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# The EPM T<sub>E</sub>X Front End for V<sub>T</sub>E<sub>X</sub>/2

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## 1 Overview

The EPM  $\text{\TeX}$  Front End for  $\text{\TeX}$  is a module for the OS/2 'Enhanced Editor' (EPM), which turns the editor into an integrated  $\text{\TeX}$  environment:

- ▷  $\text{\TeX}$ , the PDF viewer and other programs can be started from an editor menu.
- ▷  $\text{\TeX}$  errors are marked and explained in the source code window.
- ▷  $\text{\LaTeX}$  syntax assist is optionally provided.
- ▷ A marked region of a file can be typeset.
- ▷ Multi-file documents are supported.
- ▷  $\text{\TeX}$  options can be specified interactively.

The  $\text{\TeX}$  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  $\text{\TeX}$  Front End requires a ready-to-run  $\text{\TeX}$ /2 system, version 7.53e or better.

The  $\text{\TeX}$  Front End is shipped as a precompiled module, which can be added easily to an existing EPM. Alternatively you can merge its E language source code into a customized EPM version; this variant is called ' $\text{\TeX}$  Front End Pro'.

The next section refers to the ready-made module. Installing of the 'Pro' variant requires the ETPM compiler and the source files of the  $\text{\TeX}$  Front End. The latter are distributed as an archive `source.zip`, which includes also the related installation instructions.

## 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  $\text{\TeX}$  Front End rather than the English one, delete the file `texfe.ex` and rename `texfe.de` to `texfe.ex`.

Using the  $\text{\TeX}$  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 that 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  $\text{\TeX}$  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 of the EPM. After closing and restarting of the editor, the T<sub>E</sub>X Front End will be ready.

### 3 Initial configuration

#### 3.1 Configuring the PostScript and PDF viewers

When starting the Editor with the T<sub>E</sub>X Front End for the first time, the commands for running the PDF and PostScript viewers may need to be customized. Their default behavior is to start a GSView, which has been installed 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 T<sub>E</sub>X Front End is to be configured as follows:

1. Open the menu VTeX/Settings;
2. select the item PDF Preview;
3. click on change;
4. edit the name and path of the .exe file, do *not* change the other parts of the command;
5. OK
6. edit the item PDF preview’ accordingly.

#### 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<sup>1</sup>, you may want to change the option `-ox2` to `-ox2p` so as to obtain slightly smaller PDF output, at the cost of compile time.

### 4 Usage

#### 4.1 Actions in the VTeX menu

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.

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<sup>1</sup> When T<sub>E</sub>X Front End 4.2 was released, this version of VTeX was not yet shipped with the official VTeX/Free distribution!

**Locate next error** analyzes the log file of the latest  $\text{\TeX}$  run and marks the location of the next error in the source file. In case the line number of the error cannot be determined or is not found in the source file, the log file will be displayed.

**View log file** switches to the log file of the last  $\text{\TeX}$  run. Executing this action while the log file is already being displayed will reset the error browsing facility to the first  $\text{\TeX}$  error.

**Start PDF viewer** starts the PDF previewing program.

**Start PS viewer** starts the PostScript previewing program.

**Settings** opens the configuration window. Settings changed here are saved immediately.

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

**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.

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

Note that the menu items for the previewing programs and for the OS/2 command shell open a new window. They cannot bring a window, which has been created before, to the foreground. Thus, you will normally use these items only once and leave the windows open; later you can bring them to the foreground by clicking on a visible part of the window or by using the window list.

*new description  
(v4.2)*

With  $\text{\TeX}$  Front End 'Pro' the item OS/2 Shell is located in the Command menu of the editor, and the Folder item is located in the File menu.

## 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 $\text{\LaTeX}$ and other $\text{\TeX}$ formats

The default  $\text{\TeX}$  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  $\text{\TeX}$  IDEs. The  $\text{\TeX}$  Front End understands `teTeX` syntax, too:

```
%&plain
```

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 configuration 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.:

```
% master: main
```

In this example the master file is `main.tex`. TeX as well as the the previewing programs and the user-defined programs (see section 5.2) can be called then, while editing one of the dependent files, and the main document will be used for the action.

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 L<sup>A</sup>T<sub>E</sub>X 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 `.____`.

The error searching facility will display only the message in the log file (neither the source file nor the temporary file), when a marked region has been processed before.

## 4.6 L<sup>A</sup>T<sub>E</sub>X syntax assist

**Environments:** Typing  $\langle \text{return} \rangle$  within a line that contains  $\backslash \text{begin}\{\dots\}$  or  $\backslash [$  causes the corresponding  $\backslash \text{end}\{\dots\}$  or  $\backslash ]$  to be added. In the new line the cursor is indented, except with the environments `document`, `verbatim`, `verbatim*` and `macrocode`. Entering  $\backslash \text{begin}\{\text{macrocode}\}$  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:

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

**Accelerator keys** The ‘accelerator’ keys known from EPMT<sub>E</sub>X 3.1 are available, too:

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

Completion of environments and keywords is usually active with documents and style files, unless you disable the ‘expand’ facility of the Editor. You may also override syntax assist in a single case by pressing  $\langle \text{Ctrl} \rangle$  in conjunction with  $\langle \text{return} \rangle$  or  $\langle \text{space} \rangle$ .

The accelerator keys are, by default, not active. You can turn them in in the VTeX configuration window. Enabling/disabling these keys comes into effect only after changing the current file.

## 4.7 Syntax highlighting

T<sub>E</sub>X syntax highlighting (default: off) can be toggled via the configuration window. Changes do 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 T<sub>E</sub>X Front End are enabled according to the type (extension) of the current file:

- changed (v 4.2)*
- ▷ Running T<sub>E</sub>X is possible for file types defined as T<sub>E</sub>X documents; initially these are `.tex`, `.dtx` and `.ins`.
  - ▷ Syntax assist and highlighting should be provided when editing macro files, too. Initially, the types `.cls` and `.sty` are recognized. NB: Documented L<sup>A</sup>T<sub>E</sub>X 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. After upgrading from version 4.0 or an earlier one, you may need to click on Default to obtain the above default settings.

### 5.2 User-defined menu items

Apart from the items for TeXing, previewing and printing, 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 T<sub>E</sub>X 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 exist. 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. Besides executing BibTeX, other useful applications for the configurable menu items are, for instance, executing 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 the next ‘generation’ 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 T<sub>E</sub>X Front End
- /V view current settings of the T<sub>E</sub>X Front End
- /D delete all T<sub>E</sub>X 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; later this file can be used as a valid configuration file.



## 5.5 The icon

Having installed the T<sub>E</sub>X Front End, you will find an icon file `TEXFE.ICO` in the EPM directory. Feel free to use it to designate the ‘Editor for T<sub>E</sub>X’.

## 6 Known bugs

- ▷ The key Alt-T always opens the T<sub>E</sub>X menu, regardless of the general setting of the ‘menu accelerators’.
- ▷ The name of a T<sub>E</sub>X 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.)
- ▷ The error searching facility may occasionally display a wrong source file or none at all.
- ▷ V<sub>T</sub><sub>E</sub>X 8.44 may crash, if you start it in ‘quick run’ mode with GeX turned off.

## 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 T<sub>E</sub>X Front End, please, contact the author:

Walter Schmidt <epmtfe@gmx.net>

## Credits

Special thanks to Jon Hacker and Rodney Korte for providing the program EPMT<sub>E</sub>X and for the permission to use large parts of their source code. Without the model EPMT<sub>E</sub>X I would never have been able to write the T<sub>E</sub>X Front End.

Wonkoo Kim suggested and created the configuration menu, and he found various bugs.