

Adding fonts to groff

[0] if the font is in ttf format, use fontforge to convert to pfa format. this means: open ttf file in fontforge, select generate fonts from the file menu, select ps type 1 (ascii), make sure that in the options the output afm box is ticked, and save. this will at least create a file with the pfa extension and a file with the afm extension in a directory in the system that we can pick. for example, someFont.afm and someFont.pfa are extracted from the someFont.ttf file.

[1] convert the afm file to a groff font description file with the afmtodit program. in the example above:

```
afmtodit someFont.afm textmap SOMEFON
```

it is recommended that SOMEFON follow the groff naming conventions for font families, ie AB = arial bold, ABI = arial bold italic, AI = arial italic, AR = arial regular/roman?

[2] copy both the pfa file and the groff font description file to a devps directory in groffs font path. the font path is described in the environment section of the troff man page. here, copying to the /usr/share/groff/1.19.2/font/devps/ directory did the trick.

[3] find out the PS font name of the font by looking into the groff description file. continuing the example, this means:

```
grep internalname SOMEFON
```

the output is internalname someFont

[4] open the download file thats in the directory the fonts were copied to. it should look something like:

```
# List of downloadable fonts
# PostScript-name      Filename

Symbol-Slanted         symbolsl.pfa
ZapfDingbats-Reverse  zapfdr.pfa
FreeEuro               freeeuro.pfa
```

at the end, add the line that corresponds to the font. in the example, this would be:

```
someFont              someFont.pfa
```

[5] the font should be ready for use. in a groff file, it may be included with a declaration like:

```
.ft SOMEFON
```

the text that comes after the declaration will be affected by it.

More on the device font directories

maybe theres an easier way of doing it. if you need to produce custom paper sizes with groff, you should change the DESC file of the font/devps directory. in that file there is a line that says something like:

```
papersize a4
```

change this to the size that you need, following a length,width syntax. if you were using paper 12cm high by 235picas wide, then the line should read

```
papersize 12c,235p
```

this changes groffs systemwide papersize default, which to me feels like overkill. mmmh... using a pre-defined paper size is easier. size and orientation are both specified on the command line. for example, the following would produce an a3 postscript file with landscape orientation:

```
groff -Tps -P-pa3 -P-l file.groff ...
```

-P-l is the landscape bit. it seems that the groff/.../font directory contains the font files for the different devices. thus the names of the subdirectories. here,

```
l /usr/share/groff/1.19.2/font
```

gives:

```
total 32K
drwxr-xr-x 2 root root 4.0K Apr 17 2007 devascii/
drwxr-xr-x 3 root root 4.0K Apr 17 2007 devdvi/
drwxr-xr-x 2 root root 4.0K Apr 17 2007 devhtml/
drwxr-xr-x 2 root root 4.0K Apr 17 2007 devlatin1/
drwxr-xr-x 2 root root 4.0K Apr 17 2007 devlbp/
drwxr-xr-x 3 root root 4.0K Apr 17 2007 devlj4/
drwxr-xr-x 3 root root 4.0K Jul 16 16:33 devps/
drwxr-xr-x 2 root root 4.0K Apr 17 2007 devutf8/
```

the only directory ive used is devps, ie the one for the postscript device. it seems that in these directories, there are two types of files: device description files, and font files. device description files are called DESC, and above we changed one of these files in order to get custom paper size.

the font files have names like CR, AB, ZDR (for courier regular, arial bold, and zapf dingbats regular, respectively). when adding fonts to groff, afmtodit generated this type of files. and its these names that make groff nonportable, as in the blog.

most of this is taken from the groff_font manpage.