

# The `tocbibind` package\*

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2009/09/04

## Abstract

The `tocbibind` package can be used to add document elements like a bibliography or an index to the Table of Contents. The package is designed to work with the four standard `book`, `report`, `article` and `proc` classes, and to a limited extent with the `ltxdoc` class. Results with other classes may be problematical. The package has been tested with the `tocloft` package, but has not been tested with other packages that change the definitions of the `\chapter*` or `\section*` commands.

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## 1 Introduction

n Questions about adding the bibliography to the Table of Contents seem to pop up fairly regularly on the `comp.text.tex` newsgroup.

The `tocbibind` package provides a solution for automatically inserting references to a bibliography or an index, or other headed document elements into the Table of Contents. (`tocbibind` is meant to be shorthand for ‘Table of Contents, Bibliography, Index, etc’). Portions of the package were developed as part of a class and package bundle for typesetting ISO standards [Wil96]. This manual is typeset according

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\*This file (`tocbibind.dtx`) has version number v1.5i, last revised 2009/09/04.

to the conventions of the  $\text{\LaTeX}$  DOCSTRIP utility which enables the automatic extraction of the  $\text{\LaTeX}$  macro source files [GMS94].

Section 2 describes the usage of the package. Commented source code for the package is in Section 3.

## 2 The `tocbibind` package

The `tocbibind` package enables the titles of the Table of Contents, the List of Figures, the List of Tables, the Bibliography and the Index all to be added to the Table of Contents. By default, all of these document elements, if they exist, will be incorporated into the Table of Contents (ToC for short). Package options are available to switch off any of these inclusions.

- `notbib` Disables the inclusion of the Bibliography.
- `notindex` Disables the inclusion of the Index (inclusion of the Index of an `ltxdoc` class document is permanently disabled).
- `nottoc` Disables the inclusion of the ToC.
- `notlot` Disables the inclusion of the List of Tables.
- `notlof` Disables the inclusion of the List of Figures.
- `chapter` Use chapter-level headings, if possible.
- `section` Use section-level headings, if possible.
- `numbib` Number the Bibliography heading (default is no number).
- `numindex` Number the Index heading (default is no number).
- `other` Use a non-traditional heading command. This option effectively requires the use of the `\tocotherhead` command.
- `none` Disables everything.

The package is designed to work with the standard  $\text{\LaTeX}$  document classes `book`, `report`, `article`, `proc` and `ltxdoc` class (which is based to a large extent on the `article` class). In the `article`, `proc` and `ltxdoc` classes  $\text{\LaTeX}$  uses the `\section*` heading style for the bibliography etc., while for the other two classes it uses the `\chapter*` heading style. `tocbibind` honours these conventions. However, if the package is used with another class (perhaps with a class for typesetting theses which has different conventions), then the `chapter` or `section` options can be used to select the appropriate style (but the class must define `\chapter*` and `\@makeschapterhead`, or `\section*` respectively).

The standard classes, except for `ltxdoc`, have a feature whereby the height of the title for an index is at a different height than any other in a document (latex bug 3126). The `tocbibind` package disables this feature. The disablement has

the side effect that the `\columnseprule` and `\columnsep` lengths can be set via `\setlength` to alter the column separation and the thickness of a rule between the two columns in the index. The effect of using the `none` option is to limit any changes to the single one of disabling this standard feature.

`\tocotherhead` In the standard L<sup>A</sup>T<sub>E</sub>X classes the bibliography and index headings are either both defined in terms of the `\chapter*` command or in terms of the `\section*` command. The package assumes that any class, other than the standard classes already mentioned, will either use code from the standard classes for implementing the bibliography and other headings, or will use very similar code. Some classes (and maybe packages) change the names of the heading commands. One example that I am aware of uses `\clause` instead of `\section`, `\sclause` instead of `\subsection` and so on. If your document's headings are defined like this and the same heading level is used for the bibliography, etc., then you can use the `other` option and the `\tocotherhead{<headingname>}` command to cater for this. If your document uses `\clause` then put `\tocotherhead{clause}` in the preamble after loading the package. The package then assumes that the bibliography heading is defined in terms of `\clause*`.

If you use the `\tocotherhead` command, then it overrides any `chapter` or `section` option.

`\tocbibname` The package attempts to pick up the name for the Bibliography from the class definition. (Note that the `article` class and its derivatives stores the name text in the `\refname` whilst the `book` and `report` classes store the name in `\bibname`). This package uses `\tocbibname` to store the name of the bibliography.

`\setindexname` These commands set the heading texts for the index, ToC, list of tables and list  
`\settocname` of figures. When used with the three standard classes, the heading text is picked up  
`\setlotname` from the `\indexname`, `\contentsname`, `\listtablename` and `\listfigurename`  
`\setlofname` commands respectively. The heading texts can be changed by changing the stan-  
`\settocbibname` dard commands, or by using `\setindexname{<name>}`, and similarly for the other  
headings. Thus, the following two lines of code have the same effect:

```
\renewcommand{\listfigurename}{Figures}
\setlofname{Figures}
```

*Note that these commands replace the `\toc...name` commands that were in version 1.1.*

## 2.1 Numbering the List of Figures, etc.

Some authors like, or are required, to number the Listof headings. Some commands are provided to simplify doing this.

`\simplechapter` In chaptered documents, the Listof headings are effectively typeset as `\chapter*{<name>}`.  
`\simplechapterdelim` The natural way to get numbered headings would be to typeset them as  
`\restorechapter` `\chapter{<name>}` but this has the potential disadvantage that the word ‘Chapter’, or equivalent, would be written before the heading, which is probably not what is required. The `\simplechapter[<name>]` command modifies any subsequent `\chapter` commands so that the result looks like that of `\chapter*` except

that the chapter number is put on the same line as the title and the value of `\simplechapterdelim` is typeset immediately after the number. By default, `\simplechapterdelim` is empty. If the optional  $\langle name \rangle$  argument is present, the  $\langle name \rangle$  is typeset before the number. For example:

```
\renewcommand{\simplechapterdelim}{:}
\simplechapter[Chap]
```

will result in `\chapter{First chapter}` being typeset like:

**Chap 1: First chapter.**

The `\restorechapter` command resets any subsequent `\chapter` commands to their default behaviour.

`\tocchapter` Internally, the Listof commands in the `tocbibind` package use `\toc@chapter` for typesetting the Listof headings in chaptered documents and `\toc@section` for non-chaptered documents. The `\tocchapter` command modifies the `\toc@chapter` command to use a ‘simple chapter’ heading. The `\tocsection` command modifies `\toc@section` to typeset using `\section` instead of `\section*`.

For example, to get a numbered List of Figures heading in a chaptered document, put the following in the preamble:

```
\renewcommand{\listoffigures}{\begingroup
\tocchapter
\tocfile{\listfigurename}{lof}
\endgroup}
```

while to get a numbered List of Tables in a non-chaptered document:

```
\renewcommand{\listoftables}{\begingroup
\tocsection
\tocfile{\listtablename}{lot}
\endgroup}
```

More generally, to number the Table of Contents in a (non-)chaptered document you can do:

```
\renewcommand{\tableofcontents}{\begingroup
\tocsection
\tocchapter
\tocfile{\contentsname}{toc}
\endgroup}
```

The `\begingroup \endgroup` pairing keeps the changes local.

## 2.2 Page styles

The package, by default, supports the standard `empty`, `plain`, and `headings` page styles. Other page styles, for example ones you specify yourself via the `fancyhdr` package, are indirectly supported.

As an example, assume that you are using the `fancyhdr` package and you use a `fancy` pagestyle in a `book/report` class document like:

```
\pagestyle{fancy}
\renewcommand{\chaptermark}[1]{\markboth{\thechapter.\ #1}{}}
```

then you will find that the chapter titles in headers are in normalcase but the ToC, etc., headers are still in uppercase.

`\tocetcmak` In this package, the marks for the ToC, LoF... headers are specified via the command `\tocetcmak{<head>}`. To match the `fancy` pagestyle this must be redefined, like:

```
\pagestyle{fancy}
\renewcommand{\chaptermark}[1]{\markboth{\thechapter.\ #1}{}}
\renewcommand{\tocetcmak}[1]{\markboth{#1}{}}
```

which will give normalcase headers for the ToC, LoF... As these are not normally numbered, it would be a misjudgement to try and get a non-existent chapter number into the header.

Documents with sections, but not chapters, can be treated in a similar manner by redefining `\tocetcmak` appropriately.

## 2.3 Package Defined Listof...

There are packages, such as `listings` and `ccaption`, that provide new Listof lists. These can be handled by the `tocbind` package in a similar manner to the usual Listofs. Two examples are given below.

The `listings` package version 0.2 provides a `\lstlistoflistings` command to print a list of listings. The header name for this list is in `\lstlistingname` and the listing file has the extension `lol`. This can be treated just like the `\listoffigure`, etc., commands. To add the List of Listings header to the ToC do:

```
\renewcommand{\lstlistoflistings}{\begingroup
  \tocfile{\lstlistingname}{lol}
\endgroup}
```

and to number the Listof heading do:

```
\renewcommand{\lstlistoflistings}{\begingroup
  \tocsection
  \tocchapter
  \tocfile{\lstlistingname}{lol}
\endgroup}
```

The `ccaption` package enables authors to define new kinds of floats (together with their captions) and Listof for each new kind of float. The command to define a

new float is essentially `\newfloatlist{⟨fenv⟩}{⟨ext⟩}{⟨listname⟩}{⟨capname⟩}`, where *⟨fenv⟩* is the name of the new float environment and *⟨ext⟩* is the file extension for the listof file. The typesetting of the Listof listing is called by the command `\listoffenv`, where *fenv* is the name *⟨fenv⟩*. For example, a new float environment for diagrams could be defined via

```
\newfloatlist{diagram}{dia}{List of Diagrams}{Diagram}, and the Listof
called for by
\listofdiagram
```

In this case, to add the ‘List of Diagrams’ to the ToC it is necessary to define a new listof command, and use this in place of the `\listoffenv`. For the diagram example this could be (unnumbered):

```
\newcommand{\listofdia}{\begingroup
  \tocfile{List of Diagrams}{dia}
\endgroup}
```

and correspondingly for a numbered version:

```
\newcommand{\listofdia}{\begingroup
  \tocsection
  \tocchapter
  \tocfile{List of Diagrams}{dia}
\endgroup}
```

and then use `\listofdia` instead of `\listofdiagram`.

## 2.4 Abstracts

On rare occasions a publisher may want an abstract listed in the ToC. This package does not provide for that, partly because it is easier to do than the other headings. Just proceed along the lines below, where `section` might have to be `chapter`, and if you are using the `hyperref` package you have to use the `\phantomsection` macro.

```
\begin{abstract}
% \phantomsection % required if using hyperref
\addcontentsline{toc}{section}{\abstractname}
... rest of the abstract
```

## 3 The package code

Announce the name and version of the package, which requires L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub>.

```
1 ⟨*usc⟩
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesPackage{toctbibind}[2009/09/04 v1.5i extra ToC listings]
4
```

`\PRWPackageNote` These two commands write a package Note to the terminal and log file. Use  
`\PRWPackageNoteNoLine` as `\PRWPackageNote{<package name>}{<note text>}`. The NoLine version does not show the line number. The commands are intermediate between the kernel `\PackageWarning` and `\PackageInfo` commands. I have provided them as other packages (of mine) may also incorporate them. The code is based on `lterror.dtx`.

```

5 \providecommand{\PRWPackageNote}[2]{%
6   \GenericWarning{%
7     (#1)\@spaces\@spaces\@spaces\@spaces
8   }{%
9     Package #1 Note: #2%
10  }%
11 }
12 \providecommand{\PRWPackageNoteNoLine}[2]{%
13   \PRWPackageNote{#1}{#2@gobble}%
14 }
15

```

`\@bibquit` We need to know what sectional divisions are supported.

```

16 \newcommand{\@bibquit}{}
17 \newif\if@bibchapter
18 \@ifundefined{chapter}{}%
19 \@bibchapterfalse
20 \@ifundefined{section}{}%
21   \PackageWarning{tocbibind}%
22     {I don't recognize any sectional divisions.\MessageBreak
23     I hope you have used the 'other' option\MessageBreak
24     otherwise I'll ignore the package}
25   \renewcommand{\@bibquit}{\endinput}
26   }{\PRWPackageNoteNoLine{tocbibind}{The document has section divisions}}
27 }{\@bibchaptertrue
28   \PRWPackageNoteNoLine{tocbibind}{The document has chapter divisions}}
29

```

`\if@inltxdoc` This is used as a flag for the ltxdoc class. This has a particular kind of index that I am not going to mess with.

```

30 \newif\if@inltxdoc
31 \@ifclassloaded{ltxdoc}{\@inltxdoctrue}{\@inltxdocfalse}
32

```

`\if@dotocbib` A set of booleans for deciding what is to go into the ToC. By default add every-  
`\if@dotocind` thing.

```

33 \newif\if@dotocbib\@dotocbibtrue
34 \newif\if@dotocind\@dotocindtrue
35 \newif\if@dotocloc\@dotoclocfalse
36 \newif\if@dotoclot\@dotoclottrue
37 \newif\if@dotoclof\@dotocloftrue
38

```

`\if@donumbib` A set of booleans for deciding whether or not to produce numbered headings  
`\if@donumindex` (default is to do unnumbered headings).

```
39 \newif\if@donumbib\@donumbibfalse
40 \newif\if@donumindex\@donumindexfalse
```

`\if@dot@cb@bsection` If TRUE, use a section heading for the bibliography no matter what the main document divisions are.

```
41 \newif\if@dot@cb@bsection\@dot@cb@bsectionfalse
42
```

Now we can do the options. Most of them are easy.

```
43 \DeclareOption{section}{\@bibchapterfalse}
44 \DeclareOption{notbib}{\@dotocbibfalse}
45 \DeclareOption{notindex}{\@dotocindfalse}
46 \DeclareOption{nottoc}{\@dotoclocfalse}
47 \DeclareOption{notlot}{\@dotoclotfalse}
48 \DeclareOption{notlof}{\@dotoclofffalse}
49 \DeclareOption{numbib}{\@donumbibtrue}
50 \DeclareOption{numindex}{\@donumindextrue}
51
```

The `chapter` option needs to check whether or not the chapter heading commands are defined. If they are not, then go with the section level headings.

```
52 \DeclareOption{chapter}{%
53   \if@bibchapter\else
54     \PackageWarning{tocbibind}%
55       {Chapters are undefined, using section instead}
56   \fi}
57
```

The other option makes `\@bibquit` a no-op and cancels any chapter based processing.

```
58 \DeclareOption{other}{\renewcommand{\@bibquit}{}
59   \@bibchapterfalse}
```

The `none` option turns everything off.

```
60 \DeclareOption{none}{%
61   \@dotocbibfalse
62   \@dotocindfalse
63   \@dotoclocfalse
64   \@dotoclotfalse
65   \@dotoclofffalse
66   \@donumbibfalse
67   \@donumindexfalse
68 }
```

Process the options now, and then quit if necessary.

```
69 \ProcessOptions\relax
70 \@bibquit
71
```



Issue a note about the heading style being used.

```
72 \if@bibchapter
73 \PRWPackageNoteNoLine{tocbibind}{Using chapter style headings, unless overridden}
74 \else
75 \PRWPackageNoteNoLine{tocbibind}{Using section or other style headings}
76 \fi
```

Ensure that the index is not processed if it is an ltxdoc class.

```
77 \if@inltxdoc \dotocindfalse \fi
78
```

`\@tocextra` `\@tocextra` is the internal command to store the heading command name.  
`\tocotherhead` `\tocotherhead{<name>}` is the user command to set the heading command `<name>` (without the backslash). The default is section.

```
79 \newcommand{\@tocextra}{section}
80 \newcommand{\tocotherhead}[1]{\renewcommand{\@tocextra}{#1}}
81
```

`\phantomsection` `\phantomsection` is needed if the hyperref package is used to give some sort of mark for `\addcontentsline`. Read the hyperref documentation to see if you can work out why.

```
82 \providecommand{\phantomsection}{}
83
```

`\tocetcmak` Utility macros, as the code that they represent gets used several times over. They deal with marking for page headers (code taken from `classes.dtx`), and adding starred sectional headings to the ToC.

`\toc@section` `\tocetcmak{<text>}` is the default mark code as called by sectional headings.

`\toc@headstar` `\prw@mkboth` `\prw@mkboth{<text>}` is used later for the ToC headings.

```
84 \newcommand{\tocetcmak}[1]{%
85 \mkboth{\MakeUppercase{#1}}{\MakeUppercase{#1}}}
86 \newcommand{\prw@mkboth}[1]{\tocetcmak{#1}}
87
```

`\toc@section{<sec>}{<text>}` is a generalised version of `\sec*{<text>}` which also makes an entry of `<text>` into the ToC, where `<sec>` is the name of a sectional division (with no backslash). `\toc@headstar{<sec>}{<text>}` is similar except that it makes no entry into the ToC.

```
88 \newcommand{\toc@section}[2]{%
89 \@nameuse{#1}*{#2\prw@mkboth{#2}}
90 \phantomsection
91 \addcontentsline{toc}{#1}{#2}}
92
93 \newcommand{\toc@headstar}[2]{%
94 \@nameuse{#1}*{#2}}
95
```

`\toc@chapter` `\toc@chapter{<text>}` is equivalent to `\chapter*{<text>}` except that it makes an entry into the ToC.

Until version 1.5f the chapter part of the code was `\chapter*{#1\prw@mkboth{#1}}`. On 2003/03/12 James Szinger<sup>1</sup> wrote that this failed for a bibliography in a two column book; the page headings for the previous chapter continued through the bibliography! James suggested that the mark part should be moved outside the chapter part (as is now done). I have no idea why there should have been this problem. As part of looking at it I even replaced the `\toc@chapter` as used in the `thebibliography` environment with the standard book class definition, which failed as well.

```
96 \newcommand{\toc@chapter}[1]{%
97   \chapter*{#1}\prw@mkboth{#1}
98   \phantomsection
99   \addcontentsline{toc}{chapter}{#1}}
100
```

`\tocbibname` This holds the text for the Bibliography heading. We try and get the text from the class (either `\bibname` or `\refname`).

```
101 \ifx\bibname\undefined
102   \ifx\refname\undefined
103     \newcommand{\tocbibname}{References}
104   \else
105     \newcommand{\tocbibname}{\refname}
106   \fi
107 \else
108   \newcommand{\tocbibname}{\bibname}
109 \fi
110
```

`\setindexname` The remaining heading texts are simpler as we only need to check if their respective names are defined in the class. Note that these commands in version 1.2 have been changed from version 1.1 in order to integrate with the `tocloft` package (which operates with the `\contentsname` etc commands).

```
\settocbibname
111 \providecommand{\indexname}{Index}
112 \newcommand{\setindexname}[1]{\renewcommand{\indexname}{#1}}
113 \providecommand{\contentsname}{Contents}
114 \newcommand{\settocname}[1]{\renewcommand{\contentsname}{#1}}
115 \providecommand{\listtablename}{List of Tables}
116 \newcommand{\setlotname}[1]{\renewcommand{\listtablename}{#1}}
117 \providecommand{\listfigurename}{List of Figures}
118 \newcommand{\setlofname}[1]{\renewcommand{\listfigurename}{#1}}
119 \newcommand{\settocbibname}[1]{\renewcommand{\tocbibname}{#1}}
120
```

The rest is just hacking the various environments and commands from `classes.dtx`.

---

<sup>1</sup>szinger@lanl.gov

Following a suggestion by Donald Arseneau (CTT, ‘Re: memoir, natbib, and chapterbib’, 9 Jan 2003), use `\bibsection` as a hook into `thebibliography` for the style of the heading.

`\t@cb@bchapsection` Internal macros holding the heading for `thebibliography`.

```

\t@cb@bsection 121 \newcommand{\t@cb@bchapsec}{%
122   \if@bibchapter
123     \if@donumbib
124       \chapter{\tocbibname}%
125     \else
126       \toc@chapter{\tocbibname}%
127     \fi
128   \else
129     \if@donumbib
130       \@nameuse{\@tocextra}{\tocbibname}%
131     \else
132       \toc@section{\@tocextra}{\tocbibname}%
133     \fi
134   \fi}
135 \newcommand{\t@cb@bsection}{%
136   \if@donumbib
137     \@nameuse{\@tocextra}{\tocbibname}%
138   \else
139     \toc@section{\@tocextra}{\tocbibname}%
140   \fi}
141

```

Redefine `thebibliography`, but only if requested. Take care that the `natbib` package has not already modified the environment, noting that `natbib` defines and uses `\bibsection`.

```

142 \if@dotocbib
143   \ifpackageloaded{natbib}{}{% natbib not loaded

```

The `natbib` package has not been used (yet), so go ahead and change the environment.

`\bibsection` Macro holding heading for `thebibliography`.

```

144   \newcommand{\bibsection}{\t@cb@bchapsec}

```

`thebibliography`

```

145   \renewenvironment{thebibliography}[1]{%
146     \bibsection
147     \begin{thebibitemlist}{#1}}{\end{thebibitemlist}}

```

`thebibitemlist` Just as a matter of style, I have extracted the list making code from the definition of the `thebibliography`. It might also make it easier for someone to change the list environment. The code is a straight copy from `classes.dtx`.

```

148   \newenvironment{thebibitemlist}[1]{
149     \list{\@biblabel{\@arabic\c@enumiv}}%

```

```

150     {\settowidth\labelwidth{\@biblabel{#1}}%
151     \leftmargin\labelwidth
152     \advance\leftmargin\labelsep
153     \@openbib@code
154     \usecounter{enumiv}%
155     \let\p@enumiv\@empty
156     \renewcommand\theenumiv{\@arabic\c@enumiv}}%
157 \sloppy
158 \clubpenalty4000
159 \@clubpenalty \clubpenalty
160 \widowpenalty4000%
161 \sfcode'\.\@m}
162 {\def\@noitemerr
163  {\@latex@warning{Empty 'thebibliography' environment}}%
164  \endlist}
165

```

`\sectionbib` The `chapterbib` package defines a macro `\sectionbib` which, if its `sectionbib` option is used, it calls at the beginning of the document to fiddle with the `thebibliography` environment (but it doesn't work when it is renewed as above). We need to disable the macro because we do our own fiddling

```

166 \@ifpackagewith{chapterbib}{sectionbib}%
167   {\renewcommand{\sectionbib}[2]{}}%
168   {}
169

```

This is the end of `\if@dotocbib`.

```

170 \fi
171

```

At the end of the preamble we have to check if the `natbib` and/or `chapterbib` packages have been loaded after the `tocbibind` package. If this is the case, we have to make sure that we have control with respect to their `sectionbib` options.

```

172 \AtBeginDocument{%
173  \@ifpackagewith{natbib}{sectionbib}{\@dot@cb@bsectiontrue}{}

```

If the `chapterbib` package was loaded before `tocbibind` we have already killed `\sectionbib`. If `chapterbib` has been loaded afterwards we must kill `\sectionbib` now before it gets used.

```

174 \@ifpackagewith{chapterbib}{sectionbib}%
175   {\@dot@cb@bsectiontrue
176   \ifundefined{sectionbib}{\def\sectionbib#1#2{}}%
177   {}
178

```

Lastly, use our definition of `\bibsection` for the `thebibliography` environment.

```

179 \if@dotocbib
180   \if@dot@cb@bsection
181     \renewcommand{\bibsection}{\t@cb@bsection}%
182   \else

```

```

183     \renewcommand{\bibsection}{\t@cb@bchapsec}%
184     \fi
185 \fi

This is the end of \AtBeginDocument
186 }
187

```

**theindex** In an earlier version of this package, for reasons that I didn't understand, I had to add/remove some vertical space around the Index heading to make its height match other chapter/section headings. In an unrelated thread on the `comp.text.tex` newsgroup, Donald Arseneau pointed out that that this effect was a known feature of the standard classes and recorded as latex bug 3126, and was caused by misplaced topskips. The following removes this feature for all except the `doc` class.

The first bit of code is a copy from `classes.dtx`.

```

188 \if@inltxdoc\else
189   \renewenvironment{theindex}%
190     {\if@twocolumn
191       \@restonecolfalse
192     \else
193       \@restonecoltrue
194     \fi

This next bit is where we make the package changes. Note that in the default definition the values for \columnseprule and \columnsep were set at this point to be 0pt and 35pt respectively. They are not set in this definition so that they can be adjusted by the user, if necessary, before starting the environment.

195     \if@bibchapter
196       \if@donumindex
197         \refstepcounter{chapter}
198         \twocolumn[\vspace*{2\topskip}%
199                   \@makechapterhead{\indexname}]]%
200         \phantomsection
201         \addcontentsline{toc}{chapter}{\protect\numberline{\thechapter}\indexname}
202         \chaptermark{\indexname}
203       \else
204         \if@dotocind
205           \twocolumn[\vspace*{2\topskip}%
206                     \@makeschapterhead{\indexname}]]%
207           \prw@mkboth{\indexname}
208           \phantomsection
209           \addcontentsline{toc}{chapter}{\indexname}
210         \else
211           \twocolumn[\vspace*{2\topskip}%
212                     \@makeschapterhead{\indexname}]]%
213           \prw@mkboth{\indexname}
214         \fi
215       \fi
216     \else
217       \if@donumindex

```

```

218     \twocolumn[\vspace*{-1.5\topskip}]%
219         \@nameuse{\@tocextra}{\indexname}]%
220     \csname \@tocextra mark\endcsname{\indexname}
221 \else
222     \if@dotocind
223         \twocolumn[\vspace*{-1.5\topskip}]%
224             \toc@headstar{\@tocextra}{\indexname}]%
225         \prw@mkboth{\indexname}
226         \phantomsection
227         \addcontentsline{toc}{\@tocextra}{\indexname}
228     \else
229         \twocolumn[\vspace*{-1.5\topskip}]%
230             \toc@headstar{\@tocextra}{\indexname}]%
231         \prw@mkboth{\indexname}
232     \fi
233 \fi
234 \fi

```

Now we are back to the original code.

```

235 \thispagestyle{plain}\parindent\z@
236 \parskip\z@ \@plus .3\p@\relax
237 \let\item\@idxitem}
238 {\if@restonecol\onecolumn\else\clearpage\fi}
239 \fi
240

```

`\toc@start` These two macros deal with the start and finish of the `\tableofcontents` and `\toc@finish` friends by adjusting the column settings if need be.

```

241 \newcommand{\toc@start}{%
242 \if@bibchapter
243 \if@twocolumn
244 \@restonecoltrue\onecolumn
245 \else
246 \@restonecolfalse
247 \fi
248 \fi}
249
250 \newcommand{\toc@finish}{%
251 \if@bibchapter
252 \if@restonecol\twocolumn\fi
253 \fi}
254

```

`\tocfile` The code for `\tableofcontents`, `\listoftables` and `\listoffigures` is virtually identical in each case, except for the heading text. `\tocfile` embodies the common code. This is virtually a parameterized copy from `classes.dtx`, except that it handles the differences between the article class and the other two, and incorporates the code for additions to the ToC. It is a useful hook if any other package wants to extend `toctoc` for other kinds of listings.

The command is `\tocfile{<head-text>}{<file-extension>}`, where *<head-text>* is the heading (e.g., List of Figures) and *<file-extension>* is the file extension (e.g., lof).

```
255 \newcommand{\tocfile}[2]{%
256   \toc@start
```

The next bit is for the heading changes.

```
257   \if@bibchapter
258     \toc@chapter{#1}
259   \else
260     \toc@section{\@tocextra}{#1}
261   \fi
```

And finish up with a parameterized call to start the listing and tidy up.

```
262   \@starttoc{#2}
263   \toc@finish}
264
```

`\tableofcontents` If requested, we redefine this command, using `\tocfile` to do all the work for us.

```
265 \if@dotoc
266   \renewcommand{\tableofcontents}{%
267     \tocfile{\contentsname}{toc}
268   }
269 \fi
270
```

`\listoftables` This is almost identical to the code for `\tableofcontents`

```
271 \if@dotoclot
272   \renewcommand{\listoftables}{%
273     \tocfile{\listtablename}{lot}
274   }
275 \fi
276
```

`\listoffigures` This is almost identical to the code for `\tableofcontents`

```
277 \if@dotoclof
278   \renewcommand{\listoffigures}{%
279     \tocfile{\listfigurename}{lof}
280   }
281 \fi
282
```

`\simplechapter` The `\simplechapter` command modifies the `\@makechapterhead` command to

`\restorechapter` result in an appearance akin to `\@makeschapterhead`, and is based on the latter.

`\simplechapterdelim` The `\restorechapter` command restores everything back to its original state. The value of `\simplechapterdelim` is appended to the chapter number before the title text.

```
283 \newcommand{\simplechapter}[1][\@empty]{%
284   \let\@tbiold@makechapterhead\@makechapterhead
```

```

285 \renewcommand{\@makechapterhead}[1]{%
286   \vspace*{50\p@}%
287   {\parindent \z@ \raggedright
288     \normalfont
289     \interlinepenalty\@M
290     \Huge\bfseries #1\space\thechapter\simplechapterdelim\space
291     ##1\par\nobreak
292     \vskip 40\p@
293   }}
294 }
295 \newcommand{\restorechapter}{%
296   \@ifundefined{tbiold@makechapterhead}{}%
297   {\let\@makechapterhead\@tbiold@makechapterhead}
298 }
299 \newcommand{\simplechapterdelim}{}
300

```

`\tocchapter` These two commands modify the `\toc@chapter` and `\toc@section` commands to make numbered Listof headings.

```

301 \newcommand{\tocchapter}{%
302   \providecommand{\@makechapterhead}{}
303   \simplechapter
304   \renewcommand{\toc@chapter}[1]{\chapter{##1}}
305 }
306 \newcommand{\tocsection}{%
307   \renewcommand{\toc@section}[2]{\@nameuse{##1}{##2}}
308 }
309

```

The end of this package.

```
310 </usc>
```

## References

- [GMS94] Michel Goossens, Frank Mittelbach, and Alexander Samarin. *The LaTeX Companion*. Addison-Wesley Publishing Company, 1994.
- [Wil96] Peter R. Wilson. *LaTeX for standards: The LaTeX package files user manual*. NIST Report NISTIR, June 1996.

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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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