

Type 3 Fonts

Type 3 fonts are bit-mapped fonts as opposed to scalable vector based fonts such as Type 1 or TrueType. The problem with using Type 3 fonts is that they render a very poor screen viewing experience when others are viewing your file (very blurry text). Since your paper will be published to CDROM as well as other web based rendering platforms, it is extremely important for you to produce a clean copy of your file using little or no Type 3 fonts.

Details:

If you are using LaTeX on Unix, the problem is that, by default, LaTeX uses Type 3 fonts. Since most users have a tendency to use the default settings, then Type 3 fonts will be used by default. Therefore, if the first line in the LaTeX file is something like:

```
\documentstyle[10pt,psfig,twocolumn]{article}
```

then Type 3 fonts will be used. But if you modify this line as follows:

```
\documentstyle[10pt,times,psfig,twocolumn]{article}
```

then Times fonts will be used (which are not Type 3). If there are mathematical formulas in the text, it is better to use:

```
\documentstyle[10pt,times,mathptm,psfig,twocolumn]{article}
```

Afterwards, you just have to generate the dvi file from file.tex (LaTeX file), the PS file (dvips -o file.ps file), and the PDF (ps2pdf file.ps). After changing the fonts, you must review your paper very carefully to ensure that it still meets layout and page limit requirements.

Additional Help:

You may also want to check here to read about generating high quality PDF output from LaTeX or TeX. Alternatively, you should consult the documentation of your LaTeX system on how to include Type 1 fonts.

ps2pdf Conversion Problems:

Note that the **ps2pdf** command (based on GhostScript) may not preserve embedded Type 1 fonts. If you have access to Adobe Acrobat for distilling your PostScript to PDF conversion, this would be the preferred method. You can use [Acrobat Reader](#) to see if you have any Type 3 fonts embedded using this menu sequence: File > Document Properties > Fonts or you can use Ctrl-Alt-F. Although, it should be fairly obvious since Type 3 fonts look very blurry on screen.

Useful Links:

- [High quality PDF output from LaTeX and TeX](#)
- [Wikibooks guide to the LaTeX markup language](#)