Extensions to the `ltxdoc` class *

Arthur Ogawa (`mailto:ogawa@teleport.com`), 0.0a0
Copyright (C) 1999 Arthur Ogawa

May 10, 2001

This file embodies the `ltxdocext` package, the implementation and its user documentation.

The distribution point for this work is `ftp://ftp.teleport.com/users/ogawa/macros/latex/contrib/supported/ltxdoc...`, which contains fully unpacked, prebuilt runtime files and documentation.

To use this document class, you must have a working TEX installation equipped with LATEX 2ε and possibly pdftex and Adobe Acrobat Reader or equivalent.

To install, retrieve the distribution, unpack it into a directory on the target computer, and move the files `ltxdocext.sty` and `acrofont.sty` into a location in your filesystem where they will be found by LATEX.

If you will be using the `acrofont` package, you must also install the virtual fonts `zpsynocmrv`, `zptmnocmr`, `zptmnocmrm`, and `zpzcnocmry`. The corresponding `.tfm`, `.vf`, and `.vpl` files are part of this distribution.

To use, read the user documentation `ltxdocext.pdf`. The `.dtx` file, `ltxdocext.dtx`, constitutes in itself an instance of use of the `ltxdocext` package and the `acrofont` package.

Contents

1 Processing Instructions **2**
- 1.1 Build Instructions . . . 2
- 1.2 Bill of Materials . . . 3
  - 1.2.1 Primary Source . . . 3
  - 1.2.2 Generated by `latex ltxdocext.dtx` . . . 3
  - 1.2.3 Generated by `tex ltxdocext.ins` . . . 3
  - 1.2.4 Documentation . . . 3
  - 1.2.5 Auxiliary . . . 3

2 Code common to all modules **4**

3 The driver module `doc` **4**
- 3.1 Stubs for `ltxdocext.sty` and `acrofont.sty` . . . 4
- 3.2 The Preamble . . . 5
  - 3.2.1 Docstrip and info directives . . . 5
- 3.3 The installer file . . . 5

*This file has version number 0.0a0, last revised 1999/06/04. For version number and date, search on "0.0a0" in the .dtx file, or see the end of the 00readme.txt file.

3.4 The “Read Me” File 6
3.5 The Document Body 8

4 Using the `ltxdoc` and `acrofont` packages 8
4.1 Extensions to the `ltxdoc` class 8
4.1.1 Extensions to the `verbatim` environment and `\verb` command 8
4.1.2 The -`matter` Commands Work 8
4.1.3 The `\GetFileInfo` command 9
4.1.4 Self-Indexing Commands 9
4.1.5 Unnumbered Tables 9
4.1.6 Structuring Tables 9
4.1.7 A Sectioning Command Below `\subsection` 10
4.2 Alterations to the `ltxdoc` class 10

5 Extensions to the ltxdoc class 10
5.1 Beginning of the `extensions` DOCSTRIP module 10
5.2 Incorporate `ltxguide.cls` extensions 10
5.3 Changes to the base class of the ltxdoc class 13
5.4 Extensions to the base class of `ltxdoc.cls` 14
5.5 In lieu of `ltxdoc.cfg` 15
5.6 Extension to LaTeX’s `filecontents` Environment 16
5.7 End of the `extensions` DOCSTRIP module 16

6 Font Package for Acrobat Compatability 16
6.1 Beginning of the `fonts` DOCSTRIP module 17
6.2 Variants on psfonts packages 17
6.3 Font definition files 18
6.4 More math substitutions 18
6.5 End of the `fonts` DOCSTRIP module 19

7 Programming Conventions 19
7.1 Whitespace Conventions 19
7.2 Conventions For Procedures 20
7.3 Conventions For LaTeX 20

Index 21

1 Processing Instructions

The packages `ltxdocext.sty` and `acrofont.sty` are generated from this file, `ltxdocext.dtx`, via the DOCSTRIP facility of LaTeXvia `tex ltxdocext.ins`. The typeset documentation that you are now reading is generated from the same file by typesetting it with LaTeX or pdftex via `latex ltxdocext.dtx` or `pdflatex ltxdocext.dtx`.

1.1 Build Instructions

You may bootstrap this suite of files solely from `ltxdocext.dtx`. Prepare by installing LaTeX 2ε (and either tex or pdftex) on your computer, then carry out the following steps:

1. Within an otherwise empty directory, typeset `ltxdocext.dtx` with LaTeX or pdflatex; you will obtain the typeset documentation you are now reading, along with the installer `ltxdocext.ins`, and the file `00readme.txt`.

2. Now typeset `ltxdocext.ins`, thereby generating the package `ltxdocext.sty`, and the package `acrofont.sty`. Make sure that `docstrip` receives permission to overwrite existing versions of these packages.

3. Install `ltxdocext.sty` and `acrofont.sty` by moving them to a location in your filesystem where they will be found by LaTeX.

4. Now complete the typesetting of the documentation by retypesetting `ltxdocext.dtx`. Note: you will have to run LaTeX twice, then `makeindex`, then LaTeX again in order to obtain a valid index and table of contents.

1.2 Bill of Materials

Following is a list of the files in this distribution arranged according to provenance.

1.2.1 Primary Source

One single file generates all.

```
%ltxdocext.dtx
%
```

1.2.2 Generated by `latex ltxdocext.dtx`

Typesetting the source file under LaTeX generates the readme and the installer.

```
%00readme.txt   ltxdocext.ins
%
```

1.2.3 Generated by `tex ltxdocext.ins`

Typesetting the installer generates the package files.

```
%ltxdocext.sty    acrofont.sty
%
```

1.2.4 Documentation

The following are the online documentation:

```
%ltxdocext.pdf
%
```

1.2.5 Auxiliary

The following are auxiliary files generated in the course of running LaTeX:

```
%ltxdocext.aux ltxdocext.idx ltxdocext.ind ltxdocext.log ltxdocext.toc
%
```

2 Code common to all modules

The following may look a bit klootchy, but we want to require only one place in this file where the version number is stated, and we also want to ensure that the version number is embedded into every generated file.

Now we declare that these files can only be used with LaTeX 2ε. An appropriate message is displayed if a different TeX format is used.

```
%<*doc|extensions|fonts>
\NeedsTeXFormat{LaTeX2e}[1995/12/01]%
%</doc|extensions|fonts>
```

As desired, the following modules all take common version information:

```
%<extensions>\ProvidesFile{ltxdocext.sty}%
%<fonts>\ProvidesFile{acrofont.sty}%
%<*doc>
\expandafter\ProvidesFile\expandafter{\jobname.dtx}%
%</doc>
```

The following line contains, for once and for all, the version and date information. By various means, this information is reproduced consistently in all generated files and in the typeset documentation.

```
 [1999/06/04 0.0a0 ltxdoc extensions package]% \fileversion
```

3 The driver module `doc`

This module, consisting of the present section, typesets the programmer's documentation, generating the `.ins` installer and `00readme.txt` as required.

Because the only uncommented-out lines of code at the beginning of this file constitute the `doc` module itself, we can simply typeset the `.dtx` file directly, and there is thus rarely any need to generate the "doc" DOCSTRIP module. Module delimiters are nonetheless required so that this code does not find its way into the other modules.

The `\end{document}` command concludes the typesetting run.

```
%<*doc>
```

3.1 Stubs for `ltxdocext.sty` and `acrofont.sty`

This `filecontents` environment generates stub files `ltxdocext.sty` and `acrofont.sty`. Stubs are needed because the documentation for this package requires them and they might not yet be present.

A real version of these files will be generated when you typeset `ltxdocext.ins`, at which point the stub file will be overwritten (you will have to give DOCSTRIP permission to do this).

```
\begin{filecontents}{ltxdocext.sty}
% Stub version of ltxdocext.sty
\end{filecontents}
\begin{filecontents}{acrofont.sty}
% Stub version of acrofont.sty
\end{filecontents}
```

3.2 The Preamble

The programmers documentation is formatted with the `ltxdoc` class with local customizations, and with the usual code line indexing.

```
\documentclass[draft]{ltxdoc}
\RequirePackage{ltxdocext}%
\RequirePackage{acrofont}%
\CodelineIndex\EnableCrossrefs
```

3.2.1 Docstrip and info directives

We use so many DOCSTRIP modules that we set the `StandardModuleDepth` counter to 1.

```
\setcounter{StandardModuleDepth}{1}
```

The following command retrieves the date and version information from this file.

```
\expandafter\GetFileInfo\expandafter{\jobname.dtx}%
```

3.3 The installer file

The installer `ltxdocext.ins` appears here. If you have retrieved the standard distribution of this package, the installer file is already on your filesystem. If you are bootstrapping, the first typesetting of the `.dtx` file will cause the installer to be generated.

The following modules are used to direct DOCSTRIP in generating the external files:

Module	File	Description
doc	`ltxdocext.drv`	driver for programmer's documantation
extensions	`ltxdocext.sty`	ltxdoc extensions package
fonts	`acrofont.sty`	package to use only Acrobat fonts

```
\begin{filecontents}{ltxdocext.ins}
%% This file will generate documentation and runtime files
%% from ltxdocext.dtx when run through LaTeX or TeX.
\input docstrip
\preamble

This is a generated file;
altering it directly is inadvisable;
instead, modify the original source file.
See the URL in the file 00readme.txt.

Copyright notice.

   These files are distributed
   WITHOUT ANY WARRANTY; without even the implied warranty of
   MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

\endpreamble
\keepsilent
  \generate{%
   \file{ltxdocext.drv}{\from{ltxdocext.dtx}{doc}}%
   \file{ltxdocext.sty}{\from{ltxdocext.dtx}{extensions}}%
   \file{acrofont.sty}{\from{ltxdocext.dtx}{fonts}}%
  }%
```

```
\ifToplevel{
\Msg{************************************************************}
\Msg{*}
\Msg{* To finish the installation, please move}
\Msg{*    ltxdocext.sty}
\Msg{* into a directory searched by TeX.}
\Msg{*}
\Msg{* To produce the user documentation,
*       run ltxdocext.tex through LaTeX.}
\Msg{*}
\Msg{* To produce the programmer documentation,
*       run ltxdocext.dtx through LaTeX.}
\Msg{*}
\Msg{* Happy TeXing}
\Msg{************************************************************}
}
\endbatchfile
\end{filecontents}
```

Note that, because all of the files generated by the installer are part of the standard distribution, it will be necessary to run the installer only when bootstrapping (or, of course, during development). Note, too, that it is rare to generate the `doc` module because it suffices to simply typeset the `.dtx` file itself.

3.4 The "Read Me" File

As promised above, here is the contents of the "Read Me" file. That file serves a double purpose, since it also constitutes the beginining of the programmer's documentation. What better thing, after all, to have appear at the beginning of the typeset documentation?

A good discussion of how to write a ReadMe file can be found in Engst, Tonya, "Writing a ReadMe File? Read This" *MacTech* October 1998, p. 58.

Note the appearance of the `\StopEventually` command, which marks the dividing line between the user documentation and the programmer documentation.

The usual user will not be asked to do a full build, not to speak of the bootstrap. Instructions for carrying these processes begin the programmer's manual.

```
\begin{filecontents*}{00readme.txt}
\title{%
 Extensions to the \classname{ltxdoc} class%
 \thanks{%
  This file has version number \fileversion,
  last revised \filedate.%
  % For version number and date, search on "\fileversion" in the .dtx file,
  % or see the end of the 00readme.txt file.
 }%
}%

\author{%
Arthur Ogawa (\texttt{mailto:ogawa@teleport.com}),
\fileversion\\Copyright (C) 1999 Arthur Ogawa
}%
\maketitle

This file embodies the \classname{ltxdocext} package,
```

```
the implementation and its user documentation.

The distribution point for this work is
\url{ftp://ftp.teleport.com/users/ogawa/macros/latex/contrib/supported/ltxdocext...},
which contains fully unpacked, prebuilt runtime files and documentation.

To use this document class, you must have a working
\TeX\ installation equipped with \LaTeXe\
and possibly pdftex and Adobe Acrobat Reader or equivalent.

To install, retrieve the distribution,
unpack it into a directory on the target computer,
and move the files \file{ltxdocext.sty} and \file{acrofont.sty}
into a location in your filesystem where they will be found by \LaTeX.

If you will be using the \classname{acrofont} package, you must
also install the virtual fonts
\file{zpsynocmrv}, \file{zptmnocmr},
\file{zptmnocmrm}, and \file{zpzcnocmry}.
The corresponding \file{.tfm}, \file{.vf}, and \file{.vpl}
files are part of this distribution.

To use, read the user documentation \file{ltxdocext.pdf}.
The \file{.dtx} file, \file{ltxdocext.dtx}, constitutes
in itself an instance of use of the \classname{ltxdocext}
package and the \classname{acrofont} package.

\tableofcontents

\section{Processing Instructions}

The package files \file{ltxdocext.sty} and \file{acrofont.sty}
are generated from this file, \file{ltxdocext.dtx},
via the {\sc docstrip} facility of \LaTeX
via |tex ltxdocext.ins|.
The typeset documentation that you are now reading is generated from
the same file by typesetting it with \LaTeX\ or pdftex
via |latex ltxdocext.dtx| or |pdflatex ltxdocext.dtx|.

\subsection{Build Instructions}

You may bootstrap this suite of files solely from \file{ltxdocext.dtx}.
Prepare by installing \LaTeXe\ (and either tex or pdftex) on your computer,
then carry out the following steps:
\begin{enumerate}
\item
Within an otherwise empty directory,
typeset \file{ltxdocext.dtx} with \LaTeX\ or pdflatex;
you will obtain the typeset documentation you are now reading,
along with
the installer \file{ltxdocext.ins},
and the file \file{00readme.txt}.
\item
Now typeset \file{ltxdocext.ins},
```

```
thereby generating the package file \file{ltxdocext.sty},
and the package file \file{acrofont.sty}.
Make sure that {\sc docstrip} receives permission
to overwrite existing versions of these packages.
\item
Install \classname{ltxdocext.sty} and \classname{acrofont.sty}
by moving them to a location
in your filesystem where they will be found by \LaTeX.
\item
Now complete the typesetting of the documentation by
retypesetting \file{ltxdocext.dtx}.
Note: you will have to run \LaTeX\ twice, then \file{makeindex}, then
\LaTeX\ again in order to obtain a valid index and table of contents.
\end{enumerate}
\end{filecontents*}
```

3.5 The Document Body

Here is the document body, containing only a `\DocInput` directive—referring to this very file. This very cute self-reference is a common `ltxdoc` idiom.

```
\begin{document}%
\expandafter\DocInput\expandafter{\jobname.dtx}%
% ^^A\PrintChanges
\end{document}
%</doc>
```

4 Using the `ltxdoc` and `acrofont` packages

These packages are an adjunct to the standard LaTeX `ltxdoc` class and may be simply invoked as follows:

```
%\documentclass[draft]{ltxdoc}
%\RequirePackage{ltxdocext}%
%\RequirePackage{acrofont}%
%\CodelineIndex\EnableCrossrefs
%
```

Your document should simply cleave to the standards of the `ltxdoc` class, with extensions and alterations as noted.

4.1 Extensions to the `ltxdoc` class

4.1.1 Extensions to the `verbatim` environment and `\verb` command

The delimiters `<<` and `>>` within the scope of the verbatim environment or within the argument of the `\verb` command produce italics surrounded by angle brackets. This typographic convention usually indicates *metalanguage*, i.e., a placeholder.

To obtain the angle bracket character per se, double the character, viz., “`the delimiter \verb+<<<<+`”.

4.1.2 The -`matter` Commands Work

The sectioning commands `\frontmatter`, `\mainmatter`, and `\backmatter`of the standard LaTeX `book` class are operative in the `ltxdoc` class.

4.1.3 The `\GetFileInfo` command

You can use the `\GetFileInfo` command to extract the date, version, and file info of a file which has registered itself via the `\ProvidesFile` or `\ProvidesClass` command (employing the optional argument thereto).

For instance, if your document contains the following:

```
%\RequirePackage{ltxdocext}%
%\GetFileInfo{ltxdocext.sty}%
%
```

then the following control sequence names will have a value corresponding to that package's `\ProvidesFile` command: `\filedate`: the file's date, `\fileversion`: the file's version, and `\fileinfo`: the file's info.

4.1.4 Self-Indexing Commands

Certain commands automatically produce an index entry (or several related entries) according to the meaning.

meta-text	`\m{`<*text*>`}`
command	`\cmd\csname`
environment name	`\env{`<*name*>`}`
`\begin{foo}`	`\envb{`<*foo*>`}`
`\end{foo}`	`\enve{`<*foo*>`}`
argument	`\arg{`<*name*>`}`
optional	`\oarg{`<*name*>`}`
filename	`\file{`<*name*>`}`
url	`\url{`<*name*>`}`
document class	`\classname{`<*name*>`}`
document substyle	`\substyle{`<*name*>`}`
class option	`\classoption{`<*name*>`}`

4.1.5 Unnumbered Tables

When your documentation requires the use of an unnumbered table, use the `unnumtable` environment:

```
%\begin{unnumtable}
%\begin{tabular}{ll}
%<table rows>
%\end{tabular}
%\end{unnumtable}
%
```

4.1.6 Structuring Tables

The commands `\toprule`, `\colrule`, and `\botrule`allow you to mark the beginning of the column heads the beginning of the table body, and the end of the table body, respectively. In context,

```
%\begin{tabular}{ll}
%\toprule
%<table head rows>
%\colrule
%<table rows>
%\botrule
%\end{tabular}
%
```

4.1.7 A Sectioning Command Below `\subsection`

The `\subsubsection` command is defined.

4.2 Alterations to the `ltxdoc` class

The following involve no new markup, but they do change the appearance of your formatted documentation:

1. Using the `acrofont` package causes your document to be formatted using the standard Acrobat fonts to the greatest extent possible. This means that for most documents, Computer Modern is not used at all. Math that unavoidable must use CM still exists, however.
2. An index will be produced at the end of the document without your needing to explicitly mark it up, and it will have an entry in the TOC.
3. The `quote` environment has a slightly smaller left margin.
4. Array columns are set tight by default.
5. A host of `\DoNotIndex` directives are invoked. I intend this list to grow to encompass even more commands. Send me your suggestions.

5 Extensions to the ltxdoc class

The `extensions` DOCSTRIP module comprises the package `ltxdocext.sty`, which provides extensions to the standard LaTeX `ltxdoc` class.

5.1 Beginning of the `extensions` DOCSTRIP module

```
157 %<*extensions>
158 \def\class@name{ltxdocext}%
159 \expandafter\PackageInfo\expandafter{\class@name}{%
160  An extension to the \protect\LaTeXe\space ltxdoc class
161  by A. Ogawa (ogawa@teleport.com)%
162 }%
```

5.2 Incorporate `ltxguide.cls` extensions

Code extracted from `ltxguide.cls`, by Alan Jeffrey. "This code stolen from `ltxguide.cls`: Some hacks with verbatim... NB: this would be better done with the verbatim package, but this document has to run on any LaTeXinstallation."

```
163 \RequirePackage{verbatim}%
```

```
\let\o@verbatim\verbatim
\def\verbatim{%
  \ifhmode\unskip\par\fi
% \nopagebreak              % Overridden by list penalty
  \ifx\@currsize\normalsize
     \small
  \fi
  \o@verbatim
}%
```

Here we extend the font-setting command to include making <> active (i.e., adjusting the input encoding).

```
\renewcommand \verbatim@font {%
  \normalfont \ttfamily
  \catcode`\<=\active
  \catcode`\>=\active
}%
```

Make `|...|` a synonym for `\verb|...|`.

```
\RequirePackage{shortvrb}
\AtBeginDocument{%
 \MakeShortVerb{\|}%
}%
```

Make active bracket characters produce italics surrounded by angle brackets (used in `verbatim` and `\verb`). << produces a less-than, and >> produces a greater-than.

```
\begingroup
  \catcode`\<=\active
  \catcode`\>=\active
  \gdef<{\@ifnextchar<\@lt\@meta}
  \gdef>{\@ifnextchar>\@gt\@gtr@err}
  \gdef\@meta#1>{\m{#1}}
  \gdef\@lt<{\char`\<}
  \gdef\@gt>{\char`\>}
\endgroup
\def\@gtr@err{%
   \ClassError{ltxguide}{%
      Isolated \protect>%
   }{%
      In this document class, \protect<...\protect>
      is used to indicate a parameter.\MessageBreak
      I've just found a \protect> on its own.
      Perhaps you meant to type \protect>\protect>?
   }%
}
\def\verbatim@nolig@list{\do\`\do\,\do\'\do\-}
```

End of code stolen from `ltxguide.cls`. Thanks, Alan.

Add functionality from doc.dtx: (code stolen from doc.dtx):

```
\def\GetFileInfo#1{%
  \def\filename{#1}%
  \def\@tempb##1 ##2 ##3\relax##4\relax{%
    \def\filedate{##1}%
    \def\fileversion{##2}%
    \def\fileinfo{##3}}%
```

```
  \edef\@tempa{\csname ver@#1\endcsname}%
  \expandafter\@tempb\@tempa\relax? ? \relax\relax}
```

(end of code stolen from doc.dtx. Thanks FMi.)

Various forms of self-indexing commands:

```
\DeclareRobustCommand{\m}[1]{%
 \meta{#1}%
 \index{#1=\string\meta{#1} placeholder}\index{placeholder>#1=\string\meta{#1}}%
}%
\DeclareRobustCommand\meta[1]{%
 \mbox{\LANGLE\itshape#1\/\RANGLE}%
}%
\def\LANGLE{$\langle$}%
\def\RANGLE{$\rangle$}%
\DeclareRobustCommand{\arg}[1]{%
 {\ttfamily\string{}\meta{#1}{\ttfamily\string}}%
 \index{#1=\string\ttt{#1}, argument}\index{argument>#1=\string\ttt{#1}}%
}%
\let\oarg\undefined
\DeclareRobustCommand{\oarg}[1]{%
 {\ttfamily[%]
  }\meta{#1}{\ttfamily%[
 ]}%
 \index{#1=\string\ttt{#1}, optional argument}%
 \index{argument, optional>#1=\string\ttt{#1}}%
}%
\DeclareRobustCommand\cmd{\begingroup\makeatletter\@cmd}%
\def\@cmd#1{%
 \endgroup
 \cs{\expandafter\cmd@to@cs\string#1}%
 \expandafter\cmd@to@index\string#1\@nil
}%
\def\cmd@to@cs#1#2{\char\number‘#2\relax}%
\def\cmd@to@index#1#2\@nil{%
 \index{#2=\string\cmd#1#2}%\index{command>#2=\string\cmd#1#2}%
}%
\DeclareRobustCommand\cs[1]{{\ttfamily\char‘\\#1}}%
\def\scmd#1{%
 \cs{\expandafter\cmd@to@cs\string#1}%
 \expandafter\scmd@to@index\string#1\@nil
}%
\def\scmd@to@index#1#2\@nil#3{%
 \index{\string$#3=\string\cmd#1#2---#3}%
%\index{command>\string$#3=\string\cmd#1#2---#3}%
}%
\DeclareRobustCommand\env{\name@idx{environment}}%
\DeclareRobustCommand\envb[1]{%
 {\ttfamily\string\begin\string{}\env{#1}{\ttfamily\string}}%
}%
\DeclareRobustCommand\enve[1]{{\ttfamily\string\end\string{}\env{#1}{\ttfamily\string
\DeclareRobustCommand*{\file}[1]{%
 {\ttfamily#1}%
 \index{#1=\string\ttt{#1}}\index{file>#1=\string\ttt{#1}}%
}%
```

```
\DeclareRobustCommand\substyle{\name@idx{document substyle}}%
\DeclareRobustCommand\classoption{\name@idx{document class option}}%
\DeclareRobustCommand\classname{\name@idx{document class}}%
\def\name@idx#1#2{%
 {\ttfamily#2}%
 \index{#2\space#1=\string\ttt{#2}\space#1}\index{#1>#2=\string\ttt{#2}}%
}%
\DeclareRobustCommand\url@ltxdocext{\begingroup\catcode‘\/\active\catcode‘\.\active\c
\AtBeginDocument{%
 \ifx\url\undefined\let\url\url@ltxdocext\fi
}%
\def\@url#1{%
 \url@break{\ttfamily#1}%
 \url@char\edef\@tempa{#1=\string\url{#1}}%
 \expandafter\index\expandafter{\@tempa}%
 \expandafter\index\expandafter{\expandafter u\expandafter r\expandafter l\expandafte
 \endgroup
}%
{\catcode‘\:\active\aftergroup\def\aftergroup:}{\active@colon}%
\def\colon@break{\colon@char\allowbreak}%
\def\colon@char{:}%
{\catcode‘\/\active\aftergroup\def\aftergroup/}{\active@slash}%
\def\slash@break{\slash@char\allowbreak}%
\def\slash@char{/}%
{\catcode‘\.\active\aftergroup\def\aftergroup.}{\active@dot}%
\def\dot@break{\dot@char\allowbreak}%
\def\dot@char{.}%
\def\url@break{\let\active@slash\slash@break\let\active@dot\dot@break\let\active@colo
\def\url@char{\let\active@slash\slash@char\let\active@dot\dot@char\let\active@colon\c
```

5.3 Changes to the base class of the ltxdoc class

Modify `theindex` environment so that it produces a TOC entry

```
\renewenvironment{theindex}
               {\if@twocolumn
                  \@restonecolfalse
                \else
                  \@restonecoltrue
                \fi
                \columnseprule \z@
                \columnsep 35\p@
\def\see##1##2{\textit{See} ##1}%
\def\seealso##1##2{\textit{See also} ##1}%
\def\cmd##1{\cs{\expandafter\cmd@to@cs\string##1}}%
\def\@url##1{\url@break\ttt{##1}\endgroup}%
\def\ttt##1{{\ttfamily##1}}%
\mathchardef\save@secnumdepth\c@secnumdepth
\c@secnumdepth\m@ne
                \twocolumn[\section{\indexname}]%
%               \@mkboth{\MakeUppercase\indexname}%
%                       {\MakeUppercase\indexname}%
\c@secnumdepth\save@secnumdepth
                \thispagestyle{plain}\parindent\z@
                \parskip\z@ \@plus .3\p@\relax
```

```
                \let\item\@idxitem}
               {\if@restonecol\onecolumn\else\clearpage\fi}
\renewenvironment{quote}
               {\list{}{%
                \leftmargin1em\relax
                \rightmargin\leftmargin
                }%
                \item\relax}
               {\endlist}
```

5.4 Extensions to the base class of `ltxdoc.cls`

Matter commands from `book.cls`

```
\newif\if@mainmatter
\newif\if@openright
\@openrighttrue
\DeclareRobustCommand\frontmatter{%
  \cleartorecto
  \@mainmatterfalse
  \pagenumbering{roman}%
}%
\DeclareRobustCommand\mainmatter{%
  \cleartorecto
  \@mainmattertrue
  \pagenumbering{arabic}%
}%
\DeclareRobustCommand\backmatter{%
  \if@openright
    \cleartorecto
  \else
    \clearpage
  \fi
  \@mainmatterfalse
}%
\ifx\undefined\cleartorecto
 \def\cleartorecto{\cleardoublepage}%
\fi
```

Unnumbered tables

`unnumtable` An unnumbered table does not float.

```
\def\@to{to}%
\newenvironment{unnumtable}{%
 \par
 \addpenalty\predisplaypenalty
 \addvspace\abovedisplayskip
 \hbox\@to\hsize\bgroup\hfil\ignorespaces
  \let\@Hline\@empty
}{%
 \unskip\hfil\egroup
 \penalty\postdisplaypenalty
 \vskip\belowdisplayskip
 \aftergroup\ignorespaces
 \@endpetrue
```

```
}%
```

Emulate `\toprule` and friends

```
\newcommand\toprule{\hline\hline}%
\newcommand\colrule{\\\hline}%
\newcommand\botrule{\\\hline\hline}%
```

Define sectioning command below `\subsubsection`.

```
\DeclareRobustCommand\subsubsubsection{%
 \@startsection{subsubsection}{4}%
  {\z@}{-15\p@\@plus-5\p@\@minus-2\p@}%
  {5\p@}{\normalfont\normalsize\itshape}%
}%
```

5.5 In lieu of `ltxdoc.cfg`

We don't want everything to appear in the index

```
\DoNotIndex{\',\.,\@M,\@@input,\@Alph,\@alph,\@addtoreset,\@arabic}
\DoNotIndex{\@badmath,\@centercr,\@cite}
\DoNotIndex{\@dotsep,\@empty,\@float,\@gobble,\@gobbletwo,\@ignoretrue}
\DoNotIndex{\@input,\@ixpt,\@m,\@minus,\@mkboth}
\DoNotIndex{\@ne,\@nil,\@nomath,\@plus,\roman,\@set@topoint}
\DoNotIndex{\@tempboxa,\@tempcnta,\@tempdima,\@tempdimb}
\DoNotIndex{\@tempswafalse,\@tempswatrue,\@viipt,\@viiipt,\@vipt}
\DoNotIndex{\@vpt,\@warning,\@xiipt,\@xipt,\@xivpt,\@xpt,\@xviipt}
\DoNotIndex{\@xxpt,\@xxvpt,\\,\ ,\addpenalty,\addtolength,\addvspace}
\DoNotIndex{\advance,\ast,\begin,\begingroup,\bfseries,\bgroup,\box}
\DoNotIndex{\bullet}
\DoNotIndex{\cdot,\cite,\CodelineIndex,\cr,\day,\DeclareOption}
\DoNotIndex{\def,\DisableCrossrefs,\divide,\DocInput,\documentclass}
\DoNotIndex{\DoNotIndex,\egroup,\ifdim,\else,\fi,\em,\endtrivlist}
\DoNotIndex{\EnableCrossrefs,\end,\end@dblfloat,\end@float,\endgroup}
\DoNotIndex{\endlist,\everycr,\everypar,\ExecuteOptions,\expandafter}
\DoNotIndex{\fbox}
\DoNotIndex{\filedate,\filename,\fileversion,\fontsize,\framebox,\gdef}
\DoNotIndex{\global,\halign,\hangindent,\hbox,\hfil,\hfill,\hrule}
\DoNotIndex{\hsize,\hskip,\hspace,\hss,\if@tempswa,\ifcase,\or,\fi,\fi}
\DoNotIndex{\ifhmode,\ifvmode,\ifnum,\iftrue,\ifx,\fi,\fi,\fi,\fi,\fi}
\DoNotIndex{\input}
\DoNotIndex{\jobname,\kern,\leavevmode,\let,\leftmark}
\DoNotIndex{\list,\llap,\long,\m@ne,\m@th,\mark,\markboth,\markright}
\DoNotIndex{\month,\newcommand,\newcounter,\newenvironment}
\DoNotIndex{\NeedsTeXFormat,\newdimen}
\DoNotIndex{\newlength,\newpage,\nobreak,\noindent,\null,\number}
\DoNotIndex{\numberline,\OldMakeindex,\OnlyDescription,\p@}
\DoNotIndex{\pagestyle,\par,\paragraph,\paragraphmark,\parfillskip}
\DoNotIndex{\penalty,\PrintChanges,\PrintIndex,\ProcessOptions}
\DoNotIndex{\protect,\ProvidesClass,\raggedbottom,\raggedright}
\DoNotIndex{\refstepcounter,\relax,\renewcommand}
\DoNotIndex{\rightmargin,\rightmark,\rightskip,\rlap,\rmfamily}
\DoNotIndex{\secdef,\selectfont,\setbox,\setcounter,\setlength}
\DoNotIndex{\settowidth,\sfcode,\skip,\sloppy,\slshape,\space}
\DoNotIndex{\symbol,\the,\trivlist,\typeout,\tw@,\undefined,\uppercase}
\DoNotIndex{\usecounter,\usefont,\usepackage,\vfil,\vfill,\viiipt}
```

```
\DoNotIndex{\viipt,\vipt,\vskip,\vspace}
\DoNotIndex{\wd,\xiipt,\year,\z@}
\DoNotIndex{\next}
```

Direct `ltxdoc` to produce an index.

```
\AtEndDocument{\PrintIndex}%
```

5.6 Extension to LaTeX's `filecontents` Environment

We want to coax the version number into `filecontents`-generated files. Note that we expect `\fileversion` and `\filedate` to hold the needed information. For this to be the case, your document should execute the `\GetFileInfo` command (as documented in section 4.1.3) before any instances of `filecontents`.

```
\makeatletter
\def\endfilecontents{%
 \immediate\write\reserved@c{%
  \string\iffalse\space ltxdoc klootch^^J%
  \ifx\undefined\fileversion\else
  \ifx\undefined\filedate\else
  This file has version number \fileversion, last revised \filedate.%
  \fi\fi
  \string\fi
 }%
 \immediate\closeout\reserved@c
 \def\T##1##2##3{%
  \ifx##1\@undefined\else
    \@latex@warning@no@line{##2 has been converted to Blank ##3e}%
  \fi
 }%
 \T\L{Form Feed}{Lin}%
 \T\I{Tab}{Spac}%
 \immediate\write\@unused{}%
}%
\expandafter\let\csname endfilecontents*\endcsname\endfilecontents
\makeatother
```

Alter formatting in arrays; set them tight.

```
\setlength\arraycolsep{0pt}%
```

5.7 End of the `extensions` DOCSTRIP module

Here ends the module.

```
%</extensions>
```

6 Font Package for Acrobat Compatability

The package `acrofont` substitutes Acrobat-standard fonts for Computer Modern where possible, even in math mode. Documents typeset with this package in effect will require as little downloaded font data as possible, but will not be exemplars of fine math typesetting.

6.1 Beginning of the `fonts` DOCSTRIP module

The document class module comprises this and the next four sections.

`\class@base` We define in exactly one spot the base class. Typically that class will be one of `book`, `article`, or `report`. The base class effectively defines the use and the markup scheme of the class of documents to be handled by this class.

This class is a variant of the standard LaTeX book class: `ftp://ctan.tug.org/tex-archive/macros/latex/unpacked`.

```
%<*fonts>
\def\class@name{ltxdocext}%
\expandafter\ClassInfo\expandafter{\class@name}{%
 Written for \protect\LaTeXe\space
 by A. Ogawa (ogawa@teleport.com)%
}%
```

6.2 Variants on psfonts packages

The following uses `times.sty` from `/packages/psnfss/psfonts.dtx`

```
\RequirePackage{times}%
```

The following uses `mathptm.sty` from `/packages/psnfss/psfonts.dtx`

```
\RequirePackage{mathptm}%
```

The following is a customization of `ot1ptmcm.fd`. The virtual font referred to here `zptmnocmr` is a variant of Sebastian Rahtz's `zptmcmr`, but with even more glyphs moved from CM to Acrobat-standard fonts.

```
\DeclareFontFamily{OT1}{ptmcm}{}
\DeclareFontShape{OT1}{ptmcm}{m}{n}{
   <-> zptmnocmr
}{}
\DeclareFontShape{OT1}{ptmcm}{l}{n}{<->ssub * ptmnocm/m/n}{}
```

The following is a customization of `omlptmcm.fd` The virtual font referred to here `zptmnocmrm` is a variant of Sebastian Rahtz's `zptmcmrm`, but with even more glyphs moved from CM to Acrobat-standard fonts.

```
\DeclareFontFamily{OML}{ptmcm}{\skewchar \font =127}
\DeclareFontShape{OML}{ptmcm}{m}{it}{
   <-> zptmnocmrm
}{}
\DeclareFontShape{OML}{ptmcm}{l}{it}{<->ssub * ptmcm/m/it}{}
\DeclareFontShape{OML}{ptmcm}{m}{sl}{<->ssub * ptmcm/m/it}{}
\DeclareFontShape{OML}{ptmcm}{l}{sl}{<->ssub * ptmcm/m/sl}{}
```

The following is a customization of `omspzccm.fd` The virtual font referred to here `zpzcnocmry` is a variant of Sebastian Rahtz's `zpzccmry`, but with even more glyphs moved from CM to Acrobat-standard fonts.

```
\DeclareFontFamily{OMS}{pzccm}{}
\DeclareFontShape{OMS}{pzccm}{m}{n}{
   <-> zpzcnocmry
}{}% cmsy10 Symbol Zapf Chancery Medium-Italic Times-Roman
\DeclareFontShape{OMS}{pzccm}{l}{n}{<->ssub * pzccm/m/n}{}
```

The following is a customization of `omxpsycm.fd` The virtual font referred to here `zpsynocmrv` is a variant of Sebastian Rahtz's `zpsycmrv`, but with even more glyphs moved from CM to Acrobat-standard fonts.

```
\DeclareFontFamily{OMX}{psycm}{}
\DeclareFontShape{OMX}{psycm}{m}{n}{
   <-> zpsynocmrv
}{}
\DeclareFontShape{OMX}{psycm}{l}{n}{<->ssub * psycm/m/n}{}
%
\DeclareFontEncoding{8r}{}{}% from file: 8renc.def
\DeclareFontFamily{8r}{cmr}{\hyphenchar\font45 }% from file: 8rcmr.fd
\DeclareFontShape{8r}{cmr}{m}{n}{
 <-> cmr10
}{}
```

6.3 Font definition files

The following forces LaTeX to do now what it would do anyway: load the 'font definition' information for the fonts that we use. In this way, we prepare for faster processing through the `\dump` of a preformatted macro package that will not need to read in any packages or font definitions from disk.

```
\input{8rphv.fd}%
\input{8rptm.fd}%
\input{ot1phv.fd}%
\input{ot1ptm.fd}%
\input{t1ptm.fd}%
```

6.4 More math substitutions

The following definitions arrange to get certain glyphs from the text font instead of out of math pi fonts. In particular, the copyright and registered symbols are single glyphs instead of composites involving the big circle from the `cmsy` font.

```
 \def\eightRChar#1{{\def\encodingdefault{8r}\fontencoding\encodingdefault\selectfont\
 \def\LANGLE{$<$}%{\eightRChar{8B}}%
 \def\RANGLE{$>$}%{\eightRChar{9B}}%
%\def\ASTER{\eightRChar{2A}}%
%\def\DAGGER{\eightRChar{86}}%
%\def\DDAGGER{\eightRChar{87}}%
 \def\BULLET{\eightRChar{95}}%
%\def\SECTION{\eightRChar{A7}}%
%\def\PARAGRAPH{\eightRChar{B6}}%
 \def\VERTBAR{\eightRChar{7C}}%
 \def\COPYRIGHT{\eightRChar{A9}}%
 \def\REGISTERED{\eightRChar{AE}}%

 \def\textbar{\VERTBAR}%
 \def\textbullet{\BULLET}%
 \def\textcopyright{\COPYRIGHT}%
 \def\textregistered{\REGISTERED}%
```

I have removed `\ensuremath` from the following definition, and all commands like `\mathsection`have been converted to e.g., `\textsection`.

```
\def\@makefnmark{\@thefnmark}%
```

```
\def\@fnsymbol#1{{\ifcase#1\or *\or \dagger\or \ddagger\or
   \textsection\or \textparagraph\or \|\or **\or \dagger\dagger
   \or \ddagger\ddagger \else\@ctrerr\fi}}
```

6.5 End of the `fonts` DOCSTRIP module

Here ends the module.

```
%</fonts>
```

7 Programming Conventions

In writing the above code, I cleave to certain conventions, noted here. My goal in explaining them is to encourage others maintaining this body of code to consider following them as well. The benefits are twofold: Some of the coding conventions aim to avoid programming pitfalls; following them reduces maintenance costs. Others make the code easier to read; following these eases the process of understanding how the code works.

And, for my part, I prefer to read code of this type.

7.1 Whitespace Conventions

Exactly where code lines break and indent, and where additional whitespace is inserted is explained here.

- Each new macro definition or register assignment begins a new line. Therefore, `\def`, `\newcommand`, and their ilk will start in column 1.
- Code is indented one space for each level of nesting within braces `{}`.
- Likewise, if possible, for `\if`... and matching `\fi`.
- However, the closing brace or `\fi` is outdented by one so that it falls at the same level of indentation as its matching brace or `\if`, and it appears alone on its line.
- Use of the `tab` character is deprecated (tabs are not standardized across all applications and operating systems).
- Lines of code are limited to 72 characters. I follow this convention mostly to ease the transmission of files via email (a deprecated practice) and to accomodate people with small monitors. But `ltxdoc` output looks better with the shorter lines, too.
- Extraneous whitespace is avoided by using the comment character `%`. In most cases, if falling at the end of a line of code, a brace will be immediately followed by a comment character, as will the macro parameter `#1` and any one-letter control sequence, like `\\`.

These conventions taken together are illustrated by the following:

```
%\def\prepdef#1#2{%
% \@ifxundefined#1{\toks@{}}{\toks@\expandafter{#1}}%
% \toks@ii{#2}%
% \edef#1{\the\toks@ii\the\toks@}%
%}%
%
```

In the above, the definition of `\prepdef` would not fit on a single line, and required breaking. The first and last lines have matching braces, and are a the same level of indentation, with the last line containing a single brace.

Each of the three intervening lines has balanced braces and is indented by one space. Each line that would otherwise end in a single brace character is terminated by a comment character.

Some coders rely on the fact that a space character seen by TEX's scanner while in vertical mode is a no-op. Be that as it may, I eliminate them unless actually intentional.

7.2 Conventions For Procedures

Here are some of my preferences when writing procedures:

- I dislike defining a macro within another macro, especially when the pattern part is non-nil. You know, you are not saving much space in `mem` when you do this, right? You do save space in the hash table and the string pool, though. On the other hand, we are not dealing with small TEX engines anymore; Team LATEX has made sure of this.
- If two or more macros have very similar replacement parts, consider layering.
- Macros may perform parsing, may maintain tokens or registers, or may set type (produce marks). I try to avoid combining the three functions in a single macro.
- When a procedure both does assignments and sets type, I try to have a clean separations between the two activities. Try to avoid:

```
% \vskip10pt
% \parindent=0pt
% \leavevmode
%
```

- The Boolean calculus (cf. `\@ifx`) is very useful and produces code that executes nicely. Using it also helps avoid your having to debug problems where `\if...` and `\fi` are not properly balanced (a nightmare in case you didn't already experience it).

7.3 Conventions For LATEX

Team LATEX make certain recommendations in `clsguide.tex`. Ones that I particularly pay attention to are:

- For the sake of "color safety", use `\sbox` rather than `\setbox`, `\mbox` rather than `\hbox`, and `\parbox` or `minipage` rather than `\vbox`.
- Use `\newcommand` and `\newenvironment` to declare user-level commands and environments. Avoid the idiom `\def\foo`, `\def\endfoo` to define an environment. Ideally, all user-level markup could be extracted from the document class by grepping on `\newcommand` and `\newenvironment`.
- Prefer to use `\setlength` to assign registers.

I cannot help but notice that much of the code of LATEX itself fails to comply with many of the coding recommendations of Team LATEX.

Here ends the programmer's documentation.

Index

Symbols

.dtx 1, 4–6
.ins 4
.tfm 1
.vf 1
.vpl 1
/packages/psnfss/psfonts.dtx 18
\@Hline 340
\@cmd 229, 230
\@ctrerr 459
\@currsize 168
\@endpetrue 346
\@fnsymbol 457
\@gt 184, 187
\@gtr@err 184, 189
\@idxitem 304
\@ifnextchar 183, 184
\@ifx 21
\@lt 183, 186
\@mainmatterfalse . . 318, 332
\@mainmattertrue 323
\@makefnmark 456
\@meta 183, 185
\@openrighttrue 315
\@restonecolfalse 285
\@restonecoltrue 287
\@startsection 352
\@tempa 206, 207, 267–269
\@tempb 202, 207
\@thefnmark 456
\@to 334, 339
\@url 264, 265, 294
00readme.txt 3, 4

A

\abovedisplayskip 338
acrofont 1
acrofont document class 1, 9, 11, 17
acrofont.sty 1–3, 5
\active . 175, 176, 181, 182, 264, 272, 275, 278
\active@colon . . . 272, 281, 282
\active@dot 278, 281, 282
\active@slash . . . 275, 281, 282
\aftergroup . 272, 275, 278, 345
\allowbreak 273, 276, 279
\arg 10
\arg 217
argument
  foo 10
  name 10
  text 10
\arraycolsep 397
article document class 17
\ASTER 443
\AtEndDocument 396
\author 76

B

\backmatter 9
\backmatter 326
\begin 10
\belowdisplayskip 344
book document class 9, 17
book.cls document class 15
\botrule 10
\botrule 350
\BULLET 446, 453

C

\c@secnumdepth . . 296, 297, 301
\catcode 175, 176, 181, 182, 264, 272, 275, 278
\char 186, 187, 235, 239, 440
\class@base 399
\class@name . 158, 159, 400, 401
\ClassError 190
\ClassInfo 401
\classname 10
\classname . 67, 82, 98, 107, 108, 139, 142, 259
\classoption 10
\classoption 258
\clearpage 305, 330
\cleartorecto . . . 317, 322, 328
clsguide.tex 21
\cmd 10
\cmd 229, 237, 245, 246, 293
\cmd@to@cs . . 232, 235, 241, 293
\cmd@to@index 233, 236
cmsy 19
\colon@break 273, 281

\colon@char 273, 274, 282
\colrule 10
\colrule 349
\columnsep 290
\columnseprule 289
\COPYRIGHT 450, 454
\cs 232, 239, 241, 293
\csname 10
\csname 206

D

\DAGGER 444
\dagger 457, 458
\DDAGGER 445
\ddagger 457, 459
\DeclareFontEncoding .. 430
\DeclareFontFamily 407, 412, 419, 424, 431
\DeclareFontShape . 408, 411, 413, 416–418, 420, 423, 425, 428, 432
\DeclareRobustCommand . 239
\def 20, 21
\do 199
doc 4, 6
\DocInput 9
docstrip 3, 5
document class
  acrofont 1, 9, 11, 17
  article 17
  book 9, 17
  book.cls 15
  ltxdoc 1, 5, 9, 11, 17, 20
  ltxdoc.cls 15
  ltxdocext.sty 11
  ltxguide.cls 11
  report 17
document environment 4
\DoNotIndex 11
\dot@break 279, 281
\dot@char 279, 280, 282
\dump 19

E

\edef 206, 267
\eightRChar 440–451
\encodingdefault 440
\end 10
\endbatchfile 63
\endcsname 206
\endfoo 21
\endpreamble 40
\ensuremath 19
\env 10
\env 248, 250, 252
\envb 10
\envb 249
\enve 10
\enve 252
environment
  document 4
  filecontents 5
  minipage 21
  quote 11
  theindex 14
  unnumtable 10
  verbatim 9, 12
environments:
  unnumtable 15
extensions 11, 17

F

\fi 20, 21
file
  .dtx 1, 4–6
  .ins 4
  .tfm 1
  .vf 1
  .vpl 1
  00readme.txt 3, 4
  acrofont 1
  acrofont.sty 1–3, 5
  clsguide.tex 21
  cmsy 19
  doc 4, 6
  docstrip 3, 5
  extensions 11, 17
  fonts 17, 20
  ltxdoc.cfg 16
  ltxdocext 1
  ltxdocext.drv 5
  ltxdocext.dtx 1–3
  ltxdocext.ins 3, 5
  ltxdocext.pdf 1
  ltxdocext.sty 1–3, 5
  ltxguide.cls 12
  makeindex 3
  mathptm.sty 18
  omlptmcm.fd 18
  omspzccm.fd 18

omxpsycm.fd 18
ot1ptmcm.fd 18
times.sty 18
zpsycmrv 18
zpsynocmrv 1, 18
zptmcmr 18
zptmcmrm 18
zptmnocmr 1, 18
zptmnocmrm 1, 18
zpzccmry 18
zpzcnocmry 1, 18
\file 10
\file 43–45, 95, 100–102, 105, 106, 114, 115, 124, 130, 133, 134, 136–138, 147, 148, 253
filecontents environment . . . 5
\filedate 10
\fileinfo 10
\fileinfo 205
\fileversion 10
\font 412, 431
\fontencoding 440
fonts 17, 20
\foo 21
foo, argument 10
\from 43–45
\frontmatter 9
\frontmatter 316
ftp://ctan.tug.org/tex-archive/macros/latex/unpacked 17
ftp://ftp.teleport.com/users/ogawa/latex/macros/contrib/supported/ltxdoc... 1

G

\generate 42
\GetFileInfo 9
\GetFileInfo 22, 200

H

\hbox 21
\hline 348–350
\hyphenchar 431

I

\if 20, 21
\if@mainmatter 313
\if@openright 314, 327
\if@restonecol 305
\if@twocolumn 284
\ifToplevel 47
\ignorespaces 339, 345
\index 210, 219, 226, 227, 237, 245, 246, 255, 262, 268, 269
\indexname 298–300
\item . 128, 135, 141, 145, 304, 311
\itshape 213, 354

K

\keepsilent 41

L

\LANGLE 213, 215, 441
\langle 215
\LaTeX 96, 116, 119, 130, 144, 148, 149
\LaTeXe 90, 125, 160, 402
\leftmargin 308, 309
ltxdoc document class . 1, 5, 9, 11, 17, 20
ltxdoc.cfg 16
ltxdoc.cls document class . . 15
ltxdocext 1
ltxdocext.drv 5
ltxdocext.dtx 1–3
ltxdocext.ins 3, 5
ltxdocext.pdf 1
ltxdocext.sty 1–3, 5
ltxdocext.sty document class 11
ltxguide.cls 12
ltxguide.cls document class 11

M

\m 10
\m 185, 208
\mainmatter 9
\mainmatter 321
\makeatletter 229
makeindex 3
\MakeShortVerb 179
\maketitle 80
\MakeUppercase 299, 300
\mathchardef 296
mathptm.sty 18
\mathsection 19
\mbox 21
\mbox 213
\MessageBreak 194

\meta 209, 210, 212, 218, 224
minipage environment 21
\Msg 48–54, 56, 57, 59–61

N

name, argument 10
\name@idx 248, 257–260
\newcommand 20, 21
\newenvironment 21
\newif 313, 314
\nopagebreak 167
\normalfont 174, 354
\normalsize 168, 354

O

\o@verbatim 164, 171
\oarg 10
\oarg 221, 222
omlptmcm.fd 18
omspzccm.fd 18
omxpsycm.fd 18
\onecolumn 305
ot1ptmcm.fd 18

P

\PackageInfo 159
\pagenumbering 319, 324
\PARAGRAPH 448
\parbox 21
\parindent 302
\parskip 303
placeholder
  <*table head rows*> 10
  <*table rows*> 10, 11
\postdisplaypenalty ... 343
\preamble 27
\predisplaypenalty 337
\prepdef 21
\ProvidesClass 9
\ProvidesFile 9, 10
\ProvidesFile 4, 5, 7

Q

quote environment 11

R

\RANGLE 213, 216, 442
\rangle 216
\REGISTERED 451, 455
\renewenvironment .. 283, 306
report document class 17
\RequirePackage .. 18, 19, 163, 178, 405, 406

S

\save@secnumdepth .. 296, 301
\sbox 21
\sc 116
\scmd 240
\scmd@to@index 242, 244
\SECTION 447
\section 112, 298
\see 291
\seealso 292
\setbox 21
\setlength 22
\skewchar 412
\slash@break 276, 281
\slash@char 276, 277, 282
\small 169
\StopEventually 7
\string . 210, 218, 219, 226, 227, 232, 233, 237, 241, 242, 245, 246, 250, 252, 255, 262, 267, 293
\subsection 122
\substyle 10
\substyle 257
\subsubsection 11, 16
\subsubsubsection 351

T

<*table head rows*> placeholder .. 10
<*table rows*> placeholder ... 10, 11
\tableofcontents 110
\TeX 90
text, argument 10
\textbar 452
\textbullet 453
\textcopyright 454
\textit 291, 292
\textparagraph 458
\textregistered 455
\textsection 19
\textsection 458
\texttt 77
\thanks 68
theindex environment 14
\thispagestyle 302
times.sty 18
\title 66

\toprule 10, 16
\toprule 348
\ttfamily 174, 218, 223, 224, 239, 250, 252, 254, 261, 266, 295
\ttt . 219, 226, 227, 255, 262, 294, 295
\twocolumn 298

U

unnumtable (environment) . . 334
unnumtable environment 10
\unskip 166, 342
url
/packages/psnfss/psfonts.dtx 18
ftp://ctan.tug.org/tex-archive/macros/latex/unpacked 17
ftp://ftp.teleport.com/users/ogawa/latex/macros/contrib/supported/ltxdoc... 1
\url 10
\url 86, 264, 267
\url@break 266, 281, 294
\url@char 267, 282

V

\vbox 21
\verb 9, 12
\verbatim 164, 165
verbatim environment 9, 12
\verbatim@font 173
\verbatim@nolig@list . . 199
\VERTBAR 449, 452

Z

zpsycmrv 18
zpsynocmrv 1, 18
zptmcmr 18
zptmcmrm 18
zptmnocmr 1, 18
zptmnocmrm 1, 18
zpzccmry 18
zpzcnocmry 1, 18