

# Installing the PostScript fonts in EmTeX using the PSNFSS package

Chris Inacio

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## 0.1 Getting PSNFSS

PSNFSS can be downloaded from your favorite CTAN site. It installs the standard 35 PostScript fonts for use into L<sup>A</sup>T<sub>E</sub>X somewhat easily. (Most of the work has been done for you.) These directions hopefully should help you get things up and running using EmT<sub>E</sub>X. If you have any questions or comments please send them to either the EmT<sub>E</sub>X mailing list or me at [inacio@ece.cmu.edu](mailto:inacio@ece.cmu.edu) and I would be glad to help you out if I can. You can download the most recent copy of this document at <http://www.ece.cmu.edu/afs/ece/usr/inacio/publichtml/emtex/welcome.html>.

Here are some helpful hints and tips on interpreting this document. EMTEXDIR is the base directory of where you have installed EmT<sub>E</sub>X. You can find out what this is by typing `set emtexdir`. *I know checking variable settings using set that way works under OS/2, your mileage may vary under MS-DOS or Windows.* Please substitute your path in for that variable wherever you see it in the following directions. My personal first choice in CTAN sites is [ftp.dante.de](http://ftp.dante.de) the other current site, (as of this writing,) is [tug2.cs.umb.edu](http://tug2.cs.umb.edu), which is actually news to me. The PSNFSS package is on CTAN in the directory `tex-archive/macros/latex/packages/psnfss`. I refer you to your `texfonts` directory below for installing some virtual font information. This may or may not be under your EmT<sub>E</sub>X directory. I put mine under my EmT<sub>E</sub>X directory, but the standard install is *not* to do that. Lastly, I highly recommend getting the GhostScript viewer. It is a very good tool, works on most platforms, and for dealing with PostScript files, I don't see how you can do without it. I use it at home with my laser printer which isn't PostScript, and at work to view files before sending them to the PostScript printers. You can get it, along with a great user interface, GSview, by Russell Lang from <http://www.cs.wisc.edu/ghost/>.

## 0.2 Step-by-Step

1. First download PSNFSS from CTAN. This includes getting the file `lw35nfss.zip` from `/fonts/adobe`. If you don't have the Adobe font descriptions for the files, you'll also need `lw35pk.zip` from `/fonts/adobe`. *I'm not sure about the lw35pk.zip file and when you need it. It contains the PK files, T<sub>E</sub>X bitmap images of the fonts, so I think you can just install them, anybody know for sure and want to tell me?*
2. Run L<sup>A</sup>T<sub>E</sub>X on the file `psfonts.ins`. This will generate the following files: `avant.sty` `bookman.sty` `chancery.sty` `helvet.sty` `mathptm.sty` `newcent.sty` `palatino.sty` `pifont.sty` `times.sty`. Copy these files into your `EMTEXDIR\texinput\latex2e` directory.
3. Unzip the `lw35nfss.zip` file. It creates 3 directories: `dvips` `fonts` `tex`. You will need to copy a lot of different files from this zip archive, and it's a good idea to use `xcopy` with the `/s` parameter (get subdirectories,) to do it.
4. You will need to copy the `adobe` subdirectory in the `fonts\tfm` subdirectory from unzipping `lw35nfss.zip` into your `EMTEXDIR\tfm` directory.

5. Now you have to tell DVIPS about your PostScript fonts. PSNFSS has a map file that you need to tell DVIPS about. You have to edit your `config.ps` file in `EMTEXDIR\data\dvips`. The PSNFSS map file is in the `dvips\psnfss` subdirectory from unzipping `lw35nfss.zip`. I copied the map file you need, `psnfss.map` into `EMTEXDIR\data\dvips` as `postscript.map` so that I wouldn't copy over the `psnfss.map` file distributed with DVIPS. I assume the the `psnfss.map` distributed with DVIPS is out of date though, and that it wouldn't hurt to copy over it, especially since the current one from the PSNFSS package has a lot more information in it. Then, in your `config.ps` file, you need to add `p +postscript.map` or `p +psnfss.map` depending on what you called your map file.
6. Please copy the virtual font files into the font path for your dvi driver program. I assume that you are using DVIPS as your dvi driver program, I don't use anything else. I made a subdirectory in my `texfonts` directory called `vf` so that I didn't have to build a big path in my `config.ps` file. It is important to remember that DVIPS for Em $\TeX$  only supports one path in its `DVIDRVFONTS` environment variable. So it makes a lot of sense to put these files in your `texfonts` directory somewhere. You can copy these from unzipping `lw35nfss.zip` in the directory `fonts\vf`. There is a whole set of directories and files to copy, so you might want to use `xcopy`.
7. Next, you have to copy the font descriptor files `.fd` files to someplace below your `EMTEXDIR\texinput` directory. I made a directory in my `texinput` directory called `fd` to hold the descriptor files. The descriptor files come from the `lw35nfss.zip` file and are in the `tex\latex\psnfss` directory.
8. Copy the file `8r.enc` from the PSNFSS package directory into `EMTEXDIR\data\dvips` before DVIPS will understand the encoding of the font, if the file isn't already there.
9. The final step! You have to set the `TEXTFM` environment variable. Em $\TeX$  doesn't naturally search more than one directory deep into the `EMTEXDIR\tfm` directory tree. Since the font metrics for the PostScript fonts are nested below the foundry name, e.g. Adobe, you need to set `TEXTFM=EMTEXDIR\tfm!!`.

### 0.3 Using Postscript Fonts

In order to use your new PostScript font ability, all you need to do is add something like `\usepackage{times}` into your preamble. This file uses the Adobe Times font as its base font instead of Computer Modern. You can select from any of the packages you installed: `avant.sty` `bookman.sty` `chancery.sty` `helvet.sty` `mathptm.sty` `newcent.sty` `palatino.sty` `pifont.sty` `times.sty` as a selection for base font. The beginning of this document looks like:

```
\documentclass{report}
\usepackage{times}
```

```
\begin{document}
```

Good luck and happy T<sub>E</sub>Xing!