOC Styles	5
6 Implementation	7
6.1 Option	7
6.2 Body	9
6.2.1 Redefining LATEX Kernel Macros	9
6.2.2 Redefining Class Macros	13
6.2.3 New Macros	16
6.2.4 Defining Some TOC Styles	23
6.2.5 Defining Some TOC Styles	25
A Examples for the Different TOC Styles	26
A.1 Graduated Versions	26
A.2 Flat Versions	32
A.3 Fullflat Versions	38

$\textbf{A.3.4} \hspace{0.1cm} \textbf{allwithdot} \hspace{0.1cm} \textbf{with} \hspace{0.1cm} \textbf{Option} \hspace{0.1cm} \textbf{tocfullflat}$

1 How It Works	1
2 Optional Features	2
3 Using TOC Styles	3
4 Setting-up Single Features	5
5 Defining New TOC Styles	5
6 Implementation	
6.1 Option	7
6.2 Body	9
6.2.1 Redefining LATEX Kernel Macros	9
6.2.2 Redefining Class Macros	
6.2.3 New Macros	
6.2.4 Defining Some TOC Styles	
6.2.5 Defining Some TOC Styles	25
A Examples for the Different TOC Styles	26
A.1 Graduated Versions	
A.2 Flat Versions	
A.3 Fullflat Versions	

$\boldsymbol{\mathsf{A.3.5}}$ noonewithdot with $\boldsymbol{\mathsf{Option}}$ tocfullflat

1 How It Works	1
2 Optional Features	2
3 Using TOC Styles	3
4 Setting-up Single Features	5
5 Defining New TOC Styles	5
6 Implementation	7
6.1 Option	7
6.2 Body	S
6.2.1 Redefining LATEX Kernel Macros	S
6.2.2 Redefining Class Macros	13
6.2.3 New Macros	16
6.2.4 Defining Some TOC Styles	23
6.2.5 Defining Some TOC Styles	25
A Examples for the Different TOC Styles	26
A.1 Graduated Versions	26
A.2 Flat Versions	32
A.3 Fullflat Versions	38

$\textbf{A.3.6} \ \, \text{nopagecolumn with Option tocfullflat}$

1 How It Works 1 2 Optional Features 3 Using TOC Styles 3 4 Setting-up Single Features 5 5 Defining New TOC Styles 5**6** Implementation 7 6.1 Option 7 6.2 Body 9 6.2.1 Redefining LATEX Kernel Macros 9 6.2.2 Redefining Class Macros 13 6.2.3 New Macros 16 6.2.4 Defining Some TOC Styles 23 6.2.5 Defining Some TOC Styles 25 A Examples for the Different TOC Styles A.1 Graduated Versions 26 A.2 Flat Versions 32

A.3 Fullflat Versions 38