The EPM TEX Front End for VTEX/2

Contents

1 Overview

The EPM TEX Front End for VTEX is a module for the OS/2 'Enhanced Editor' (EPM), which turns the editor into an integrated TEX environment:

▷ VTEX, the PDF viewer and other programs can be started from an editor menu.

▷ TEX errors are marked and explained in the source code window.

▷ LATEX syntax assist is optionally provided.

▷ A marked region of a file can be typeset.

▷ Multi-file documents are supported.

▷ VTEX options can be specified interactively.

The TEX Front End requires version 6.03b of the editor, which is part of Warp 4 and eCS. It does *not* work in conjunction with v5.51, which was shipped with Warp 3. However, EPM 6.03b can also be installed within Warp 3, and it is available for free from various sources. Furthermore, the TEX Front End requires a ready-to-run VTEX/2 system, version 7.53e or better.

new (v 5.4) The TEX Front End is shipped as a precompiled module, which can be added easily to an existing EPM. From version 5.4 on, the precompiled module provides also those features that were formerly available only when the TEX Front End was compiled into a customized version of the EPM.

2 Installing

Unpack the files from the archive `tfe.zip` to the directory, where your EPM resides. In case a file named EPMKWDS.TEX is already present, do not overwrite it.

If you want to use the German version of the TEX Front End rather than the English one, delete the file `texfe.ex` and rename `texfe.de` to `texfe.ex`.

Using the TEX Front End with the editor requires the module to be loaded into the EPM each time it starts up. This is accomplished by suitably editing the file `profile.erx`, which resides in the EPM directory. Add the following line to the file:

```
'link texfe.ex'
```

Note hat the quotes are part of the information!

In case the file `profile.erx` does not yet exist, you have to create it. The distribution contains a file named `profile.smp`, which can be used as a model by renaming it to `profile.erx`. Beside loading the TEX Front End, it applies various useful changes to the EPM configuration; see the comments in the file.

Make sure the EPM option *REXX profile* is active; see the 'settings notebook'. After closing and restarting of the editor the TEX Front End will be ready.

3 Initial configuration

3.1 Configuring the PostScript and PDF viewers

When starting the Editor with the TEX Front End for the first time, you may need to set up the commands for running the PDF and PostScript viewers. By default, the TEX Front End will start GSView, which is assumed to reside on drive C: 'as usual'.

In case you have installed GSView on a different drive or in a different directory, or if you want to use a different program, the TEX Front End is to be configured as follows:

1. open the menu VTeX/Settings
2. select the item #8 PDF Preview
3. click on Modify
4. edit the name and path of the .exe file; do *not* change the other parts of the command line
5. OK
6. edit the item #9 PS preview accordingly

More information about how to configure the invocation of external programs can be found in section 5.

3.2 VTEX options

In the menu VTeX/Settings you can change the options that are passed to the VTEX program, for PDF as well as for PostScript mode. The default options are suitable for VTEX/2 7.53 and later versions.

If you are using at least version 8.44 of VTEX, you may want to change the option -ox2 to -ox2p so as to obtain slightly smaller output, at the cost of compile time.

4 Usage

4.1 Actions in the VTeX menu

new (v 5.4)

The TEX Front End adds a new menu named VTeX to the EPM. Menu items are 'grayed out', when they are not applicable to the current file.

TeX (PDF) runs VTEX in PDF mode on the current document. The document will be saved automatically, if it has been changed.

TeX (PostScript) ditto, for PostScript mode.

quick opens a submenu, where VTEX can be started with the 'quick run' option; either in PDF or PostScript mode.

Locate next error analyzes the log file of the latest TEX run and marks the location of the next error in the related source file. In case the location of the error cannot be determined, the log file will be displayed.

View log file switches to the log file of the last TEX run. Executing this action while the log file is already being displayed will reset the error browsing facility to the first TEX error.

Start PDF viewer starts the PDF previewing program.

Start PS viewer starts the PostScript previewing program.

new (v 5.4)   **Master file support** toggles the 'master file' facility, see section 4.4 below.

Settings opens the configuration window. Changes to the settings are saved immediately.

Build Cache updates the file name data base of VTEX; it is disabled by default. It will be enabled, as soon as you turn on the static path cache by changing the VTEX option pu0 to pr or pr0, either for PDF or for PostScript mode, see section 3.2.

changed (v 5.4)   Two further items are normally added to the existing **File** and **Command** menus of the EPM. (If, however, your version of the EPM editor does not exhibit the 'standard' menu structure, they will appear in the **VTeX** menu.)

Folder opens the directory of the current file as a WPS folder.

OS/2 Shell opens an OS/2 command shell window in the directory of the current file, so that you can manually run auxiliary programs.

The menu items for the previewing programs and for the OS/2 command shell always create a new window; they cannot bring an existing window to the foreground. Thus, you will normally use these menu items only once and leave the windows open; to bring them to the foreground again—if necessary—click on a visible part of the window or use the window list.

4.2 The hot-keys

Various actions can also be performed using hot-keys rather than the menu:

TeX (PDF)	Ctrl-F9
TeX (PostScript)	Ctrl-F10
Locate next error	Ctrl-F11
View log file	Ctrl-F12

4.3 LaTeX and other TEX formats

The default TEX format is `latex`, unless a format is specified in the first line of the document, using the following syntax, e.g., for the 'plain' format:

```
% format: plain
```

This is compatible with E. Mattes' REXX program `texit.cmd` and other TEX IDEs. The TEX Front End understands teTeX syntax, i.e., `%&plain`, too.

The default format can be changed in the configuration window.

4.4 Master file support

Long documents are typically spread over several files and included into a common 'master' file using \input or \include commands. To provide special support for this way of handling multi-file documents, you have to turn on the 'master file support' via the menu. TeXing a document will then cause all dependent files in the same EPM window (edit ring) to be checked for modification, and they will be saved if necessary. 'Dependent files' are those that are included using \input or \include commands. Nested dependencies are, however, not recognized.

Each of the dependent files should, in its first line, indicate the corresponding master file, e.g., if the name of the master file is `main.tex`:

```
% master: main
```

As a result, actions such as running TeX or starting a previewer etc. will be applied to the main document, even when they are started while one of the dependent files is being edited.

Disabling the master file support is not required when TeXing 'simple' documents. With long text files, however, it may slow down the TeX Front End unnecessarily. Master file support should also be disabled when editing documented LaTeX sources (`.dtx`) containing the commands input or include within their code sections.

4.5 Typesetting a marked region of a file

It is possible to process a marked region of a file only, as opposed to typesetting the complete document. When TeXing is requested while there is a marked region in the file being edited, the TeX Front End will ask you whether to typeset the whole file or the marked region only. This works with standard (CUA) marking mode as well as with the 'advanced' marking mode, but not with block marks.

The marked region will be combined with the preamble (or header) of the document, i.e., the lines from the beginning of the file up to a line that contains \begin{document} or %**end of header. If the string \begin{document} is found, the corresponding \end{document} will be added to the end of the text to be formatted; otherwise the text gets terminated with \bye. The action stops with an error message, if the end of the header cannot be located. Notice that a temporary file is created, with the name of the current document and the extension `.___`.

new (v 5.4)   From version 5.4 on, there are no more restrictions regarding the use of the error browsing facility, when a marked region is processed.

4.6 LaTeX syntax assist

Environments: Typing ⟨return⟩ within a line that contains \begin{...} or \[causes the corresponding \end{...} or \] to be added. In the new line the cursor is indented, except with the environments document,

verbatim, verbatim* and macrocode. Entering \begin{macrocode} causes the current line to be replaced with

```
%␣␣␣␣\begin{macrocode}

%␣␣␣␣\end{macrocode}
```

Keywords: The following commands and keywords are completed, when a space is entered after the indicated characters:

```
\(   → \( \)          \la  → \label{}
\be  → \begin{}       \re  → \ref{}
equ  → equation       \pa  → \pageref{}
eqn  → eqnarray       \ci  → \cite{}
\fr  → \frac{}{}      \fo  → \footnote{}
```

Accelerator keys The 'accelerator keys' known from EPMTeX 3.1 are available, too:

```
Alt-A → eqnarray      Alt-B → \begin{}
Alt-C → \cite{}       Alt-D → description
Alt-E → equation      Alt-F → \frac{}{}
Alt-H → \hspace*{}    Alt-I → \item
Alt-J → itemize       Alt-K → tabular
Alt-L → \label{}      Alt-M → \mbox{}
Alt-N → enumerate     Alt-Q → equation
Alt-R → \ref{}        Alt-S → \sqrt{}
Alt-V → \vspace*{}    Alt-W → verbatim
$     → $$            {     → {}
```

Completion of environments and keywords is usually active with documents and macro files, unless you disable the 'expand' facility of the Editor altogether. You can also override it on demand by pressing the ⟨Ctrl⟩ key in conjunction with ⟨return⟩ or ⟨space⟩.

changed (v 5.4)

By default, the 'accelerator keys' are not active or are bound to EPM procedures, respectively. You can turn them on in the configuration window. Enabling/disabling these keys does not affect files that are already loaded.

4.7 Syntax highlighting

TEX syntax highlighting (default: off) can be toggled via the last item in configuration window; note that this does not affect files that are already loaded. Syntax highlighting is controlled by the file EPMKWDS.TEX, which has been adopted from a free EPM distribution (so don't blame *me* for missing keywords or ugly choice of color).

5 Advanced configuration

5.1 File types

Certain features of the TEX Front End are enabled according to the type (extension) of the current file:

changed (v 4.2)   ▷ Running TEX is possible for file types defined as TEX documents; initially these are `.tex`, `.dtx` and `.ins`. (When updating from version 4.0 or an earlier one, these new default settings do not automatically come into effect.)

▷ Syntax assist and highlighting should be provided when editing macro files, too. Initially, the types `.cls` and `.sty` are recognized. Note that documented LATEX sources, i.e., the file types `.dtx` and `.fdd`, are never highlighted.

The types to be recognized as documents and macro files can be specified in the configuration window. The file types must be entered *without* the leading dot.

5.2 User-defined menu items

Apart from the items for TeXing and previewing, there are four user-definable commands, which can be run from the menu. They are set up using a configuration file, rather than the Settings menu. Unless you have got a configuration file from a previous version of the TEX Front End already, you should start with a simple example. Copy the following four lines to a file named `tfe.cfg` in the EPM directory:

```
USER1_CMD       = start /n /f vbibtex %**N
USER1_EXT       = .aux
USER1_MENU_TEXT = BibTeX
USER1__MSG      = run BibTeX on current document
```

Shut down the editor, open an OS/2 window in the EPM directory and run the command `tfconfig` to transfer the information from the file `tfe.cfg` into the EPM. After restarting the EPM you should see an additional item in the VTeX menu, labeled BibTeX. Now, what do the above lines mean in detail?

`USER1_CMD` is the EPM command to be executed from the first menu item. The EPM starts external programs using the `start` command, which you should know from the OS/2 command prompt. A binary `.exe` program is launched using the option `/n`, whereas a batch file is executed using `/c`. All programs will be executed in the directory of the current document.

Usually the name of the current document needs to be passed to the external program. You can specify where and how this is done via the strings %**N and %**F. When the command is actually executed, these strings are replaced as follows:

%**N → file name without extension
%**F → file name with extension

Certain commands need to be given extra options manually, when they are launched. If you include a string in square brackets to your command, then a window will pop up when the program is started and you will be asked to enter additional options: 'Enter extra options for ⟨string⟩. For instance, if the menu item for the Makeindex program is defined as

```
USER1_CMD = start /n /f vmakeindex [vmakeindex] %∗∗N
```

the EPM will prompt: 'Enter extra options for vmakeindex'. The information you enter will be included into the command string just in the place of the square brackets.

If USER1_EXT is defined, running the first user-definable program requires the file with the given extension to exists. E.g., BibTeX can be run only if the .aux file exists. If a dependency of this kind makes no sense for a certain program, simply omit the USER1_EXT=... statement.

USER1_MENU_TEXT is the title of the corresponding menu item. A tilde ~ in this string makes the following character act as a menu shortcut.

USER1__MSG is an (optional) menu prompt.

Up to four menu items and related commands can be declared by following the above model. Just add their declarations to tfe.cfg and replace the 1 in the keywords with 2, 3 or 4. Beside executing BibTeX, other useful applications for the configurable menu items are, for instance, excuting Makeindex or deleting of auxiliary files.

Do not forget to run tfconfig after any change to the configuration file; otherwise the change will never come into effect. Notice that an existing entry cannot be deleted by simply omitting it from of tfe.cfg. You must supply an 'empty' value instead.

5.3 Configuring the PostScript and PDF viewers

The commands to start the PostScript and PDF viewers, which can be entered in the configuration window, are evaluated in the same way as the above-mentioned commands for starting the user-defined programs.

5.4 The configuration tool

Invocation:

```
tfconfig [⟨file⟩] [⟨option⟩]
```

Options:

/N	list contents of configuration file only
/U	read settings from file and write them to the TeX Front End
/V	view current settings of the TeX Front End
/D	delete all TeX Front End settings from the EPM

/U is the default option. In case no file is specified, settings are read from a file named tfe.cfg in the current directory. Any filename is ignored, if /V or /D is requested.

The settings, which are displayed via /V, can be piped to a file; it will constitute a valid configuration file.

5.5   The icon

Having installed the TEX Front End, you will find an icon file `TEXFE.ICO` in the EPM directory. Feel free to use it to designate the 'Editor for TEX'.

6   Known bugs

▷   The key Alt-T always opens the TEX menu, regardless of the general setting of the 'menu accelerators' for the editor.

▷   The name of a TEX file is required to have an extension.

▷   The master file dependency system recognizes only one `\input` or `\include` command per line.

▷   A drive letter in a master file specification is not always evaluated properly. (There should, however, be no real need to specify a drive letter in this context.)

▷   VTEX 8.44 may crash, if you start it in 'quick run' mode with GeX turned off.

▷   After termination of VTEX or another external program the focus does not always return to the editor.

7   Distribution and support

The current version of this software is distributed from

    ftp://dante.ctan.org/tex-archive/systems/os2/epmtfe/

or any other CTAN host.

In case you encounter any problems upon installing or using the TEX Front End, please, contact the author:

    Walter Schmidt   <epmtfe@gmx.net>

Credits

Special thanks to Jon Hacker and Rodney Korte for providing the program EPMTeX and for the permission to use large parts of their source code. Without the model EPMTeX I would never have been able to write the TEX Front End. Wonkoo Kim suggested and created the configuration menu, and he found various bugs. Andreas Schnellbacher provided many of the new features introduced with version 5.