

**NAME**

**perltx** – enable LaTeX macros to be defined in terms of Perl code

**SYNOPSIS**

```
perltx [--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. **perltx** is the tool that enables a symbiosis between the two systems. All a user needs to do is compile a LaTeX document using **perltx** instead of **latex**. (**perltx** is actually a wrapper for **latex**, so no **latex** functionality is lost.) If the document includes a `\usepackage{perltx}` 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**

**perltx** 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**, **perltx** 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 **perltx** sandbox. See Opcode for more information.

**--makesty**

Generate a LaTeX style file called `noperltx.sty`. Replacing the document's `\usepackage{perltx}` line with `\usepackage{noperltx}` 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 `noperltx.sty` is specific to the document that produced it. Any changes to the document's PerlTeX macro definitions or macro invocations necessitates rerunning **perltx** 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, **perltx** is run just like **latex**:

```
perltx myfile.tex
```

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

```
perltx --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 **perltx**’s safety mechanisms with **--nosafe**:

```
perltx --nosafe myfile.tex
```

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

```
perltx --permit=:browse --permit=:filesys_open
--permit=time myfile.tex
```

## ENVIRONMENT

**perltx** 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*, **perltx** 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

### *noperltx-#.tex*

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

## NOTES

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

**SEE ALSO**

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

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