

L^AT_EX2man

—

A Documentation Tool

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Abstract

Latex2man is a tool to translate UNIX manual pages written with L^AT_EX into a format understood by the UNIX *man*(1)-command. Alternatively HTML, TexInfo, or L^AT_EX 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] [-cCSSfile] [-HMTL] [-h] [-V] [-Cname] [-a`char`] *infile outfile*

2 Description

Latex2man reads the file *infile* and writes *outfile*. The input must be a L^AT_EX document using the *latex2man* L^AT_EX 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^AT_EX output can be produced, instead of *troff*(1).

3 Options

- ttransfile** Translation for user defined L^AT_EX macros.
- cCSSfile** 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 generated HTML 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^AT_EX 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 L^AT_EX file containing this Man-page.
- `latex2man.inc` A file read with `\input{.}` .
- `latex2man.sty` The L^AT_EX package defining the environments and commands.
- `latex2man.cfg` The configuration file for *Latex2man* L^AT_EX-package.
- `latex2man.css` File containing example CSS definitions.
- `latex2man.trans` File containing example translations of user defined L^AT_EX macros.
- `fancyheadings.sty` A L^AT_EX package used to typeset head- and foot lines.
- `fancyhdr.sty` A L^AT_EX package used to typeset head- and foot lines.
- `rctinfo.sty` A L^AT_EX package used to extract and use RCS version control information in L^AT_EX documents.
- `latex2man.pdf` The PDF version of this document.

5 See Also

L^AT_EX, TexInfo, *troff*(1), *groff*(1), *makeinfo*(1).

6 L^AT_EX commands

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

6.1 Package Options

The `latex2man` package accepts the following options:

fancy use the L^AT_EX package `fancyheadings`.

fancyhdr use the L^AT_EX package `fancyhdr`.

nofancy neither the L^AT_EX 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 L^AT_EX (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 L^AT_EX 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^AT_EX 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** is typeset as •.
- \setVersion{..}** set .. as version information.
- \setVersionWord{..}** set .. for the word *Version:* in the footline.
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). L^AT_EX ignores this command.
- \Lbr**, **\Rbr** is typeset as [and] (these variants are needed only sometimes 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 ^.
- \Percent** is typeset as %.
- \TEXbr** If processed with L^AT_EX 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 **-a**char.

## 6.5 Accepted Macros from the rcsinfo Package

- \rcsInfo \$Id ...\$** if the L<sup>A</sup>T<sub>E</sub>X package `rcsinfo` is used, this command is used to extract the date of the Man-page.
- \rcsInfoLongDate** if the L<sup>A</sup>T<sub>E</sub>X 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 ≥.

**\$\le\$** is typeset as ≤.

**\$\leftarrow\$** is typeset as ←.

**\$\Leftarrow\$** is typeset as ⇐.

**\$\rightarrow\$** is typeset as →.

**\$\Rightarrow\$** is typeset as ⇒.

**\{** 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** 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).

`~` is typeset as a blank.

`\copyright` is typeset as ©.

`\noindent`

`\hline` inside a `Table` environment.

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

`\today` October 6, 2017 (see also the `rcsinfo` L<sup>A</sup>T<sub>E</sub>X 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}
\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 L<sup>A</sup>T<sub>E</sub>X-macros and its arguments must be contained in one line.

## 6.7 Conditional Text

`latex2man` preprocesses the L<sup>A</sup>T<sub>E</sub>X input to allow text to be used conditionally. A special sort of L<sup>A</sup>T<sub>E</sub>X 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 L<sup>A</sup>T<sub>E</sub>X-document through L<sup>A</sup>T<sub>E</sub>X, 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;

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

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

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

**calling L<sup>A</sup>T<sub>E</sub>X 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 L<sup>A</sup>T<sub>E</sub>X 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 Subsubsection still works

This is another `\subsubsection`.

### 6.11 General Remarks

1. Empty lines are typeset as paragraph separators.
2. The arguments of the L<sup>A</sup>T<sub>E</sub>X 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     | progrname          | 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 properly, since a `\&` is added. Therefore 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](mailto: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: 1.26 of October 6, 2017.

## 12 License and Copyright

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[Juergen.Vollmer@informatik-vollmer.de](mailto: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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