

NAME

autoinst – wrapper script around *otftotfm*, for installing OpenType fonts in LaTeX.

SYNOPSIS

autoinst [options] *fontfile* [*fontfile* ...]

DESCRIPTION

Eddie Kohler’s *otftotfm* is a great tool for installing OpenType fonts for use with LaTeX, but its use (even in automatic mode) is quite complicated because it needs lots of long command lines and doesn’t generate the *fd* and *sty* files LaTeX needs. **autoinst** simplifies the font installation process by generating and executing all commands for *otftotfm* and by creating all necessary *fd* and *sty* files. All the user then needs to do is move these files to a suitable location ($\$LOCALTEXMF/tex/latex/<Supplier>/<FontFamily>/$ being the canonical choice) and update TeX’s filename database.

Given a number of fonts, **autoinst** will create several LaTeX font families:

- Four text families (with lining and oldstyle figures, in tabular and proportional variants), each with the following shapes:
 - n* Roman text
 - sc* Small caps
 - nw* ‘Upright swash’; usually normal text with some extra ‘oldstyle’ ligatures, such as ct, sp and st.
 - tl* Titling shape. Meant for all-caps text only (even though it sometimes contains lowercase glyphs as well), where letterspacing and the positioning of interpunctuation characters have been adjusted to suit all-caps text. This shape is generated only for the families with lining figures.
 - it* Italic or oblique text
 - scit* Italic small caps
 - sw* Swash
 - tlit* Italic titling
- For each text family: a family of TS1–encoded symbol fonts, in roman and italic shapes.
- Four families with superiors, inferiors, numerators and denominators, in roman and italic shapes.
- An ornament family, in roman and italic shapes.

Of course, if the font doesn’t contain oldstyle figures, small caps etc., the corresponding shapes or families are not created; furthermore, command-line options allow fine-grained control over the creation of many families and shapes (see below).

The generated font families are named $<FontFamily>-<Suffix>$, where $<Suffix>$ is one of

<i>LF</i>	proportional (i.e., figures have varying widths) lining figures
<i>TLF</i>	tabular (i.e., all figures have the same width) lining figures
<i>OsF</i>	proportional oldstyle figures
<i>TOsF</i>	tabular oldstyle figures
<i>Sup</i>	superior characters (note that most fonts only have an incomplete set of superiors: figures, some punctuation and the letters <i>abdeilmnorst</i> ; normal forms will be used for the other characters)
<i>Inf</i>	inferior characters; usually only figures and punctuation, normal forms for the other characters
<i>Orn</i>	ornaments
<i>Numr</i>	numerators
<i>Dnom</i>	denominators

The generated fonts are named $<FontFile>-<suffix>-<shape>-<enc>$, where $<FontFile>$ is the name of the OpenType file, $<suffix>$ is the same as above (but in lowercase), $<shape>$ is either empty, ‘sc’, ‘swash’ or ‘titling’, and $<enc>$ is the encoding. A typical name in this scheme is *MinionPro-Regular-osf-sc-ly1*.

On the choice of text encoding

By default, all text families use the LY1 encoding. This has been chosen over T1 (Cork) because many OpenType fonts (especially the so-called ‘Pro’ ones) contain additional ligatures such as fj and Th, and LY1 has a number of empty slots to accommodate these.

A different encoding can be selected using the **—encoding** command line option (see below).

Using the fonts with LaTeX

autoinst generates a style file for using the font in LaTeX documents, named ‘<FontFamily>.sty’. This style file also takes care of loading the *fontenc* and *textcomp* packages, if necessary. To use the font, simply put `\usepackage{MinionPro}` (or whatever the font is called) in the preamble of the document.

This style file defines a number of options:

lining, oldstyle, tabular, proportional

Choose which figures will be used for the text fonts. The defaults are ‘oldstyle’ and ‘proportional’ (if available).

medium, demibold, semibold, bold, black

Choose the weight that LaTeX will use for the ‘bold’ weight (i.e., the value of `\bfdefault`).

The style file will also try to load the *fontaxes* package (part of the MinionPro for LaTeX project), which gives easy access to various font shapes and styles. This package can be downloaded from the project’s homepage (<http://developer.berlios.de/projects/minionpro>) or directly through the CVS web interface (<http://cvs.berlios.de/cgi-bin/viewcvs.cgi/minionpro/MinionPro/tex/>), and is also available from CTAN as part of the archive *base-v2.zip* (<http://www.ctan.org/tex-archive/fonts/minionpro/base-v2.zip>).

Using the machinery set up by *fontaxes*, the generated style file also defines a few commands (which take one argument) and declarations (which don’t take arguments, but affect all text up to the end of the current group) of its own:

DECLARATION	COMMAND
<code>\tlshape</code>	<code>\texttl, \texttitling</code>
<code>\sufigures</code>	<code>\textsu, \textsuperior</code>
<code>\infigures</code>	<code>\textin, \textinferior</code>

In addition, the `\swshape` and `\textsw` commands are redefined to place swash on the secondary shape axis (*fontaxes* places it on the primary shape axis); this allows the use of ‘upright swash’. Just saying `\swshape` will still give normal (italic) swash, but `\swshape\upshape` results in upright swash.

Note that there is no separate command for accessing the italic titling shape; but these commands behave properly when nested, so `\tlshape\itshape` gives italic titling. There are also no commands for accessing the numerator and denominator fonts; these can be selected using *fontaxes*’ low-level commands, e.g., `\fontfigurestyle{numerator}\selectfont`.

The style file also provides a command `\ornament{<number>}`, where *<number>* is a number from 0 to the total number of ornaments minus one. Ornaments are always typeset using the current family, series and shape. A list of all ornaments in a font can be created by running LaTeX on the file *nfssfont.tex* (which comes with LaTeX) and specifying the ornament font (e.g., *MinionPro-Regular-orn-u*).

This whole machinery builds on *fontaxes*; if that package cannot be found, the style file doesn’t provide access to the various font shapes and styles.

Using multiple font families in one document

If you want to use several font families in one document, make sure all fonts were installed using the same version of **autoinst**; style files that were generated by different versions of **autoinst** may not be able to be able to coexist peacefully.

A note for non-**teTeX** users

Calling *otftotfm* with the **--automatic** option (as **autoinst** does by default) requires a TeX-installation that uses the *kpathsea* library; with TeX-installations that implement their own directory searching (such as MiKTeX) *otftotfm* might complain that it cannot find a writable *texmf* directory and leave all generated *tfm*, *vf*, *enc* and *map* files in the current working directory. In that case, you need to move these to their correct destinations. You also need to tell the dvi-driver (*dvips*, *dvipdfm*, *pdfTeX* etc.) about the new font map files; this usually means editing some configuration file.

Furthermore, some OpenType fonts lead to *pl* and *vpl* files that are too big for MiKTeX's *plotf* and *vptovf*; the versions that come with TeXLive (<http://tug.org/ftp/texlive/Contents/live/bin/win32/>) don't have this problem.

COMMAND-LINE OPTIONS

--encoding=encoding[,encoding]

Use the encoding *encoding* for the text fonts. The default is 'LY1'. A file named '<encoding>.enc' (in all *lowercase*) should be somewhere where *otftotfm* can find it. Suitable encoding files for LY1 and T1 come with *fontools*.

Multiple text encodings can be specified as well: **--encoding=OT1,T1,LY1**. The encodings are passed to *fontenc* in the order specified, so the last one will be the default text encoding.

--sanserif

Install the font as a sanserif font, accessed via `\sffamily` and `\textsf`. The generated style file redefines `\familydefault`, so including it will still make this font the default text font.

--typewriter

Install the font as a typewriter font, accessed via `\ttfamily` and `\texttt`. The generated style file redefines `\familydefault`, so including it will still make this font the default text font.

--ts1

--nots1

Turn the creation of TS1-encoded fonts on or off. The default is **--ts1** if the text encodings (see **--encoding** above) include T1, **--nots1** otherwise.

--smallcaps

--nosmallcaps

Turn the creation of small caps fonts on or off. The default is **--smallcaps**.

--swash

--noswash

Turn the creation of swash fonts on or off. The default is **--swash**.

--titling

--notitling

Turn the creation of titling fonts on or off. The default is **--notitling**.

--superiors

--nosuperiors

Turn the creation of fonts with superior characters on or off. The default is **--superiors**.

--inferiors

--noinferiors

Turn the creation of fonts with inferior figures on or off. The default is **--noinferiors**.

--fractions

--nofractions

Turn the creation of fonts with numerators and denominators on or off. The default is **--nofractions**.

--ornaments

---noornaments

Turn the creation of ornament fonts on or off. The default is **---ornaments**.

---manual

Manual mode. By default, **autoinst** immediately executes all *otftotfm* command lines it generates; with the **---manual** option, these commands are instead written to a batch command file (named '*.bat*', to make things easier for our friends on Windows). Also, the generated *otftotfm* command lines specify the **--pl** option and leave out the **--automatic** option; this causes human readable (and editable) *pl* and *vpl* files to be created instead of the default *tfm* and *vf* files.

---verbose

Verbose mode; print detailed info about what **autoinst** thinks it's doing.

---extra=text

Pass *text* as options to *otftotfm*. To prevent *text* from accidentally being interpreted as options to **autoinst**, it should be properly quoted.

SEE ALSO

Eddie Kohler's TypeTools (<http://www.lcdf.org/type>).

John Owens' *otfinst* (<http://www.ece.ucdavis.edu/~jowens/code/otfinst/>) is another wrapper around *otftotfm*, and may work for you when **autoinst** doesn't.

Ready-made support files for MinionPro, providing more options and flexibility than **autoinst** ever will (including math), are available from <http://developer.berlios.de/projects/minionpro/>.

XeTeX (<http://scripts.sil.org/xetex>) is a TeX extension that can use any font installed in the operating system (including OpenType fonts) without additional support files. It also isn't hindered by standard TeX's limitation to 8-bit fonts, so it is especially well suited to fonts with many ligatures and alternate glyphs such as Poetica, Silentium and Zapfino.

A good free-as-in-beer Perl implementation for Windows (and also Linux) is ActiveState's ActivePerl, available from <http://www.activestate.com>.

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When sending a bug report, please give as much relevant information as possible; this usually includes (but may not be limited to) the output from running **autoinst** with the **---verbose** option.

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