

NAME

`texprof` – A profiler for TeX source files

SYNOPSIS

`texprof` [*options*] [*&format*] [*file*|*commands*]

DESCRIPTION

Run the TeX profiler on *file*, usually creating *file.dvi* and *file.tprof*. If the *file* argument has no extension, ".tex" will be appended to it. Instead of a file name, a list of TeX commands can be given, the first of which must start with a backslash. With a *&format* argument, the TeX profiler uses a different set of precompiled commands, contained in *format.fmt*; it is usually better to use the **-fmt** *format* option instead.

The TeX profiler is a version of TeX that measures the time TeX needs to execute individual input lines or macros. It writes the collected data to a file with extension *.tprof*. A separate program, **texprofile** (see **texprofile(1)**), is used to display the content of a *.tprof* file in a readable form.

The typical use of the TeX profiler is with pre generated formats. The **texprof** command uses the equivalent of the plain TeX format, and the **latexprof** command uses the equivalent of the L^AT_EX format. To investigate the timing of macros targeted to **pdf_{te}x** or **pdf_{la}te_x**, you can use **pdf_{te}xprof** or **pdf_{la}te_xprof**.

The TeX profiler's handling of its command-line arguments is similar to that of the other TeX programs in the *web2c* implementation.

OPTIONS

This version of the TeX profiler understands the following command line options.

-cnf-line *string*

Parse *string* as a *texmf.cnf* configuration line. See the Kpathsea manual.

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

-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.

-fmt *format*

Use *format* as the name of the format to be used, instead of the name by which the TeX profiler was called or a *%&* line.

-help Print help message and exit.

-ini Start in *INI* mode, which is used to dump formats. The *INI* mode can be used for typesetting, 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`.

- 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.
- ltx** Enable the L^AT_EX extensions. This option is only effective in combination with **-ini**. See **latex(1)**.
- mktex** *fnt*
Enable `mktex fnt`, where *fnt* must be either *tex*, *tfm*, *fnt*, or *pk*.
- no-mktex** *fnt*
Disable `mktex fnt`, where *fnt* must be either *tex*, *tfm*, *fnt*, or *pk*.
- output-directory** *directory*
Write output files in *directory* instead of the current directory. Look up input files in *directory* first, then along the normal search path.
- parse-first-line**
If the first line of the main input file begins with `%&` parse it to look for a dump name.
- no-parse-first-line**
Disable parsing of the first line of the main input file.
- pdf** Enable the simulation of common **pdf_{tex}** primitives. This option requires the **-ini** option and implies the **-ltx** option. See **pdf_{tex}(1)**.
- prof** Enable profiling as soon as T_EX enters the main loop. If this option is not used, profiling needs to be switched on using the `\profileon` primitive. Profiling can be switched off with the `\profileoff` primitive.
- progname** *name*
Pretend to be program *name*. This affects both the format used and the search paths.
- version**
Print version information and exit.

ENVIRONMENT

See the Kpathsea library documentation (e.g., 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.

TEXMFOUTPUT

Normally, T_EX 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 *texprof paper* and the current directory is not writable and `TEXMFOUTPUT` has the value */tmp*, T_EX attempts to create */tmp/paper.log*, */tmp/paper.dvi*, and */tmp/paper.tprof*. `TEXMFOUTPUT` is also checked for input files, as T_EX often generates files that need to be subsequently read; for input, no suffixes (such as “.tex”) are added by default, the input name is simply checked as given.

TEXINPUTS

Search path for `\input` and `\openin` files. This normally starts 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/user/tex:” to prepend the current directory and “/home/user/tex” to the standard search path.

TEXFORMATS

Search path for format files.

TFM FONTS

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

SOURCE_DATE_EPOCH

If set, its value, taken to be in epoch-seconds, will be used for the creation date and as the reference moment for the time related primitives of L^AT_EX. This is useful for making reproducible builds.

FORCE_SOURCE_DATE

If set to the value “1”, the time-related T_EX primitives (`\year`, `\month`, `\day`, `\time`) are also initialized from the value of `SOURCE_DATE_EPOCH`. This is not recommended if there is any viable alternative.

Many, many more environment variables may be consulted related to path searching. See the Kpathsea manual.

FILES

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

`*.tfm` Metric files for T_EX’s fonts.

`*.fmt` Predigested T_EX format files.

`*.pk` `*.pfb`

Font files used by T_EX.

NOTES

This manual page is not meant to be exhaustive. The complete documentation for the T_EX profiler can be found in `texprof.pdf`. Further information can be found in the manual of the *Kpathsea library*.

BUGS

This version of the T_EX profiler does not implement all of the primitives that `pdftex` provides, and further, it will not produce the same side effects.

AVAILABILITY

The T_EX profiler should compile on a large variety of machine architectures and operating systems. The function to obtain timing information is POSIX specific.

The sources of the T_EX profiler are hosted at <https://github.com/ruckertm/HINT>

SEE ALSO

texprofiler(1), **tex(1)**, **latex(1)**, **pdftex(1)**, **pdfflatex(1)**, and **kpsewhich(1)**.

AUTHORS

The primary author of the T_EX profiler is Martin Ruckert, with eT_EX extensions by Peter Breitenlohner, L^AT_EX extensions by Thierry Laronde, and the `kpathsearch` library by Karl Berry.

T_EX was designed by Donald E. Knuth, who implemented it using his WEB system for Pascal programs.

Many, many more contributed to the typesetting system now known as T_EX; far too many to name all of them here.