

**NAME**

pdfetex, pdfenitex, pdfevirtex – PDF output from e-TeX

**SYNOPSIS**

**pdfetex** [*options*] [**&format**] [*file* | \ *commands*]

**DESCRIPTION**

Run the pdf<sub>E</sub>TeX typesetter on *file*, usually creating *file.pdf*. If the file argument has no extension, ".tex" will be appended to it. Instead of a filename, a set of pdf<sub>E</sub>TeX commands can be given, the first of which must start with a backslash. With a **&format** argument pdf<sub>E</sub>TeX uses a different set of precompiled commands, contained in *format.fmt*; it is usually better to use the **-fmt format** option instead.

pdf<sub>E</sub>TeX is a version of e-<sub>E</sub>TeX that can create *PDF* files as well as *DVI* files.

In *DVI* mode, pdf<sub>E</sub>TeX can be used as a complete replacement of the e-<sub>E</sub>TeX engine.

The typical use of pdf<sub>E</sub>TeX is with a pregenerated formats for which PDF output has been enabled. The **pdfetex** command uses the equivalent of the plain e-<sub>E</sub>TeX format, and the **pdfelatex** command uses the equivalent of the e-<sub>L</sub>AT<sub>E</sub>X format. To generate formats, use the **-ini** switch.

The **pdfenitex** and **pdfevirtex** commands are pdf<sub>E</sub>TeX's analogues to the **enitex** and **evirtex** commands. In this installation, they are symbolic links to the **pdfetex** executable. These symbolic links may not exist at all.

In *PDF* mode, pdf<sub>E</sub>TeX can natively handle the *PDF*, *JPG*, *JBIG2*, and *PNG* graphics formats. pdf<sub>E</sub>TeX cannot include PostScript or Encapsulated PostScript (EPS) graphics files; first convert them to PDF using **epstopdf**(1). pdf<sub>E</sub>TeX's handling of its command-line arguments is similar to that of the other <sub>E</sub>TeX programs in the *web2c* implementation.

**OPTIONS**

This version of pdf<sub>E</sub>TeX understands the following command line options.

**-draftmode**

Sets \pdfdraftmode so pdf<sub>E</sub>TeX doesn't write a PDF and doesn't read any included images, thus speeding up execution.

**-enc** Enable the enc<sub>E</sub>TeX extensions. This option is only effective in combination with

**-etex** Enable the e-<sub>E</sub>TeX extensions. This option is only effective in combination with **-ini**. See **etex**(1).

**-ini.** For documentation of the enc<sub>E</sub>TeX extensions see <http://www.olsak.net/enc tex.html>.  
**-file-line-error** Print error messages in the form *file:line:error* which is similar to the way many compilers format them.

**-no-file-line-error**

Disable printing error messages in the *file:line:error* style.

**-file-line-error-style**

This is the old name of the **-file-line-error** option.

**-fmt format**

Use *format* as the name of the format to be used, instead of the name by which pdf<sub>E</sub>TeX was called or a %& line.

**-halt-on-error**

Exit with an error code when an error is encountered during processing.

**-help**

Print help message and exit.

**-ini**

Start in *INI* mode, which is used to dump formats. The *INI* mode can be used for type-setting, but no format is preloaded, and basic initializations like setting catcodes may be required.

**-interaction** *mode*

Sets the interaction mode. The mode can be either *batchmode*, *nonstopmode*, *scrollmode*, and *errorstopmode*. The meaning of these modes is the same as that of the corresponding `\commands`.

**-ipc**

Send DVI or PDF output to a socket as well as the usual output file. Whether this option is available is the choice of the installer.

**-ipc-start**

As **-ipc**, and starts the server at the other end as well. Whether this option is available is the choice of the installer.

**-jobname** *name*

Use *name* for the job name, instead of deriving it from the name of the input file.

**-kpathsea-debug** *bitmask*

Sets path searching debugging flags according to the bitmask. See the *Kpathsea* manual for details.

**-mktex** *fnt*

Enable mktex *fnt*, where *fnt* must be either *tex* or *tfm*.

**-mltex**

Enable ML $\text{\TeX}$  extensions. Only effective in combination with **-ini**.

**-no-mktex** *fnt*

Disable mktex *fnt*, where *fnt* must be either *tex* or *tfm*.

**-output-comment** *string*

In *DVI* mode, use *string* for the *DVI* file comment instead of the date. This option is ignored in *PDF* mode.

**-output-directory** *directory*

*directory* instead of the current directory. Look up input files in *directory* first, then along the normal search path.

**-output-format** *format*

Set the output format mode, where *format* must be either *pdf* or *dvi*. This also influences the set of graphics formats understood by pdf $\text{\TeX}$ .

**-parse-first-line**

If the first line of the main input file begins with `%&` parse it to look for a dump name or a **-translate-file** option.

**-no-parse-first-line**

Disable parsing of the first line of the main input file.

**-progname** *name*

Pretend to be program *name*. This affects both the format used and the search paths.

**-recorder**

Enable the filename recorder. This leaves a trace of the files opened for input and output in a file with extension *.fls*.

**-shell-escape**

Enable the `\write18{command}` construct. The *command* can be any shell command. This construct is normally disallowed for security reasons.

**-no-shell-escape**

Disable the `\write18{command}` construct, even if it is enabled in the *texmf.cnf* file.

**-src-specials**

In *DVI* mode, insert source specials into the *DVI* file. This option is ignored in *PDF* mode.

**-src-specials where**

In *DVI* mode, insert source specials in certain places of the *DVI* file. *where* is a comma-separated value list: *cr*, *display*, *hbox*, *math*, *par*, *parent*, or *vbox*. This option is ignored in *PDF* mode.

**-translate-file tcxname**

Use the *tcxname* translation table to set the mapping of input characters and re-mapping of output characters.

**-default-translate-file tcxname**

Like **-translate-file** except that a `%&` line can override this setting.

**-version**

Print version information and exit.

**ENVIRONMENT**

See the Kpathsearch library documentation (the ‘Path specifications’ node) for precise details of how the environment variables are used. The **kpsewhich** utility can be used to query the values of the variables.

One caveat: In most pdf<sub>ε</sub>TeX formats, you cannot use `~` in a filename you give directly to pdf<sub>ε</sub>TeX, because `~` is an active character, and hence is expanded, not taken as part of the filename. Other programs, such as METAFONT, do not have this problem.

**TEXMFOUTPUT**

Normally, pdf<sub>ε</sub>TeX puts its output files in the current directory. If any output file cannot be opened there, it tries to open it in the directory specified in the environment variable **TEXMFOUTPUT**. There is no default value for that variable. For example, if you say *pdfetex paper* and the current directory is not writable, if **TEXMFOUTPUT** has the value */tmp*, pdf<sub>ε</sub>TeX attempts to create */tmp/paper.log* (and */tmp/paper.pdf*, if any output is produced.)

**TEXINPUTS**

Search path for `\input` and `\openin` files. This should probably start with `“.”`, so that user files are found before system files. An empty path component will be replaced with the paths defined in the *texmf.cnf* file. For example, set **TEXINPUTS** to `“./:/home/usr/tex:”` to prepend the current directory and `“/home/user/tex”` to the standard search path.

**TEXFORMATS**

Search path for format files.

**TEXPOOL**

search path for **pdfetex** internal strings.

**TEXEDIT**

Command template for switching to editor. The default, usually **vi**, is set when pdf<sub>f</sub>TeX is compiled.

**TFMFORMATS**

Search path for font metric (*.tfm*) files.

**FILES**

The location of the files mentioned below varies from system to system. Use the **kpsewhich** utility to find their locations.

*pdfetex.pool*

Text file containing pdf<sub>f</sub>TeX's internal strings.

*pdf<sub>f</sub>tex.map*

Filename mapping definitions.

*\*.tfm* Metric files for pdf<sub>f</sub>TeX's fonts.

*\*.fmt* Predigested pdf<sub>f</sub>TeX format (*.fmt*) files.

**NOTES**

Starting with version 1.40, pdf<sub>f</sub>TeX incorporates the e-TeX extensions, and pdf<sub>f</sub>TeX is just a copy of pdf<sub>f</sub>TeX. See **pdf<sub>f</sub>tex(1)**. This manual page is not meant to be exhaustive. The complete documentation for this version of pdf<sub>f</sub>TeX can be found in the *pdf<sub>f</sub>TeX manual* and the info manual *Web2C: A TeX implementation*.

**BUGS**

This version of pdf<sub>f</sub>TeX implements a number of optional extensions. In fact, many of these extensions conflict to a greater or lesser extent with the definition of pdf<sub>f</sub>TeX. When such extensions are enabled, the banner printed when pdf<sub>f</sub>TeX starts is changed to print **pdf<sub>f</sub>TeXk** instead of **pdf<sub>f</sub>TeX**.

This version of pdf<sub>f</sub>TeX fails to trap arithmetic overflow when dimensions are added or subtracted. Cases where this occurs are rare, but when it does the generated *DVI* file will be invalid. Whether a generated *PDF* file would be usable is unknown.

**AVAILABILITY**

pdf<sub>f</sub>TeX is available for a large variety of machine architectures and operation systems. pdf<sub>f</sub>TeX is part of all major TeX distributions.

Information on how to get pdf<sub>f</sub>TeX and related information is available at the **<http://www.pdf-tex.org>** pdf<sub>f</sub>TeX website.

The following pdf<sub>f</sub>TeX related mailing list is available: **pdf<sub>f</sub>tex@tug.org**. This is a mailman list; to subscribe send a message containing *subscribe* to **pdf<sub>f</sub>tex-request@tug.org**. More about the list can be found at the **<http://tug.org/mailman/listinfo/pdf<sub>f</sub>tex>** mailing list website.

**SEE ALSO**

**etex(1)**, **mf(1)**, **pdf<sub>f</sub>tex(1)**, **tex(1)**.

## AUTHORS

The primary authors of pdf $\text{\TeX}$  are Han The Thanh, Petr Sojka, Jiri Zlatuska, and Peter Breitenlohner (e $\text{\TeX}$ ).

$\text{\TeX}$  was designed by Donald E. Knuth, who implemented it using his system for Pascal programs. It was ported to Unix at Stanford by Howard Trickey, and at Cornell by Pavel Curtis. The version now offered with the Unix  $\text{\TeX}$  distribution is that generated by the to C system (**web2c**), originally written by Tomas Rokicki and Tim Morgan.

The enc $\text{\TeX}$  extensions were written by Petr Olsak.