LATEX2man

A Documentation Tool

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Abstract

Latex2man is a tool to translate UNIX manual pages written with LaTeX into a format understood by the UNIX man(1)-command. Alternatively HTML, TexInfo, or LaTeX code can be produced too. Output of parts of the text may be suppressed using the conditional text feature (for this, LaTeX generation may be used).

1 Synopsis

latex2man [-ttransfile] [-HMTL] [-h] [-V] [-Cname] [-achar] infile outfile

2 Description

Latex2man reads the file infile and writes outfile. The input must be a Latex2man translates that document using the latex2man Latex2man translates that document into the troff(1) format using the **-man** macro package.

Using the **-H** option, HTML code can be produced, instead of troff(1).

Using the **-T** option, TexInfo code can be produced, instead of troff(1).

Using the $-\mathbf{M}$ option, troff(1) input is produced.

Using the **-L** option, \LaTeX ouput can be produced, instead of troff(1).

3 Options

- -ttransfile Translation for user defined LATEX macros.
- -M Produce output suitable for the man(1) command (default).
- -H Instead of producing output suitable for the man(1) command, HTML code is produced (despite the name of the command).

- -T Instead of producing output suitable for the man(1) command, Tex-Info code is produced (despite the name of the command). The generated .texi-file may be processed with makeinfo(1) (to produce an .info-file) which in turn may be installed using install-info(1). The Info tags <code>@dircategory</code> and <code>@direntry</code> are provided.
- -L The LATEX source is written to the *outfile*. This is useful in conjunction with the -Cname option.
- **-Cname** Output the conditional text for *name*. If more than one name should be given use quotes: **-C** 'name1 name2 ...'

 The following names are defined automatically:
 - -H defines HTML
 - -T defines TEXI
 - -M defines MAN
 - -L defines LATEX
- -achar Is used only in conjunction with -T.

Background:

TexInfo ignores all blanks before the first word on a new line. In order to produce some additional space before that word (using \SP) some character has to be printed before the additional space. By default this is a . (dot). The *char* specifies an alternative for that first character. Giving a blank to -a supresses the indentation of a line.

Note: only for the first \SP of a series that *char* is printed.

- **-h** Show a help text.
- **-V** Show version information.

4 Files

latex2man.tex The LATEX file containing this Man-page.

latex2man.sty The LATEX package defining the environments and commands.

latex2man.cfg The configuration file for Latex2man LATEX-package.

latex2man.trans File containing example translations of user defined \LaTeX macros.

fancyheadings.sty A LATEX package used to typeset head- and foot lines.

fancyhdr.sty A LATEX package used to typeset head- and foot lines.

rcsinfo.sty A LATEX package used to extract and use RCS version control information in LATEX documents.

5 See Also

LATEX, TexInfo, troff(1), groff(1), makeinfo(1).

6 LaTeX commands

The LATEX package latex2man is used to write the Man-pages with LATEX. Since we translate into other text formats, not all LATEX stuff can be translated.

6.1 Package Options

The latex2man package accepts the following options:

fancy use the LATEX package fancyheadings.

fancyhdr use the LATEX package fancyhdr.

nofancy neither the LATEX package fancyheadings nor fancyhdr are used.

The default option may be specified in the file latex2man.cfg.

6.2 Package Specific Environments

The following environments are provided by the package:

\begin{Name} {chapter} {name} {author} {info} {title} The Name environment takes five arguments: 1. the Man-page chapter, 2. the name of the Man-page, 3. the author, 4. some short information about the tool printed in the footline of the Man-page, and 5. a text which is used as title, for HTML and Later Interval (it's ignored for output of the Man-page or TeXinfo. The Name environment must be the first environment in the document. Processing starts with this environment. Any text before this is ignored (exception: the setVersion and setDate commands). (Note: all arguments of \begin{Name} must be written on one line).

\begin{Table}{columns} The Table environment takes one argument: the number of columns. For example:

```
\begin{Table}{3}
Here & am & I \\\hline
A 1 & A 2 & A 3 \\
B 1 & B 2 & B 3 \\\
end{Table}
will be typeset as:

Here am I
A 1 A 2 A 3
B 1 B 2 B 3
```

\hline may be used. All entries are typeset left justified. If the Manpage is formatted with troff(1) and tables are used, the tbl(1) preprocessor should be called, usually by giving a **-t** to the call of troff(1). When viewing the generated manula page using man(1), tbl(1) is called automatically.

\begin{Description} is the same as \begin{description}

\begin{Description} [label] is similar to \begin{description}, but the item labels have at minimum the size of the (optional) word label. The difference is visible only in the DVI and PDF-output, not in the troff, TexInfo or HTML output.

```
a |a \begin{description}
ab |ab
abc |abc

a |a \begin{Description}
ab |ab
abc |abc

a |a \begin{Description}[aa]
ab |ab
abc |abc
```

6.3 Accepted LaTeX Environments

The following environments are accepted:

- description
- enumerate
- itemize
- verbatim
- center

They may be nested:

• Itemize and nested center:

A centered line.

Another centered line.

- Another item an nested enumerate
 - 1. a
 - 2. b

6.4 Package Specific Macros

```
The following commands are provided:
\Opt{option} Option: \Opt{-o} will be typeset as -o.
\Arg{argument} Argument: \Arg{filename} will be typeset as filename.
\OptArg{option}{argument} Option with Argument:
     \OptArg{-o}{filename} will be typeset as -ofilename.
\OptoArg{option}{argument} Option with optional Argument:
     \oOpt{option} Optional option, e.g. \oOpt{-o} will be typeset as [-o].
\oArg{argument} Optional argument, e.g. \oArg{filename} will be typeset
     as [filename].
\oOptArg{option}{argument} Optional option with argument, e.g.
     \oOptArg{-o}{filename} will be typeset as [-ofilename].
\oOptoArg{option}{argument} Optional option with optional argument,
     e.g. \oOptoArg{-o}{filename} will be typeset as [-o[filename]].
\File{filename} used to typeset filenames, e.g. \File{filename} will be type-
     set as filename.
\Prog{prog} used to typeset program names, e.g. \Prog{latex2man} will be
     typeset as latex2man.
\Cmd{command}{chapter} used to typeset references to other commands,
     e.g. \Cmd{latex2man}{1} will be typeset as latex2man(1).
\Bar is typeset as |.
\Bs (BackSlash) is typeset as \.
\Tilde is typeset as a \sim.
\Dots is typeset as . . .
\Bullet us typeset as \bullet.
\setVersion{..} set .. as version information.
\setVersionWord{..} set ... for the word Version: in the footline. The de-
     fault is \setVersionWord{Version:}.
Version returns the version information.
\setDate{..} sets .. as date information.
Date returns the date information.
Email(..) use to mark an Email address:
     \Email{Juergen.Vollmer@informatik-vollmer.de} is typeset as:
     Juergen.Vollmer@informatik-vollmer.de.
\URL\{..\} use to mark an URL: \URL\{http://www.foo.de/\Tilde vollmer\}
```

is typeset as http://www.foo.de/~vollmer.

- \LatexManEnd the input file is read and processed until reading end-of-file or \LatexManEnd (at the beginning of a line). LATEX ignores this command.
- \Lbr, \Rbr is typeset as [and] (these variants are needed only somtimes like in item[FooBar\LBr xx \Lbr]. Usually [] will work.
- \LBr, \RBr is typeset as { and } (these variants are needed when using { or } as arguments to macros.

\Circum is typeset as \hat{\circ}.

Percent is typeset as %.

- **\TEXbr** If processed with \LaTeX causes a linebreak (i.e. is equivalent to \\). In the output of latex2man this macro is ignored.
- **TEXIbr** If TexInfo output is generated, causes a linebreak (i.e. is equivalent to \\), otherwise ignored.
- \MANbr If Man-Page output is generated, causes a linebreak (i.e. is equivalent to \\), otherwise ignored.
- \HTMLbr If HTML output is generated, causes a linebreak (i.e. is equivalent to \\), otherwise ignored.

\medskip An empty line.

\SP Produces some extra space, works also at the beginning of lines. The code of the second line looks like: \SP abc \SP\SP xx\\:

abc xx abc xx

Note: Due to some "problems" with TexInfo, the lines starting with \SP have a leading . (dot) in the TexInfo output, see -achar.

6.5 Accepted Macros from the resinfo Package

\rcsInfo \$Id ...\$ if the LATEX package rcsinfo is used, this command is used to extract the date of the Man-page.

\rcsInfoLongDate if the LaTeX package rcsinfo is used, this command is used to typeset the date coded in the \$Id ..\$ string.

6.6 Accepted LaTeX Macros

The following standard LATEX commands are accepted:

\section{..} The section macro takes one argument: the name of the Manpage section. Each Man-page consists of several sections. Usually there are the following sections in a Man-page: Name (special handling as environment, c.f. above), Synopsis, Description, Options, Files, See Also, Diagnostics, Return Values, Bugs, Author, version, etc.

Synopsis must be the first section after the Name environment.

Note: Do not use LATEX-macros in section names.

```
\subsection{..} works as well as
\subsubsection{..} those.
\emph{..} \emph{example} is typeset as example.
\textbf{..} \textbf{example} is typeset as example.
\textt{..} \textt{example} is typeset as example.
\underline{..} \underline{example} is typeset as example of underline.
\del{date} uses .. as date.
\ verb+..+ but only + is allowed as delimiter.
< is typeset as <.
> is typeset as >.
<= is typeset as <=.
>= is typeset as >=.
= is typeset as =.
$<>$ is typeset as <>.
ge is typeset as \geq.
le is typeset as \leq.
\Gamma is typeset as \leftarrow.
\Gamma \simeq \ is typeset as \Leftarrow.
\Gamma is typeset as \rightarrow.
\Lambda  is typeset as \Rightarrow.
\ is typeset as \{.
\} is typeset as \.
\$ is typeset as $.
\$ is typeset as $, should be used inside macro arguments.
\_ is typeset as _.
\& is typeset as &.
\ is typeset as \#.
\ is typeset as \%.
\, is typeset as smaller blank -- (between the two -)
\- is used to mark hyphenation in a word.
\\ is typeset as a linebreak or marks the end of a column in the Table environ-
\ (a \ followed by a blank) is typeset as a blank, although it cannot be used at
     the beginning of a line to make indentation (see the \SP command).
\sim is typeset as a blank.
```

äöüÄÖÜßäöüÄÖÜß äöüÄÖÜß

If these letters are used in their LATIN-1 8-bit coding, they are translated into the equivalent letter of the desired output format. E.g. Ä becomes Ä in HTML and @"A in texinfo.

6.7 Conditional Text

latex2man preprocesses the LATEX input to allow text to be used conditionally. A special sort of LATEX comment is used for that purpose.

- %@% IF condition %@%
- %@% ELSE %@%
- %@% END-IF %@%

A line must contain only such a comment and nothing else. *condition* is a boolean expression containing "names" and operators. The names given with the **-C**name option have the value "true", while all other names occuring in the expression are assumed to be "false". If the evaluation of the boolean expression results in the value "true", the text in the "then"-part is used and the text in the optional "else"-part is skipped (and vice versa). The IF/ELSE/END-IF may be nested. As boolean operators the following are allowed:

```
|| boolean or && boolean and ! negation (and) for grouping are allowed. For example: %@% IF abc %@% abc set %@% IF xyz %@% xyz set
```

```
%@% ELSE %@%
       xyz NOT set
    %@% END-IF %@%
%@% ELSE %@%
    abc NOT set
    \%@\% IF xyz || !XYZ \%@\%
       xyz OR !XYZ set
    %@% ELSE %@%
       xyz OR !XYZ NOT set
    %@% END-IF %@%
%@% END-IF %@%
Run this manual page through latex2man with e.g. -C'abc XYZ' and have a
look to the generated output. (If simply running the LATEX-document through
LATEX, all lines are shown in the .dvi file).
abc set
xyz set
xyz NOT set
abc NOT set
xyz OR !XYZ set
xyz OR !XYZ NOT set
To check the conditional text feature, when latex2man is called with
-CHTML the lines 1a, 2b, 3b, and 4b;
-C TEXI the lines 1b, 2a, 3b, and 4b;
-CMAN the lines 1b, 2b, 3a, and 4b;
-CLATEX the lines 1b, 2b, 3b, and 4a;
```

calling LATEX without preprocessing all lines

should be shown:

- 1a. This text occurs only when viewing the HTML output.
- 1b. The HTML conditional was not set.
- 2a. This text occurs only when viewing the TEXI output
- 2b. The TEXI conditional was not set.
- 3a. This text occurs only when viewing the MAN output
- 3b. The MAN conditional was not set.
- 4a. This text occurs only when viewing the LATEX output
- 4b. The LATEX conditional was not set.

6.8 Translation of User Defined Macros

The user macro translation file (given by the [-ttransfile]) contains Perl commands specifying the translation of IATEX macros defined by the user. These macros may have none, one or two arguments. The following code is expected:

- Comments start with a # up to the end of the line.
- For a macro \foo with no arguments, the following code must be specified:

```
Translation to Man-Pages
    $manMacro{'foo'} = '...';
Translation to HTML
    $htmlMacro{'foo'} = '...';
Translation to TexInfo
    $texiMacro{'foo'} = '...';
```

where ... is the translation.

• For a macro \foo{..} with one argument, the following code must be specified:

```
Translation to Man-Pages
    $manMacro1a{'foo'} = '...';
    $manMacro1b{'foo'} = '...';
Translation to HTML
    $htmlMacro1a{'foo'} = '...';
    $htmlMacro1b{'foo'} = '...';
Translation to TexInfo
    $texiMacro1a{'foo'} = '...';
    $texiMacro1b{'foo'} = '...';
```

where ... is the translation. The 1a code is used before the argument, while 1b is typeset after the argument is set.

• For a macro \foo{..}{..} with two arguments, the following code must be specified:

```
Translation to Man-Pages
    $manMacro2a{'foo'} = '...';
```

```
$manMacro2b{'foo'} = '...';
    $manMacro2c{'foo'} = '...';
Translation to HTML
    $htmlMacro2a{'foo'} = '...';
    $htmlMacro2b{'foo'} = '...';
    $htmlMacro2c{'foo'} = '...';
Translation to TexInfo
    $texiMacro2a{'foo'} = '...';
```

```
$texiMacro2b{'foo'} = '...';
$texiMacro2c{'foo'} = '...';
```

where . . . is the translation. The 2a code is used before the first argument, 2b between the two arguments and 2c is typeset after the second argument

• The file latex2man.trans contains some example code.

6.9 Verbatim Environment

6.10 Subsection works

This is a \subsection.

6.10.1 Subsubsection works

This is a \subsubsection.

6.10.2 Subsubsection still works

This is another \subsubsection.

6.11 General Remarks

- 1. Empty lines are typeset as paragraph separators.
- 2. The arguments of the LATEX commands must not be split over several lines.
- 3. Do not nest calls to macros.
- 4. Except the mentioned environment and macros, the usage of other LATEX environments or macros are not translated. Their usage will cause garbage in the output.
- 5. latex2man requires Perl version $>= 5.0004_03$.
- 6. If you want to install the system with the distributed Makefile, you need GNU-make. If you don't have it, you should execute the steps shown in the Makefile manually.

6.12 Some Bug Fix Tests

Leading . and 'Now leading . and 'in generation troff output should work propperly, since a & is added. Therfore the \Dot macro has been deleted. Thanks to Frank.Schilder@Mathematik.Tu-Ilmenau.De.

Testcase 1:

'\n' ...

```
Testcase 2:
.foobar Testcase 3:
abc ...abc . efg ' 123
```

% in verbatim A % in a \verb and verbatim-environment was not emitted correctly. Thanks to Aleksey Nogin nogin@cs.caltech.edu for the bug report and bug fix.

% abc

% abc %

but ignore comments following this:

Requirements

Perl latex2man requires Perl version $>= 5.0004_03$.

Make If you want to install the system with the distributed Makefile, you need GNU-make. If you don't have it, you should execute the steps shown in the Makefile manually.

LATEX LATEX2e is required.

Changes

Change history of the latex2man package

```
$Id: CHANGES, v 1.54 2005/09/12 09:17:42 vollmer Exp $
      12 Sep 2005
1.19
                        - Thanks to Aleksey Nogin <nogin@cs.caltech.edu> for
                          his bugfix of the problem he found:
                          "I came across another issue in the latest
                           latex2man - if the source file has "\verb+.foo+" in
                           it, then the ".foo" will be copied to the man page
                           verbatim and if it happens to be placed on the
                           beginning of a line, then troff will consider it to
                           be a command and not display it properly."
1.18
      20 July 2005
                        - latex2man.sty: Removed option pdf.
1.17
       14 Oct 2004
                        - Fixed order of gerating & amp; for HTML
                          (Thanks to Aleksey Nogin <nogin@cs.caltech.edu>)
       06 Sep 2004
                        - Fixed handling of % in \verb+..+ and verbatim
1.16
                          environments
                          (Thanks to Aleksey Nogin <nogin@cs.caltech.edu>)
                        - added \subsubsection
1.15
      12 Dec 2001
                        - added extra stuff in the headline of man pages
```

```
(thanks to Andrew Anderson <aja@emulab.ee.mu.oz.au>)
1.14
      18 June 2001
                        - TROFF generation: fixed handling of leading . and '
                        - removed macro \Dot
                        - Added \begin{center} / \end{center}.
1.13
       08 May 2001
                        - Reimplemented font changing stuff in TROFF
                          generation (use now troff instead of -man commands).
1.12.3 10 Apr
              2001
                        - Fixed \oOptArg in man output.
1.12.2 12 Mar 2001
                        - Fixed handling of conditional translation to LaTeX
                          (if in a IF .. ELSE .. END-IF, the condition
                           evaluates to true, the ELSE and END-IF are written
                           to the result file, but not the IF...
                           Now all %0% directives are written.)
                        - In \setDate and \setVersion a ~ is replaced by the
1.12.1 13 Sep 2000
                          output specific blank.
1.12
       28 Aug 2000
                        - Fixed error in htmlVerb (thanks to
                          Glunz Wolfgang <Wolfgang.Glunz@icn.siemens.de>)
                        - Fixed error in conditional text handling:
                          (%0%ELSE%0% was not handled correct).
1.11
       25 Aug 2000
                        - Fixed error in conditional text handling:
                          (MAN was not enabled by default, when calling
                        - Added eror message, if arguments of \begin{Name},
                          \section, and \subsection are not contained on a
                          single line.
                        - Better handling of \Tilde.
1.10.1 21 Aug 2000
                        - added \Begin{Description}[label] (based on an idea of
1.10 13 Jun 2000
                          Andi Winter <winter@cocolab.de>)
                        - Thanks to Andi Winter <winter@cocolab.de>:
                          - fixed: removed wrong line break in date for
                            TROFF output
                          - fixed wrong line breaks in some TROFF macros
                          - fixed wrong output of optional arguments in TROFF
                          - allow spaces between '\item' and following '['
1.9.1 20 Mar 2000
                        - added \OptoArg \oOptoArg Option with optional
                          argument (Thanks to Andi Winter <winter@cocolab.de>)
1.9
       13 Mar 2000
                        - latex2man.sty: Added option pdf.
                          latex2man:
                                         define names HTML TEXI MAN LATEX
                                         automatically.
1.8
      11 Feb 2000
                        - Added verbatim environment (many thanks to
                          "Olaf Maibaum" <Maibaum@Informatik.Uni-Oldenburg.DE>
                          who provided me the troff generation code)
                        - Added better handling of german Umlaut
                        - Fixed minor HTML tag mismatch.
1.7.1 17 Nov 1999
                        - Fixed END_IF handling of -L option.
1.7
       25 July 1999
                        - Allow german Umlaute to be written as \"a, etc.
1.6.4 30 May 1999
                        - Added fix of Frank.Schilder@Mathematik.TU-Ilmenau.DE
                          line 418: from
                                if ($manRS == 0 && $list_nest > 0) {
                          t.o
                                if ($manRS == 0 && $list_nest > 1) {
```

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					line 471: from
					<pre># manParagraph; to</pre>
					manParagraph;
1.6.3	25	Mar	1999	-	Added Math stuff is matched now after macro arguments
1.6.2	21	Nov	1998	-	Added \LBr / \RBr, added {} and \itemsep \Dollar \$\ge\$, \$\leftarrow\$, \$\Leftarrow\$,
		~	4000		\$\rightarrow\$, \$\Rightarrow\$.
		-	1998		Added \$<=\$, \$>=\$, \$=\$ \$<>\$.
1.6	08	Sep	1998		Added \SP macro.
					Hyphenation \- is translated for TexInfo into @
					Runs now under older Versions of Perl (e.g. 5.03).
1.5	22	Aug	1998		Support for the fanyhdr package, added latex2man.cfg
					Now \% and \- work.
1.4	23	July	1998	-	Fixed typos.
				-	Fixed generated HTML
					The following is wrong: <a> <h></h>
					Correct is: <h><a></h>
1.3	03	June	1998	-	Add conditional text feature
1.2	18	Jan	1998	-	Enumerate/itemize/description environments may
					be nested now.
				-	Output specific line break macros.
1.1	14	Jan	1998	-	Fixed bug in HTML generation (no blanks emited after \hline)
1.0	11	Jan	1998	_	Initial version

Please check the file latex2man-CHANGES for the list of changes.

9 Version

Version: 1.19 of September 12, 2005.

10 License and Copyright

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The actual version of Latex2man may be found on my homepage http://www.informatik-vollmer.de/software/latex2man.

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