

# Frequently Asked Questions about $\LaTeX$

**Wietse Dol\***

Landbouw-Economisch Instituut (LEI-DLO)  
 P.O.Box 29703  
 2502 LS Den Haag  
 The Netherlands  
 w.dol@lei.agro.nl

## Introduction

$\LaTeX$  is growing in popularity. As a shell for  $\text{EM}\TeX$  and many many utilities,  $\LaTeX$  is the userfriendly way to do perfect  $\TeX$ ing. It aims to be a complete system and is designed to shield you from all kind of parameter settings. Installing  $\LaTeX$  may take some time, but you are rewarded with a open userfriendly working bench. If you donot like the way  $\LaTeX$  handels things you can adjust the ‘batch’ files (btm files to be exact) or add your own utilities. Once  $\LaTeX$  works on your system you will soon become addicted to it, and even simple things will be done using this shell instead of remembering all kind of parameter settings.

When  $\LaTeX$  grew in popularity we decided to open an e-mail number just for asking  $\LaTeX$  and  $\text{EM}\TeX$  questions. This account will shield the authors of  $\LaTeX$  from extensive disturbances and lets us also select the appropriate person to answer the problem (mail). You still are invited to mail all remarks/suggestions and questions to [4tex-support@eco.RUG.nl](mailto:4tex-support@eco.RUG.nl) We also have a  $\LaTeX$  mailinglist. This list is intended to inform people about the bugs, the interesting questions and suggestions, and the latest updates (as writing this note we are working on  $\LaTeX$  3.00).

In this note I have gathered some frequently asked questions and remarks. Most of the questions and answers were proposed in Dutch, so I tried to translate them into English. Blame me for (m)any bad English.

## The questions

1. I cannot start  $\LaTeX$  without many strange error messages.
2. Occasionally I would like to write a document using the Dutch language. How can I force  $\LaTeX$  to use Dutch hyphenation patterns.
3. I try to use  $\LaTeX$  under Windows and get the errormessage ‘DPMI not supported’.
4. In the ‘ $\LaTeX$  local guide’ I find many references to documents and articles, but where can I find them.
5. I like to automatically generate the missing fonts. How to do this in  $\LaTeX$ .
6. I quickly installed `tex386.exe` and while running  $\TeX$  I get the message ‘cannot find format file’. I like to generate new format files, but how.
7. Does  $\LaTeX$  works on our network.
8. After installing Dos 6.0, I get some errormessages when starting  $\LaTeX$ .
9. Am I forced to use Qedit as an editor in  $\LaTeX$ .
10. What means a `%<TeX_Marker>` in all my  $\TeX$  documents.
11. Why we need the logical drives `t:` and `q:`.
12. Why is  $\LaTeX$  such a slow starter. I have to wait several (precious) seconds before the main menu appears.
13. Can I use the  $\text{L}\text{A}\text{T}\text{E}\text{X}$  on-line help environment of  $\LaTeX$  without using  $\LaTeX$ .
14. I have problems with the ASCII-beta-symbol which in my German  $\text{L}\text{A}\text{T}\text{E}\text{X}$  sources denote the German character `\ss`.

## 1 Startup with errors

Most of the time these errors are due to wrong settings of environment variables. You should take the time (only once) looking at the two files containing all the environment settings (i.e. `\emtex\btm\texuser.set` and `c:\emtex\btm\bs system.set`). For instance not specifying the `path` correctly can result in strange errors. We try to install  $\LaTeX$  in a way that it almost will work immediately, but still read the two files carefully and follow the instructions.

## 2 Dutch hyphenation patterns

$\LaTeX$  uses Babel and by default we have installed the languages: Dutch, English (American), German and French. You can easily select one or more languages even within one document. For instance:

```
\documentstyle[german,french,english,%
                                dutch]{article}
\begin{document}
  %default language is dutch, i.e.
  %the last specified in the preamble
  Dat is mooi.
```

\*I thank my former colleagues Erik Frambach and Maarten van der Vlerk for their effort in making  $\LaTeX$  what it is today: a complete userfriendly workbench

```

Een \chapter heet nu Hoofdstuk, enz.
\selectlanguage{english}
  This is nice.
  A \chapter is now called Chapter, etc.
\selectlanguage{german}
  Da\ss\ ist sch\on.
  Ein \chapter hei\ss t jetzt
  Kapitel, unz.
\selectlanguage{french}
  C'est bon.
  Une \chapter s'apelle maintenant
  Chapitre, etc.
\end{document}

```

Of course there is a complete documentation of the Babel system. Read this for more information. Many languages have special options. For instance in Dutch we can use "y to get the ligature ij and use "i to get ï.

### 3 DPMI not supported

This is the result of E. Mattes EMX Dos-extender. The solution is simple: upgrade the `tex386.exe` and add two Dos-extenders. See this MAPS: 'Some notes about Windows'. Windows will be fully supported in  $\LaTeX$  version 3.00 (released end of november 1993).

### 4 References in Local guide

When you have fully installed  $\LaTeX$  there also will be a directory called `c:\emtex\doc\`. In this directory you will find all documents about style files etc. All these files are compressed (.zip) files and you need e.g. `pkunzip.exe` to unzip them. This can be done automatically in a simple menu structure using the F3 key in any of the menus in  $\LaTeX$ . Of course all these files are regular updated. So for the most recent versions one should look on any CTAN server.

### 5 Missing fonts

For automatically generating missing fonts you only have to set some environment variables in the file `c:\emtex\btm\texuser.set`. You need to set the following variables:

```

FONTGEN=y
MYFONTS=c:\texfiles\fonts
MYTFM=c:\texfiles\tfm

```

Take care that these directories exist (otherwise make them).  $\LaTeX$  will generate the missing fonts and store them in all kind of directories. When you use for instance the Epson printer and you have just generated `cmr10<240>` this font will be stored in `c:\texfiles\fonts\epsonfx\240dpi`. When using a HP-laserjet the font `cmr10<300>` is stored in `c:\texfiles\fonts\hplaser\300dpi`. This means that  $\LaTeX$  makes it possible to generate all kinds of fonts for all types of printers and that  $\LaTeX$  will do all bookkeeping in storing and loading the correct

fonts. Of course to generate fonts we need METAFONT and therefore automatically font generation only works when you have installed METAFONT.

In the new release of  $\LaTeX$  (version 3.00) there will be some extra utilities especially for handling fonts. There will be an utility called `fontlib` to store your (pk) fonts in a font library. The utility `mfformat` will generate new METAFONT formats. This is for instance needed when you have added a new type of printer (e.g. the HP-laserjet 4). With the utility `metafont` you can add/modify/run your own METAFONT jobs.

## 6 Format files

There are two groups of format files, the ones that are used for normal  $\TeX$ ing (the compilers `tex86.exe`, `tex186.exe`) and the ones that are used when running BiG-versions (i.e. larger memory setting and therefore slower, like `btex86.exe`, `btex186.exe` and `tex386.exe`). The first group is installed in the directory `c:\emtex\texfmts` and the BiG-versions are stored in `c:\emtex\btexfmts`.

In the  $\LaTeX$  local guide it is explained how to generate new format files. This still looks complicated. Therefore we have added ( $\LaTeX$  version 3.00) the utility `formats`. With this menu it becomes really simple to generate new formats (small or big or with whatever languages).

## 7 Does $\LaTeX$ works on our network

We have tried to make it possible to run  $\LaTeX$  on almost any network. We did not test it on all possible networks, so we have to rely on comments/questions from others. In Groningen we use a Novell network and  $\LaTeX$  works fine. Every user has its own `texuser.set` with his own settings and the complete  $\TeX$  system is stored on a network drive.

If you do not have a Novell network, you have to change some things in order to work. All the network settings are stored in a batch file `c:\emtex\btm\network.btm`. After some trial and error most people get  $\LaTeX$  working. We know that the following networks can run  $\LaTeX$ :

1. Novell network
2. Decnet Pathworks network
3. Vines/Banyan LAN-network

When you want to install  $\LaTeX$  on a network and you have problems/questions mail them to `4tex-support@eco.rug.nl` We will try and answer these questions or give you the name of the person who already successfully installed  $\LaTeX$  on your type of network. The nicest thing we recently heard is that an APPLE-user installed  $\LaTeX$  on his APPLE machine using a Dos-emulation mode.

## 8 Dos 6.0 and errors

$\LaTeX$  uses the programs `marknet.exe` and `relnet.exe` to store the current memory settings. These programs need some updating when running under Dos 6.0. The errors are not dangerous, you should however get the new (up-to-date) versions of the two programs mentioned above.

## 9 Editors

You can use whatever editor you want. The editor is set by the environment variable `EDITOR` in the file `texuser.set`. We recommend Qedit because we have written some nice macros to help you with all kinds of things (e.g. block compiling, one word spell-checking etc.)

Nowadays we use the update/upgrade of Qedit, called TSE. This program is not shareware (yet), but for everyone who is interested, we can supply the TSE macros that do the same as the Qedit macros (even more and better).

We, unfortunately, discovered that there are editors that can not use extended ASCII codes (values above ASCII 128). For instance the Norton Editor, translates extended ASCII code to normal codes. Because we use extended ASCII codes in our batch files as well as our settings files (`*.set`) we do not recommend using such an editor to change/view our files. The Norton Editor of course can be used to generate  $\TeX$  documents under  $\LaTeX$ .

## 10 %<TeX\_Marker>

$\LaTeX$  uses a `%<TeX_Marker>` to indicate the place (line and column) where we left our document. The next time we enter the editor,  $\LaTeX$  will find the place where we left and we can start typing immediately. Because the `%<TeX_Marker>` starts with a `%` it will be treated as a comment when compiling the document. The same holds for a `%<Block_Marker>`

When using Qedit, there is one place where this macro gives undesired results. In a verbatim environment the `%<TeX_Marker>` will be printed, so we have to be aware not to end an editing session on a verbatim line. The TSE macro is rewritten so that it will end above the verbatim lines and therefore not will print the `%<TeX_Marker>`.

## 11 Logical drives

We setup  $\LaTeX$  so that it could run on networks as well as on any PC without completely modifying all our batch files. Therefore we needed to assign drive letters

to our batch files that could be used anywhere. We decided to use the drives `t:` and `q:`. The stand alone PC as well as a Network environment will work with some Network mappings or using the `SUBST` command for stand alone PC's. Therefore be sure you have specified `LASTDRIVE=T` in your `config.sys` file.

## 12 $\LaTeX$ a slow starter

We tried to make  $\LaTeX$  as idiot proof as possible. We therefore need to check a lot of things and write several files before we can start the main menu. On slow machines this can be quite time consuming. But it is a small price to pay compared to the joy of  $\TeX$ ing. Most people we know start  $\LaTeX$  only once a day, and do everything within  $\LaTeX$ . When they need other programs, they add it to their own utility menu (the F5 key) or they `shell to Dos` with the F9 key.

In  $\LaTeX$  version 3.00 we have tried to speed up the startup (on my PC the startup time went from 8.3 seconds to 3.2 seconds). We also recommend the use of disk caching (e.g. `smartdrv.exe`) because we read and write a lot of files. You can also speedup things by not using the slow video-ram (as is done with e.g. `vidram`). Another environment setting that speeds up  $\LaTeX$  is `SEARCHFILE=n`, i.e.  $\LaTeX$  should not search for  $\TeX$  files in subdirectories. If things still are to slow, try to skip the mouse (i.e. `SET MOUSE=` in the `texuser.set` file).

## 13 On line $\LaTeX$ help

$\LaTeX$  comes with a really nice  $\LaTeX$  help environment, which can be used anywhere because it is a stand-alone TSR program. You only need the two files `texhelp.exe` and `texhelp.hlp`. These can be found on the directory `c:\emtex\utils\`

## 14 German character `\ss`

In  $\LaTeX$  we have redefined the higher ASCII values. This means that higher ASCII codes are translated to correct  $\TeX$  statements. For instance the  $\acute{e}$  (ASCII 130) is translated to `\' {e}`, also the ASCII 125 (the  $\beta$ ) is translated to `\$ \beta \$` etc. We use the code-page 437. When you like to change this you have to modify the file `c:\emtex\texinput\437_tex.txt` and use the program `c:\emtex\maketcp.exe` to generate the file `c:\emtex\texinput\437_tex.tcp`. After this you have to generate new format files (e.g. using the `Formats` utility from  $\LaTeX$ ). For instance using

```
tex386 /i /8 /c437_tex /mt:65000
                                lplain \dump
```