

\LaTeX -Mik: \LaTeX -Support for GVim on Win32-systems

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Volker Kiefel

Abstract

Vim, one of the most complex text editors is also available on win32 systems. Vim has excellent syntax highlighting for \LaTeX and \BibTeX files. \LaTeX -Mik has been written for GVim, the graphical version of Vim. It supports authors using Mik \TeX , a popular win32 \TeX / \LaTeX -implementation. Only minor changes of the script are required to make it suitable for other \TeX implementations, e. g. **fp \TeX** .

1 System requirements

At least, installation of MikTeX¹ on a win32-system including **pdfL^AT_EX** and **dvips** is required. For converting L^AT_EX-documents to HTML the script calls **tth**². For printing PostScript documents **Ghostview** and **Ghostscript** should be installed.

2 Installation

Please copy the file `latex-mik.vim` into the vim plugin-directory. If you open a file with the extension `.tex` or `.bib`, the L^AT_EX-menu appears.

3 L^AT_EX-menu options

3.1 BibT_EXEntry

The Options of this menu insert empty templates for BibT_EX document types into a `.bib` file³. Thus `LaTeX→BibTeX→Article` inserts

```
@article{,
author = {},
title = {},
year = {},
journal = {},
OPTpages = {},
OPTvolume = {},
OPTmonth = {},
OPTnumber = {}
}
```

into the text: the template for `@article`-entries. Fields beginning with `OPT...` are optional in the context of this document type. The last field of a well-formed `.bib`-file is not closed by a comma (,). Also the other document types: `book`, `booklet`, `inbook`, `incollection`, `inproceedings`, `manual`, `mastersthesis`, `misc`, `phdthesis`, `proceedings`, `techreport`, `unpublished` are implemented.

3.2 Environment on region, Empty environment

`LaTeX→Environment on region` only works if a region is selected “linewise visual” (with ‘V’ in Vim’s command mode). With a region selected “characterwise visual” (‘v’) the script generates the error message: “No text highlighted linewise”. To use this command, select a region of lines with ‘V’ and enter the name of the environment and the prompt, e.g. `center`. `LaTeX→Empty environment` generates an empty environment. L^AT_EX-Mik attempts to create “appropriate” environment templates. As an example, “`center`” inserts

¹<http://www.miktex.org>

²<http://hutchinson.belmont.ma.us/tth/>

³A BibT_EX database usually has the filename extension `.bib`

```
\begin{center}
```

```
\end{center}
```

“itemize” inserts

```
\begin{itemize}
```

```
\item
```

```
\end{itemize}
```

and “table” inserts

```
\begin{table}[]
```

```
\caption[]{} 
```

```
\label{} 
```

```
\end{table}
```

3.3 Commands on region, Empty Commands

LaTeX→Commands on region only works if a region is selected “characterwise visual”, with a region selected “linewise visual”, the script generates the message “No text highlighted characterwise”. LaTeX→Empty commands generates an empty command.

3.4 “Umlaut” and accented characters

In LaTeX-documents “Umlaut”-characters (äöüÄÖÜ) and ‘ß’ are inserted literally by default. If you select LaTeX→Umlaute→Normal TeX, typing ä inserts \a. Default behaviour is restored with LaTeX→Umlaute→Normal TeX. LaTeX→Umlaute→German TeX mapping prints "a for a typed ä, LaTeX→Umlaute→BibTeX mapping prints {\a}, LaTeX→Umlaute→German Umlaut mapping converts ä to ae. Mapping for accented and other characters might easily be added.

3.5 Process LaTeX-projects

In the following description, a LaTeX-project is understood either as a single LaTeX-file (together with a .bib-file, if it exists) or as the main file and the files included with \input{} or \include{} commands as in

```
\documentclass{article}
```

```
\begin{document}
```

```
\input{fileOne}
```

```
\input{fileTwo}
```

```
\input{fileThree}
```

```
\end{document}
```

After opening one of the files of a project and before \LaTeX ing and/or viewing the project you will have to tell the script the project name, therefore select $\text{\LaTeX} \rightarrow \text{Projectname}$. If you are currently editing the main file, you may confirm the prompt (Enter project name [default current file]:) with [Enter], if another file of the project is edited you will have to enter the name of the main file without the extension⁴. Then, with $\text{\LaTeX} \rightarrow \text{\LaTeX} \text{Project}$ you will compile the project (produce a .dvi-file), $\text{\LaTeX} \rightarrow \text{BibTeXProject}$ runs Bib \TeX , $\text{\LaTeX} \rightarrow \text{IndexProject}$ runs makeindex, $\text{\LaTeX} \rightarrow \text{ViewFile}$ calls the dvi-viewer yap and makes it jump to the correct position, $\text{\LaTeX} \rightarrow \text{PDFLaTeX}$ calls PDF \LaTeX to produce a PDF-file, $\text{\LaTeX} \rightarrow \text{dvips}$ calls dvips to produce a PostScript file, $\text{\LaTeX} \rightarrow \text{gsview}$ opens the graphical interface of the ghostscript-interpreter, $\text{\LaTeX} \rightarrow \text{\LaTeX} \text{ to HTML}$ generates a HTML file with tth⁵.

3.6 Mappings

Important funktions have been mapped to key sequences beginning with “,”.

Command	mapping
$\text{\LaTeX} \text{Project}$,la
ViewFile	,vi
Projectname	,pr
Empty Commands	,cm
Commands on region	,rcm
Empty environment	,en
Environment on region	,ren

Table 1: Mappings of \LaTeX -Mik-functions

For example, if you wish to \LaTeX the current project you may enter ,la instead of selecting the menu option $\text{\LaTeX} \text{Project}$. All current mappings are listed in table 1.

⁴if the main file is myfile.tex, please enter myfile; generally the main file is the \TeX file with the `\documentclass` statement

⁵available through <http://hutchinson.belmont.ma.us/tth/>