

# The hypdoc package

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## Abstract

This package adds hyper features to the package `doc` that is used in the documentation system of L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub>. Bookmarks are added and references are linked as far as possible.

## Contents

<b>1 Features</b>	<b>1</b>
<b>2 Usage</b>	<b>2</b>
2.1 Options . . . . .	2
2.2 Simple example . . . . .	2
2.3 Example <code>source2e.tex</code> . . . . .	3
<b>3 Implementation</b>	<b>3</b>
<b>4 Installation</b>	<b>11</b>
4.1 Some details for the interested . . . . .	11
<b>5 History</b>	<b>12</b>
[2002/05/10 v1.0] . . . . .	12
[2006/02/20 v1.1] . . . . .	12
[2006/04/27 v1.2] . . . . .	12
[2006/06/01 v1.3] . . . . .	12
[2006/06/02 v1.4] . . . . .	12
<b>6 Index</b>	<b>13</b>

## 1 Features

The package adds the following features:

**Bookmarks:** For supporting bookmarks package `hyperref` is loaded. Some T<sub>E</sub>X code inside section titles can cause problems during bookmark processing; these can be warnings, ugly bookmark titles or even errors. With the help of `\pdfstringdefDisableCommands` or `\texorpdfstring` you can manage these things, see `hyperref`'s package documentation.

**Additional bookmarks:** Unnumbered bookmark entries are generated for:

- Table of contents
- List of figures
- List of tables
- Index

- Glossary

Option `numbered` controls, whether these section or chapters should be numbered. The exception is the table of contents if this it would be the first numbered section. Then just a bookmark is added.

**Metadata:** The loaded package `hyperref`, enforced by option `pdfusetitle`, tries to detect `\title` and `\author` and sets the corresponding PDF information fields. In case of problems see the previous item about bookmarks. These entries can be overwritten or new ones added by `\hypersetup` after the package is loaded, see documentation of package `hyperref`.

**References, links:** Because of package `\hyperref` `\ref` become links, also `\url`, footnote referencing are supported.

**Index:** The main part of this package deals with index links in order to support the kind of index that package `doc` provides.

**Thumbnails:** Package `thumbpdf` is loaded for the case that the PDF file also should contain thumbnails, see the documentation of this package. But thumbnail embedding is not really necessary, because nowadays AcrobatReader is able to generate and view thumbnails on the fly.

## 2 Usage

The purpose of this packages is to add PDF features to the documentation of LaTeX packages. Thus just load the package in the driver file that generates the documentation:

```
\usepackage{hypdoc}
```

Package `doc` is loaded by `hypdoc`, thus you also can replace a `\usepackage{doc}` with this line. At any case, the package must be loaded before macros of package `doc` such as `\CodelineIndex` or `\PageIndex` are used.

If the class `ltxdoc` is used, you can also use the configuration file for this class to add package `hypdoc`. Add the following line to the file `ltxdoc.cfg` (or create a new one):

```
\AtEndOfClass{\RequirePackage{hypdoc}}
```

### 2.1 Options

There is one option `numbered`. It controls, whether the starred versions of section or chapter inside `\tableofcontents`, `\listoffigures`, ... should be replaced by the non-star versions.

### 2.2 Simple example

Example of a simple driver file `foobar.drv` of a package `foobar`. Often the driver file is packed in the file `foobar.dtx` and can be extracted by `docstrip` or if an instruction file for `docstrip` is provided by:

```
tex foobar.ins
```

Note that although `docstrip` doesn't rely on `LATEX`, sometimes you need to run the `.ins` file through `LATEX`. Oddly enough, often the only `LATEX` feature in use is `\NeedsTeXFormat{LaTeX2e}` in the first line.

```
\documentclass{ltxdoc}
\usepackage{hypdoc}
\RecordChanges
\EnableCrossrefs
```

```

\CodelineIndex
\begin{document}
\title{Title for package \texttt{foobar}}
\author{Author of package \texttt{foobar}}
\date{...}
\maketitle
\tableofcontents
\DocInput{foobar.dtx}
\PrintChanges
\PrintIndex
\end{document}

```

Then compile it, for example with pdfL<sup>A</sup>T<sub>E</sub>X.

```

pdflatex foobar.drv
makeindex -s gind.ist foobar.idx
makeindex -s gglo.ist -o foobar.gls foobar.glo
pdflatex foobar.drv

```

You will need several cycles until the cross references and similar things are correct.

## 2.3 Example source2e.tex

The source code of the base of L<sup>A</sup>T<sub>E</sub>X is available as a bunch of .dtx files. L<sup>A</sup>T<sub>E</sub>X provides the file `source2e.tex` to merge them all together.

Now you can either load package `hypdoc` in a private copy of this file (please, respect the LPPL) or use the configuration file `ltxdoc.cfg`. Example that also sets A4 paper size:

```

\PassOptionsToClass{a4paper}{article}
\AtEndOfClass{\RequirePackage{hypdoc}}

```

Then `source2e.tex` can be compiled by pdfT<sub>E</sub>X, for example:

```

pdflatex source2e
makeindex -s gind.ist source2e.idx
makeindex -s gglo.ist -o source2e.glo source2e.gls
pdflatex source2e
makeindex -s gind.ist source2e.idx
makeindex -s gglo.ist -o source2e.glo source2e.gls
pdflatex source2e

```

## 3 Implementation

```

1 (*package)
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesPackage{hypdoc}%
4 [2006/06/02 v1.4 Hyper extensions for doc.sty (H0)]

```

The package identification is done at the top of the .dtx file in order to use only one identification string.

For unique command names this package uses HD@ as prefix

```

5 %
6 \newif\ifHD@numbered
7 \DeclareOption{numbered}{\HD@numberedtrue}
8 \ProcessOptions*\relax
9
10 \RequirePackage{doc}
11
12 \ifx\numexpr\@undefined
13   \RequirePackage{calc}
14 \fi
15 \RequirePackage[%

```

```

16 hyperindex=false,%
17 pdfusetitle,%
18 colorlinks,%
19 pdfpagelabels,%
20 ]{hyperref}[2002/05/09]%
21 \hypersetup{%
22   plainpages=false,%
23   bookmarksopen,%
24   bookmarksnumbered,%
25   bookmarksopenlevel=0,%
26   pdfstartview={FitBH \hypercalcbp{%
27     \paperheight-\topmargin-1in-\headheight-\headsep
28   }},%
29 }
30 \RequirePackage{thumbpdf}
31
32 \newcounter{HD@unique}
33 \renewcommand{\theHD@unique}{%
34   \number\value{HD@unique}%
35 }
36
37 \g@addto@macro\Hy@UseMaketitleInfos{%
38   \@ifundefined{fileinfo}{-}{%
39     \ifx\@pdfsubject\@empty
40       \hypersetup{pdfsubject={\fileinfo}}%
41     \fi
42   }%
43 }
44
45 \pdfstringdefDisableCommands{%
46   \let\thanks\@gobble
47   \let\footnote\@gobble
48   \def\cs#1{\textbackslash #1}%
49   \let\normalfont\@empty
50   \let\scshape\@empty
51   \def\and{and }%
52 }
53
54 %%% Bookmarks
55
56 \def\HD@sectionpatch{%
57   \ifHD@numbered
58     \HD@@sectionpatch{section}%
59     \HD@@sectionpatch{chapter}%
60   \else
61     \let\Hy@writebookmark\HD@disable@writebookmark
62   \fi
63 }
64 \def\HD@@sectionpatch#1{%
65   \expandafter\let\csname HDorg@@#1\expandafter\endcsname
66     \csname #1\endcsname
67   \@namedef{#1}{%
68     \@ifstar{\@nameuse{HDorg@@#1}}{\@nameuse{HDorg@@#1}}%
69   }%
70 }
71 \def\HD@disable@writebookmark#1#2#3#4#5{
72
73 % A wild guessing of the toplevel. There is the hope, that
74 % the macro \verb|#1| starts with a sectioning command.
75 \def\HD@guesstoclevel#1{%
76   \expandafter\HD@@guesstoclevel#1\section\HD@end
77 }

```

```

78 \def\HD@guesstoclevel#1#2\HD@end{%
79   \@ifundefined{toclevel@}\expandafter\@gobble\string#1\@empty}{%
80     1%
81   }{%
82     \@nameuse{toclevel@}\expandafter\@gobble\string#1\@empty}%
83   }%
84 }
85
86 \let\HDorg@tableofcontents\tableofcontents
87 \def\tableofcontents{%
88   % As first section the table of contents shouldn't
89   % go into the toc itself. Also a number looks too funny then.
90   % Just a bookmark is enough in this case.
91   \begingroup
92     \@ifundefined{c@section}{%
93       \def\c@section{0}%
94     }{%
95       \expandafter\endgroup
96       \ifcase\c@section
97         \stepcounter{HD@unique}%
98         \pdfbookmark[\HD@guesstoclevel{\HDorg@tableofcontents}]
99           {\contentsname}{toc\theHD@unique}%
100       \HDorg@tableofcontents
101     \else
102       \ifHD@numbered
103       \else
104         \stepcounter{HD@unique}%
105         \pdfbookmark[\HD@guesstoclevel{\HDorg@tableofcontents}]
106           {\contentsname}{toc\theHD@unique}%
107       \fi
108       \begingroup
109         \HD@sectionpatch
110         \HDorg@tableofcontents
111       \endgroup
112     \fi
113 }
114
115 \let\HDorg@listoffigures\listoffigures
116 \def\listoffigures{%
117   \ifHD@numbered
118   \else
119     \stepcounter{HD@unique}%
120     \pdfbookmark[\HD@guesstoclevel{\HDorg@listoffigures}]
121       {\contentsname}{toc\theHD@unique}%
122   \fi
123   \begingroup
124     \HD@sectionpatch
125     \HDorg@listoffigures
126   \endgroup
127 }
128
129 \let\HDorg@listoftables\listoftables
130 \def\listoftables{%
131   \ifHD@numbered
132   \else
133     \stepcounter{HD@unique}%
134     \pdfbookmark[\HD@guesstoclevel{\HDorg@listoftables}]
135       {\contentsname}{toc\theHD@unique}%
136   \fi
137   \begingroup
138     \HD@sectionpatch
139     \HDorg@listoftables

```

```

140 \endgroup
141 }
142
143 \let\HDorg@thebibliography\thebibliography
144 \def\thebibliography{%
145   \ifHD@numbered
146   \else
147     \stepcounter{HD@unique}%
148     \pdfbookmark[\HD@guesstoclevel{\HDorg@thebibliography}]
149       {\@ifundefined{chapter}{\refname}{\bibname}}{\bib\theHD@unique}%
150   \fi
151   \HD@sectionpatch
152   \HDorg@thebibliography
153 }
154
155 \let\HDorg@theindex\theindex
156 \def\theindex{%
157   \let\HDorg@index@prologue\index@prologue
158   \let\HDorg@writebookmark\Hy@writebookmark
159   \HD@sectionpatch
160   \g@addto@macro\IndexParms{%
161     \ifHD@numbered
162     \else
163       \let\Hy@writebookmark\HDorg@writebookmark
164     \fi
165     \let\bfseries\HD@bfseries
166   }%
167   \edef\HD@toclevel@index{\HD@guesstoclevel{\index@prologue}}%
168   \begingroup
169     \count@=\HD@toclevel@index\relax
170     \advance\count@ by 1 %
171     \xdef\HD@toclevel@subindex{\the\count@}%
172   \endgroup
173   \def\index@prologue{%
174     \ifHD@numbered
175     \else
176       \begingroup
177         \stepcounter{HD@unique}%
178         \let\Hy@writebookmark\HDorg@writebookmark
179         \pdfbookmark[\HD@toclevel@index]{%
180           {\indexname}{index\theHD@unique}%
181         }
182       \endgroup
183     \fi
184     \HDorg@index@prologue
185   }%
186   \HDorg@theindex
187 }
188 \let\HDorg@bfseries\bfseries
189 \def\HD@bfseries{\futurelet\HD@hfil\HD@@bfseries}%
190 \def\HD@@bfseries{%
191   \HDorg@bfseries
192   \ifx\HD@hfil\hfil
193     \expandafter\HD@@@bfseries
194   \fi
195 }%
196 \def\HD@@@bfseries\hfil#1\hfil{%
197   \ifx\#1\%
198   \else
199     \raisebox{\baselineskip}[Opt]{%
200       \kern-\HD@margin\relax
201       \pdfbookmark[\HD@toclevel@subindex]{#1}{HD.#1}%
202       \kern\HD@margin\relax

```

```

202     }%
203     \fi
204     \hfil#1\hfil
205 }%
206 \def\HD@margin{1mm}
207
208 \let\HDorg@theglossary\theglossary
209 \def\theglossary{%
210     \let\HDorg@glossary@prologue\glossary@prologue
211     \let\HDorg@writebookmark\Hy@writebookmark
212     \HD@sectionpatch
213     \def\glossary@prologue{%
214         \ifHD@numbered
215         \else
216             \begingroup
217                 \let\Hy@writebookmark\HDorg@writebookmark
218                 \stepcounter{HD@unique}%
219                 \pdfbookmark[\HD@guesstoclevel{\HDorg@glossary@prologue}]
220                     {\glossaryname}{glossary\theHD@unique}%
221             \endgroup
222         \fi
223     \HDorg@glossary@prologue
224 }%
225 \HDorg@theglossary
226 }
227 \providecommand*{\glossaryname}{Change History}
228
229 %%% Index stuff
230
231 \newcounter{HD@hypercount}
232 \newlength{\HD@helplength}
233 \newif\ifHD@savedest
234 \HD@savedesttrue
235 \AtBeginDocument{%
236     \HD@savedest@init
237 }
238 \begingroup
239     \catcode'\^M=\active
240 \@firstofone{\endgroup
241     \def\HD@savedest@init{%
242         \ifHD@savedest
243             \let\HDorg@tilde~%
244             \let~\HD@savedest@entry
245             \edef\HDorg@catcodeM{\the\catcode'\^M}%
246             \catcode'\^M=\active
247             \def^M{}%
248             \InputIfFileExists{\jobname.hd}{-}{-}%
249             \let~\HDorg@tilde
250             \catcode'\^M=\HDorg@catcodeM\relax
251             \newwrite\HD@savedest@out
252             \immediate\openout\HD@savedest@out=\jobname.hd\relax
253             \AtEndDocument{\immediate\closeout\HD@savedest@out}%
254         \else
255             \let\HD@savedest@add\@gobble
256         \fi
257     }%
258     \def\HD@savedest@entry#1^M{%
259         \@namedef{HD.#1}{-}%
260     }%
261 }
262 \def\HD@savedest@add#1{%
263     \immediate\write\HD@savedest@out{\string~#1}%

```

```

264 }
265
266 \newif\ifHD@targetraise
267 \HD@targetraisetrue
268
269 \def\HD@target{%
270   \ifHD@targetraise
271     \ifhmode
272       \settoheight{\HD@helplength}{[H]}%
273       \addtolength{\HD@helplength}{0.4ex}%
274       \raisebox{\HD@helplength}{%
275         \HD@maketarget
276       }%
277     \else
278       \HD@maketarget
279     \fi
280   \else
281     \HD@maketarget
282   \fi
283 }
284 \def\HD@maketarget{%
285   \stepcounter{HD@hypercount}%
286   \def\HD@next{%
287     \llap{\hypertarget{HD.\the\c@HD@hypercount}{\},}%
288   }%
289   \ifHD@savedest
290     \expandafter\ifx\csname HD.\the\c@HD@hypercount\endcsname\@empty
291     \else
292       \let\HD@next\relax
293     \fi
294   \fi
295   \HD@next
296 }
297
298 \g@addto@macro\CodelineIndex{%
299   \let\special@index\HD@codeline@wrindex
300 }
301 \g@addto@macro\PageIndex{%
302   \let\special@index\HD@page@wrindex
303 }
304
305 \def\HD@codeline@wrindex#1{%
306   \begingroup
307   \let\HDorg@encapchar\encapchar
308   \def\encapchar##1\encapchar##2\@nil{%
309     \HDorg@encapchar
310     hdclindex{\the\c@HD@hypercount}{##1}%
311   }%
312   \codeline@wrindex{%
313     #1\encapchar\encapchar\@nil
314   }%
315   \endgroup
316 }
317 \def\HD@page@wrindex#1{%
318   \begingroup
319   \let\HDorg@encapchar\encapchar
320   \def\encapchar##1\encapchar##2\@nil{%
321     \HDorg@encapchar
322     hdpindex{##1}%
323   }%
324   \HDorg@index{#1\encapchar\encapchar\@nil}%
325   \endgroup

```



```

326 }
327
328 \def\hdclindex#1#2#3{%
329   \csname\ifx\\#2\\relax\else#2\fi\endcsname{%
330     \hyperlink{HD.#1}{#3}%
331     \HD@savedest@add{#1}%
332   }%
333 }
334 \def\hdpindex#1#2{%
335   \csname\ifx\\#1\\relax\else#1\fi\endcsname{%
336     \hyperpage{#2}%
337   }%
338 }
339
340 \let\HDorg@PrintDescribeMacro\PrintDescribeMacro
341 \renewcommand\PrintDescribeMacro[1]{%
342   \begingroup
343     \let\HDorg@MacroFont\MacroFont
344     \def\MacroFont{%
345       \HD@target
346       \HDorg@MacroFont
347     }%
348     \HDorg@PrintDescribeMacro{#1}%
349   \endgroup
350 }
351
352 \let\HDorg@PrintMacroName\PrintMacroName
353 \renewcommand\PrintMacroName[1]{%
354   \begingroup
355     \let\HDorg@MacroFont\MacroFont
356     \def\MacroFont{%
357       \HD@target
358       \HDorg@MacroFont
359     }%
360     \HDorg@PrintMacroName{#1}%
361   \endgroup
362 }
363
364 \let\HDorg@theCodelineNo\theCodelineNo
365 \renewcommand*\theCodelineNo{%
366   \settowidth{\HD@helplength}{\HDorg@theCodelineNo\ }%
367   \ifdim\HD@helplength<\MacroIndent
368     \addtolength{\HD@helplength}{-\MacroIndent}%
369     \llap{%
370       \begingroup\HD@target\endgroup
371       \hspace*{-\HD@helplength}%
372     }%
373   \else
374     \HD@target
375   \fi
376   \HDorg@theCodelineNo
377 }
378
379 \AtBeginDocument{%
380   \let\HDorg@index\index
381 }
382
383 \let\HDorg@SpecialUsageIndex\SpecialUsageIndex
384 \renewcommand*\SpecialUsageIndex[1]{%
385   \@bsphack
386   \begingroup
387     \HD@target

```

```

388 \let\index\HDorg@index
389 \let\HDorg@encapchar\encapchar
390 \edef\encapchar usage{%
391 \HDorg@encapchar hdclindex{\the\c@HD@hypercount}{usage}%
392 }%
393 \HDorg@SpecialUsageIndex{#1}%
394 \endgroup
395 \@esphack
396 }
397
398 \begingroup\expandafter\expandafter\expandafter\endgroup
399 \expandafter\ifx\csname autoindex\endcsname\relax
400 \else
401 \let\HDorg@autoindex\autoindex
402 \renewcommand*\autoindex[1]{%
403 \@bsphack
404 \begingroup
405 \HD@target
406 \let\index\HDorg@index
407 \let\HDorg@encapchar\encapchar
408 \edef\encapchar usage{%
409 \HDorg@encapchar hdclindex{\the\c@HD@hypercount}{usage}%
410 }%
411 \HDorg@autoindex{#1}%
412 \endgroup
413 \@esphack
414 }
415 \fi
416
417 \let\HDorg@SpecialEnvIndex\SpecialEnvIndex
418 \renewcommand*\SpecialEnvIndex[1]{%
419 \@bsphack
420 \begingroup
421 \HD@target
422 \let\HDorg@encapchar\encapchar
423 \edef\encapchar usage{%
424 \HDorg@encapchar hdclindex{\the\c@HD@hypercount}{usage}%
425 }%
426 \HDorg@SpecialEnvIndex{#1}%
427 \endgroup
428 \@esphack
429 }
430
431 \let\HDorg@SortIndex\SortIndex
432 \renewcommand*\SortIndex[2]{%
433 \@bsphack
434 \begingroup
435 \let\index\HD@page@wrindex
436 \HDorg@SortIndex{#1}{#2}%
437 \endgroup
438 \@esphack
439 }
440
441
442 %%% glossary stuff
443
444 \let\HDorg@wrglossary\@wrglossary
445 \def\@wrglossary#1{%
446 \let\HDorg@encapchar\encapchar
447 \def\encapchar##1\encapchar##2\@nil{%
448 \HDorg@encapchar
449 hdpindex{##1}%

```

```

450 }%
451 \HDorg@wrglossary{#1\encapchar\encapchar\@nil}%
452 }
453
454 %%% \MacroIndent automatically calculated
455
456 \AtEndDocument{%
457   \if@files
458     \immediate\write\@auxout{%
459       \noexpand\HD@SetMacroIndent{\number\value{CodelineNo}}}%
460   }%
461 \fi
462 }
463 \def\HD@SetMacroIndent#1{%
464   \begingroup
465     \value{CodelineNo}=#1\relax
466     \settowidth{\MacroIndent}{\HDorg@theCodelineNo\ }%
467     \global\MacroIndent\MacroIndent
468   \endgroup
469 }
470 </package>

```

## 4 Installation

**CTAN.** This package is available on CTAN<sup>1</sup>:

[CTAN:macros/latex/contrib/oberdiek/hypdoc.dtx](#) The source file.

[CTAN:macros/latex/contrib/oberdiek/hypdoc.pdf](#) Documentation.

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

```
tex hypdoc.dtx
```

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

```

hypdoc.sty  → tex/latex/oberdiek/hypdoc.sty
hypdoc.pdf  → doc/latex/oberdiek/hypdoc.pdf
hypdoc.dtx  → source/latex/oberdiek/hypdoc.dtx

```

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

**Refresh file databases.** If your  $\text{\TeX}$  distribution (`te $\text{\TeX}$` , `mik $\text{\TeX}$` , ...) rely on file databases, you must refresh these. For example, `te $\text{\TeX}$`  users run `texhash` or `mktextlsr`.

### 4.1 Some details for the interested

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

```
pdftk hypdoc.pdf unpack_files output .
```

---

<sup>1</sup><http://ftp.ctan.org/tex-archive/>

**Unpacking with L<sup>A</sup>T<sub>E</sub>X.** The .dtx chooses its action depending on the format:

**plain-T<sub>E</sub>X:** Run docstrip and extract the files.

**L<sup>A</sup>T<sub>E</sub>X:** Generate the documentation.

If you insist on using L<sup>A</sup>T<sub>E</sub>X for docstrip (really, docstrip does not need L<sup>A</sup>T<sub>E</sub>X), then inform the autodetect routine about your intension:

```
latex \install=y\input{hypdoc.dtx}
```

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

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

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

An example follows how to generate the documentation with pdfL<sup>A</sup>T<sub>E</sub>X:

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

## 5 History

[2002/05/10 v1.0]

- First standalone version.

[2006/02/20 v1.1]

- Option numbered added.
- \HD@savedest@init fixed (empty ..hd file triggered first page with fl ligature).
- Bookmarks for \listoffigures and \listoftables.
- Documentation: features and usage added.
- LPPL 1.3.

[2006/04/27 v1.2]

- \HD@target fixed (multicol.dtx).

[2006/06/01 v1.3]

- Support for package amssdtx's \autoindex added.

[2006/06/02 v1.4]

- Bookmark fixed if there are several table of contents, bibliographies, glossaries, ...

## 6 Index

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

Symbols	F
\, ..... 287	\fileinfo ..... 40
\@auxout ..... 458	\footnote ..... 47
\@bspback ..... 385, 403, 419, 433	\futurelet ..... 188
\@empty ..... 39, 49, 50, 79, 82, 290	
\@esphack ..... 395, 413, 428, 438	
\@firstofone ..... 240	
\@gobble ..... 46, 47, 79, 82, 255	
\@ifstar ..... 68	
\@ifundefined ..... 38, 79, 92, 149	
\@namedef ..... 67, 259	
\@nameuse ..... 68, 82	
\@nil ..... 308, 313, 320, 324, 447, 451	
\@pdfsubject ..... 39	
\@undefined ..... 12	
\@wrglossary ..... 444, 445	
\\ ..... 196, 329, 335	
\^ ..... 239, 245, 246, 250	
\_ ..... 366, 466	
A	G
\active ..... 239, 246	\g@addto@macro ..... 37, 160, 298, 301
\addtolength ..... 273, 368	\glossary@prologue ..... 210, 213
\advance ..... 170	\glossaryname ..... 220, 227
\and ..... 51	
\AtBeginDocument ..... 235, 379	
\AtEndDocument ..... 253, 456	
\autoindex ..... 401, 402	
B	H
\baselineskip ..... 198	\HD@@@bfseries ..... 192, 195
\bfseries ..... 165, 187	\HD@@bfseries ..... 188, 189
\bibname ..... 149	\HD@@guesstoclevel ..... 76, 78
	\HD@@sectionpatch ..... 58, 59, 64
	\HD@bfseries ..... 165, 188
	\HD@codeline@wrintex ..... 299, 305
	\HD@disable@writebookmark ..... 61, 71
	\HD@end ..... 76, 78
	\HD@guesstoclevel ..... 75,
	98, 105, 120, 134, 148, 167, 219
	\HD@helplength ..... 232,
	272, 273, 274, 366, 367, 368, 371
	\HD@hfil ..... 188, 191
	\HD@maketarget ..... 275, 278, 281, 284
	\HD@margin ..... 199, 201, 206
	\HD@next ..... 286, 292, 295
	\HD@numberedtrue ..... 7
	\HD@page@wrintex ..... 302, 317, 435
	\HD@savest@add ..... 255, 262, 331
	\HD@savest@entry ..... 244, 258
	\HD@savest@init ..... 236, 241
	\HD@savest@out ..... 251, 252, 253, 263
	\HD@savest@true ..... 234
	\HD@sectionpatch ..... 56, 109, 124, 138, 151, 159, 212
	\HD@SetMacroIndent ..... 459, 463
	\HD@target ..... 269,
	345, 357, 370, 374, 387, 405, 421
	\HD@targetraisetrue ..... 267
	\HD@toclevel@index ..... 167, 169, 179
	\HD@toclevel@subindex ..... 171, 200
	\hdclindex ..... 328
	\HDorg@autoindex ..... 401, 411
	\HDorg@bfseries ..... 187, 190
	\HDorg@catcodeM ..... 245, 250
	\HDorg@encapchar ..... 307, 309, 319, 321, 389,
	391, 407, 409, 422, 424, 446, 448
	\HDorg@glossary@prologue ..... 210, 219, 223
	\HDorg@index ..... 324, 380, 388, 406
	\HDorg@index@prologue ..... 157, 183
	\HDorg@listoffigures ..... 115, 120, 125
	\HDorg@listoftables ..... 129, 134, 139
	\HDorg@MacroFont ..... 343, 346, 355, 358
	\HDorg@PrintDescribeMacro ..... 340, 348
C	
\c@HD@hypercount ..... 287, 290, 310, 391, 409, 424	
\c@section ..... 93, 96	
\catcode ..... 239, 245, 246, 250	
\closeout ..... 253	
\codeline@wrintex ..... 312	
\CodelineIndex ..... 298	
\contentsname ..... 99, 106, 121, 135	
\count@ ..... 169, 170, 171	
\cs ..... 48	
\csname ..... 65, 66, 290, 329, 335, 399	
D	
\DeclareOption ..... 7	
E	
\encapchar ..... 307, 308,	
313, 319, 320, 324, 389, 390,	
407, 408, 422, 423, 446, 447, 451	
\endcsname ..... 65, 66, 290, 329, 335, 399	

\HDorg@PrintMacroName	352, 360	\newcounter	32, 231
\HDorg@SortIndex	431, 436	\newif	6, 233, 266
\HDorg@SpecialEnvIndex	417, 426	\newlength	232
\HDorg@SpecialUsageIndex	383, 393	\newwrite	251
\HDorg@tableofcontents	86, 98, 100, 105, 110	\normalfont	49
\HDorg@thebibliography	143, 148, 152	\number	34, 459
\HDorg@theCodelineNo	364, 366, 376, 466	\numexpr	12
\HDorg@theglossary	208, 225	<b>O</b>	
\HDorg@theindex	155, 185	\openout	252
\HDorg@tilde	243, 249	<b>P</b>	
\HDorg@wrglossary	444, 451	\PageIndex	301
\HDorg@writebookmark	158, 163, 178, 211, 217	\paperheight	27
\hdpinde	334	\pdfbookmark	98, 105, 120, 134, 148, 179, 200, 219
\headheight	27	\pdfstringdefDisableCommands	45
\headsep	27	\PrintDescribeMacro	340, 341
\hfil	191, 195, 204	\PrintMacroName	352, 353
\hspace	371	\ProcessOptions	8
\Hy@UseMaketitleInfos	37	\providecommand	227
\Hy@writebookmark	61, 158, 163, 178, 211, 217	\ProvidesPackage	3
\hypercalcbp	26	<b>R</b>	
\hyperlink	330	\raisebox	198, 274
\hyperpage	336	\refname	149
\hypersetup	21, 40	\renewcommand	33, 341, 353, 365, 384, 402, 418, 432
\hypertarget	287	\RequirePackage	10, 13, 15, 30
<b>I</b>		<b>S</b>	
\if@files	457	\scshape	50
\ifcase	96	\section	76
\ifdim	367	\settoheight	272
\ifHD@numbered	57, 102, 117, 131, 145, 161, 174, 214	\settowidth	366, 466
\ifHD@savedest	233, 242, 289	\SortIndex	431, 432
\ifHD@targetraise	266, 270	\special@index	299, 302
\ifhmode	271	\SpecialEnvIndex	417, 418
\ifx	12, 39, 191, 196, 290, 329, 335, 399	\SpecialUsageIndex	383, 384
\immediate	252, 253, 263, 458	\stepcounter	97, 104, 119, 133, 147, 177, 218, 285
\index	380, 388, 406, 435	<b>T</b>	
\index@prologue	157, 167, 173	\tableofcontents	86, 87
\indexname	180	\textbackslash	48
\IndexParms	160	\thanks	46
\InputIfFileExists	248	\the	171, 245, 287, 290, 310, 391, 409, 424
<b>J</b>		\thebibliography	143, 144
\jobname	248, 252	\theCodelineNo	364, 365
<b>K</b>		\theglossary	208, 209
\kern	199, 201	\theHD@unique	33, 99, 106, 135, 149, 180, 220
<b>L</b>		\theHd@unique	121
\listoffigures	115, 116	\theindex	155, 156
\listoftables	129, 130	\topmargin	27
\llap	287, 369	<b>V</b>	
<b>M</b>		\value	34, 459, 465
\MacroFont	343, 344, 355, 356	\verb	74
\MacroIndent	367, 368, 454, 466, 467	<b>W</b>	
<b>N</b>		\write	263, 458
\NeedsTeXFormat	2		