

# L<sup>A</sup>T<sub>E</sub>X2man

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## A Documentation Tool

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### Abstract

*Latex2man* is a tool to translate UNIX manual pages written with L<sup>A</sup>T<sub>E</sub>X into a format understood by the UNIX *man*(1)-command. Alternatively HTML, TexInfo, or L<sup>A</sup>T<sub>E</sub>X 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* [-t*transfile*] [-c*CSSfile*] [-HMTL] [-h] [-V] [-C*name*] [-a*char*] *infile* *outfile*

## 2 Description

*Latex2man* reads the file *infile* and writes *outfile*. The input must be a L<sup>A</sup>T<sub>E</sub>X document using the *latex2man* L<sup>A</sup>T<sub>E</sub>X package. *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). With this option you can, optionally, specify a *CSSfile* as an argument. CSS (Cascading Style Sheets) allows you to control the appearance of the resulting HTML page. See below for the names of CSS classes that are included in the HTML tags as attributes.

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

Using the **-M** option, *troff*(1) input is produced.

Using the **-L** option, L<sup>A</sup>T<sub>E</sub>X output can be produced, instead of *troff*(1).

## 3 Options

**-t*transfile*** Translation for user defined L<sup>A</sup>T<sub>E</sub>X macros.

**-c*CSSfile*** If you use the **-H** you can also specify a file that contains CSS style sheets. The link to the CSS file is inserted into the generatedHTML output using the specified *CSSfile* filename.

**-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, TexInfo 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 @dircategory and @direntry are provided.

- L** The L<sup>A</sup>T<sub>E</sub>X 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** suppresses 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 L<sup>A</sup>T<sub>E</sub>X file containing this Man-page.  
**latex2man.inc** A file read with \input{...} .  
**latex2man.sty** The L<sup>A</sup>T<sub>E</sub>X package defining the environments and commands.  
**latex2man.cfg** The configuration file for *Latex2man* L<sup>A</sup>T<sub>E</sub>X-package.  
**latex2man.css** File containing example CSS definitions.  
**latex2man.trans** File containing example translations of user defined L<sup>A</sup>T<sub>E</sub>X macros.  
**fancyheadings.sty** A L<sup>A</sup>T<sub>E</sub>X package used to typeset head- and foot lines.  
**fancyhdr.sty** A L<sup>A</sup>T<sub>E</sub>X package used to typeset head- and foot lines.  
**rccsinfo.sty** A L<sup>A</sup>T<sub>E</sub>X package used to extract and use RCS version control information in L<sup>A</sup>T<sub>E</sub>X documents.  
**latex2man.pdf** The PDF version of this document.

## 5 See Also

L<sup>A</sup>T<sub>E</sub>X, TexInfo, *troff*(1), *groff*(1), *makeinfo*(1).

## 6 L<sup>A</sup>T<sub>E</sub>X commands

The L<sup>A</sup>T<sub>E</sub>X package **latex2man** is used to write the Man-pages with L<sup>A</sup>T<sub>E</sub>X. Since we translate into other text formats, not all L<sup>A</sup>T<sub>E</sub>X 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 footnote of the Man-page, and 5. a text which is used as title, for HTML and LATEX (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}[width]{columns}` The `Table` environment takes two arguments: the first optional one specifies a width of the last column, the second one gives the number of columns. For example:

```
\begin{Table}[2cm]{3}
  Here & am & I \\hline
  A 1 & A 2 & A 3 1 2 3 4 5 A 3 1 2 3 4 5 \\
  B 1 & B 2 & B 3 \\
\end{Table}
```

will be typeset as:

|      |     |               |
|------|-----|---------------|
| Here | am  | I             |
| A 1  | A 2 | A 3 1 2 3 4 5 |
|      |     | A 3 1 2 3 4 5 |
| B 1  | B 2 | B 3           |

If no optional `width` argument is given, all entries are typeset left justified. The `width` is a length measured absolutely in *cm*. Processing with LATEX a `p{width}` column is typeset as last column. The translation to `troff(1)` commands results in a `lw(width)` column specification. Translating to HTML and TexInfo ignores the `width` parameter.

`\hline` may be used.

If the Man-page 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 L<sup>A</sup>T<sub>E</sub>X 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:
  \OptoArg{-o}{filename} will be typeset as -o[filename].
\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 typeset 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 ~.

\Dots is typeset as ...

\Bullet us typeset as •.

\setVersion{..} set .. as version information.

\setVersionWord{..} set .. for the word *Version*: in the footnote.  
The default 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 \Rbr]. Usually [ ] will work.

\LBr, \RBr is typeset as { and } (these variants are needed when using { or } as arguments to macros.

\Circum is typeset as ^.

\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  
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 rcsinfo 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 L<sup>A</sup>T<sub>E</sub>X Macros

The following standard L<sup>A</sup>T<sub>E</sub>X commands are accepted:

**\section{..}** The **section** macro takes one argument: the name of the Man-page 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 L<sup>A</sup>T<sub>E</sub>X-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**.

**\texttt{..}** **\texttt{example}** is typeset as **example**.

**\underline{..}** **\underline{example}** is typeset as example of underline.

**\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  $\leq$ .

**\\$\\leftarrow\$** is typeset as  $\leftarrow$ .

**\\$\\Leftarrow\$** is typeset as  $\Leftarrow$ .

**\\$\\rightarrow\$** is typeset as  $\rightarrow$ .

**\\$\\Rightarrow\$** 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.

**\\$\\backslash** is typeset as a linebreak or marks the end of a column in the **Table** environment.

**\\$\\ (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.

`\copyright` is typeset as ©.

`\noindent`

`\hline` inside a `Table` environment.

`\item` inside a `itemize`, `enumerate`, or `description` environment.

`\today` November 25, 2018 (see also the `rcsinfo` LATEX package).

`\ss`, `\a`, ... `\ss = ß`, `\a = ä`, `\o = ö`, `\u = ü`, `\A = Ä`, `\O = Ö`, `\U = Ü`. It is allowed to surround these macros in { and } in all places, even inside other macros, e.g.

```
\textbf{\a\o\u\A\O\U\ss}
\textbf{\a\o\u\A\O\U\ss\ss}
\textbf{\äöüÄÖÜß}
```

### 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 &Auml; in HTML and ©"A in texinfo.

`\input{..}` Read and process the given filename.

Please note: the name of the LATEX-macros and its arguments must be contained in one line.

## 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 `-Cname` option have the value “true”, while all other names occurring 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

**-CHTM**L the lines 1a, 2b, 3b, and 4b;

**-CTEX**I the lines 1b, 2a, 3b, and 4b;

**-CMAN** the lines 1b, 2b, 3a, and 4b;

**-CLATE**X 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 [-t*transfile*]) contains *Perl* commands specifying the translation of LATEX 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 is set.

- The file `latex2man.trans` contains some example code.

## 6.9 Verbatim Environment

This

```
{is}
  \texttt{a}
  $test$
  _of_
verbatim
<this is no HTML tag> and no @* TexInfo command
```

## 6.10 Subsection works

This is a `\subsection`.

### 6.10.1 Subsubsection works

This is a `\subsubsection`.

### 6.10.2 Subsubsubsection still works

This is another `\subsubsubsection`.

## 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 L<sup>A</sup>T<sub>E</sub>X environments or macros are not translated. Their usage will cause garbage in the output.
5. *latex2man* requires Perl version  $\geq 5.0004_03$ .
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.

## 7 CSS classnames

The table below shows the names of CSS classes that will be included in the HTML tags as attributes. You can specify the CSS style properties in the *CSSfile* for these classes:

| HTML tag | Class              | Style applies to  |
|----------|--------------------|---|
| body     |                    | the body of the HTML page   |
| h1       | titlehead          | the title at the top of the HTML page specified as an argument to the <i>Name</i> environment   |
| h4       | authorhead         | the author at the top of the HTML page specified as an argument to the <i>Name</i> environment  |
| h4       | datehead           | the date at the top of the HTML page  |
| h4       | versionhead        | the man page version at the top of the HTML page specified as an argument to the <i>setVersion</i> macro                                  |
| h2       | sectionname        | a section title specified as an argument to the <i>section</i> macro  |
| h4       | subsectionname     | a subsection title specified as an argument to the <i>subsection</i> macro  |
| h5       | subsubsectionname  | a subsubsection title specified as an argument to the <i>subsubsection</i> macro  |
| font     | progname           | a program name specified as an argument to the <i>Prog</i> macro  |
| font     | filename           | a file name specified as an argument to the <i>File</i> macro   |
| font     | commandname        | a command name specified as an argument to the <i>Cmd</i> macro   |
| font     | textstyle          | all text that is not an argument to some L <sup>A</sup> T <sub>E</sub> X or <i>latex2man</i> macro  |
| font     | optstyle           | a name of an option specified as an argument to the <i>Opt</i> , <i>oOpt</i> , <i>OptArg</i> , <i>oOptArg</i> or <i>oOptoArg</i> macros   |
| font     | argstyle           | a name of an argument specified as an argument to the <i>Arg</i> , <i>oArg</i> , <i>OptArg</i> , <i>oOptArg</i> or <i>oOptoArg</i> macros |
| a, font  | urlstyle           | a URL specified as an argument to the <i>URL</i> macro  |
| a, font  | urlstyle.link      | subclass of urlstyle class  |
| a, font  | urlstyle.visited   | subclass of urlstyle class  |
| a, font  | urlstyle.hover     | subclass of urlstyle class  |
| a, font  | emailstyle         | an email specified as an argument to the <i>Email</i> macro   |
| a, font  | emailstyle.link    | subclass of emailstyle class  |
| a, font  | emailstyle.visited | subclass of emailstyle class  |
| a, font  | emailstyle.hover   | subclass of emailstyle class  |
| table    | tablestyle         | a table specified as a <i>Table</i> environment   |
| tr       | rowstyle           | a row of a table specified as a <i>Table</i> environment  |
| td       | cellstyle          | a cell of a table specified as a <i>Table</i> environment   |

## 8 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:

## 9 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.

## 10 Changes

Please check the file *latex2man-CHANGES.html* for the list of changes and acknowledgment to people contributing bugfixes or enhancements. Please check the file *latex2man-CHANGES* for the list of changes and acknowledgment to people contributing bugfixes or enhancements.

## 11 Version

Version: 1.29 of November 25, 2018.

## 12 License and Copyright

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Juergen.Vollmer@informatik-vollmer.de

The most recent version of *Latex2man* may be found on my homepage  
<http://www.informatik-vollmer.de/software/latex2man.html>.

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**Misc** If you find this software useful, please send me a postcard from the place where you are living.

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