

**NAME**

`perltex` – enable LaTeX macros to be defined in terms of Perl code

**SYNOPSIS**

```
perltex [--help] [--latex=program] [--[no]safe] [--permit=feature] [--makesty] [latex options]
```

**DESCRIPTION**

LaTeX — through the underlying TeX typesetting system — produces beautifully typeset documents but has a macro language that is difficult to program. In particular, support for complex string manipulation is largely lacking. Perl is a popular general-purpose programming language whose forte is string manipulation. However, it has no typesetting capabilities whatsoever.

Clearly, Perl’s programmability could complement LaTeX’s typesetting strengths. **perltex** is the tool that enables a symbiosis between the two systems. All a user needs to do is compile a LaTeX document using **perltex** instead of **latex**. (**perltex** is actually a wrapper for **latex**, so no **latex** functionality is lost.) If the document includes a `\usepackage{perltex}` in its preamble, then `\perlnewcommand` and `\perlrenewcommand` macros will be made available. These behave just like LaTeX’s `\newcommand` and `\renewcommand` except that the macro body contains Perl code instead of LaTeX code.

**OPTIONS**

**perltex** accepts the following command-line options:

**--help**

Display basic usage information.

**--latex=program**

Specify a program to use instead of **latex**. For example, `--latex=pdflatex` would typeset the given document using **pdflatex** instead of ordinary **latex**.

**--[no]safe**

Enable or disable sandboxing. With the default of **--safe**, **perltex** executes the code from a `\perlnewcommand` or `\perlrenewcommand` macro within a protected environment that prohibits “unsafe” operations such as accessing files or executing external programs. Specifying **--nosafe** gives the LaTeX document *carte blanche* to execute any arbitrary Perl code, including that which can harm the user’s files. See [Safe](#) for more information.

**--permit=feature**

Permit particular Perl operations to be performed. The **--permit** option, which can be specified more than once on the command line, enables finer-grained control over the **perltex** sandbox. See [Opcode](#) for more information.

**--makesty**

Generate a LaTeX style file called *noperltex.sty*. Replacing the document’s `\usepackage{perltex}` line with `\usepackage{noperltex}` produces the same output but does not require PerlTeX, making the document suitable for distribution to people who do not have PerlTeX installed. The disadvantage is that *noperltex.sty* is specific to the document that produced it. Any changes to the document’s PerlTeX macro definitions or macro invocations necessitates rerunning **perltex** with the **--makesty** option.

These options are then followed by whatever options are normally passed to **latex** (or whatever program was specified with `--latex`), including, for instance, the name of the *.tex* file to

compile.

## EXAMPLES

In its simplest form, **perltex** is run just like **latex**:

```
perltex myfile.tex
```

To use **pdflatex** instead of regular **latex**, use the **--latex** option:

```
perltex --latex=pdflatex myfile.tex
```

If LaTeX gives a “trapped by operation mask” error and you trust the *.tex* file you’re trying to compile not to execute malicious Perl code (e.g., because you wrote it yourself), you can disable **perltex**’s safety mechanisms with **--nosafe**:

```
perltex --nosafe myfile.tex
```

The following command gives documents only **perltex**’s default permissions (`:browse`) plus the ability to open files and invoke the `time` command:

```
perltex --permit=:browse --permit=:fileSYS_open
--permit=time myfile.tex
```

## ENVIRONMENT

**perltex** honors the following environment variables:

### PERLTEX

Specify the filename of the LaTeX compiler. The LaTeX compiler defaults to “`latex`”. The `PERLTEX` environment variable overrides this default, and the **--latex** command-line option (see “`OPTIONS`”) overrides that.

## FILES

While compiling *jobname.tex*, **perltex** makes use of the following files:

*jobname.lgpl*

log file written by Perl; helpful for debugging Perl macros

*jobname.topl*

information sent from LaTeX to Perl

*jobname.frpl*

information sent from Perl to LaTeX

*jobname.tfpl*

“flag” file whose existence indicates that *jobname.topl* contains valid data

*jobname.ffpl*

“flag” file whose existence indicates that *jobname.frpl* contains valid data

*jobname.dfpl*

“flag” file whose existence indicates that *jobname.ffpl* has been deleted

*noperltex-#.tex*

file generated by *noperltex.sty* for each PerlTeX macro invocation

## NOTES

**perltex**’s sandbox defaults to what Opcode calls “`:browse`”.

**SEE ALSO**

*latex(1)*, *pdflatex(1)*, *perl(1)*, *Safe(3pm)*, *Opcode(3pm)*

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