

**NAME**

**gsftopk** – render a ghostscript font in TeX pk format

**SYNOPSIS**

**gsftopk** [-i *path*] [-q] [-t] [--dosnames] [--interpreter=*path*] [--mapline=*line*] [--mapfile=*file*] [--quiet] [--test] [--help] [--version] *font dpi*

**ARGUMENTS**

*font*      Name of the font to be created.

*dpi*        Desired resolution of the font to be created, in dots per inch. This may be a real number.

**DESCRIPTION**

**gsftopk** is a program which calls up the ghostscript program **gs(1)** to render a given font at a given resolution. It packs the resulting characters into the **pk** file format and writes them to a file whose name is formed from the font name and the resolution (rounded to the nearest integer). The font may be in any format acceptable to Ghostscript, including *.pfa*, *.pfb*, *.gsf*, and *.ttf* files.

This program should normally be called by a script, such as **mktexpk**, to create fonts on demand.

**gsftopk** obtains the character widths from the *.tfm* file, which must exist in the standard search path. It also must be able to find the font in a map file (such as **psfonts.map**), formatted as in **dvips(1)**, unless the **--mapline** option is used. The set of map files is given by the **--mapfile** option, or in the files **config.ps**, **\$HOME/.dvipsrc**, and **config.gsftopk** (as would be used by **dvips -Pgsftopk**).

The following **pk** "specials" are added at the end of the output file, to provide an internal check on the contents of the file: **"jobname=font"**, **"mag=1"**, **"mode=modeless"**, and **"pixels\_per\_inch=dpi"**. This is in accordance with the TeX Directory Standard (TDS).

**OPTIONS**

- dosnames**  
Use a name of the form *font.pk* instead of *font.dpi***pk**.
- h, --help**  
Print a brief help synopsis and exit.
- i path, --interpreter=path**  
Use *path* as the Ghostscript interpreter.
- mapfile=file**  
Use *file* to look for the map information for *font*. This should be the full name of the file (in other words, no path searching algorithms are applied).
- mapline=line**  
Use *line* instead of looking for an entry in a map file. The first word of *line* must match *font*.
- q, --quiet**  
Operate quietly; i.e., without writing any messages to the standard output.
- t, --test**  
Test run: return zero status if the font can be found in the map file(s), and nonzero status if it cannot. If this option is specified, then the *dpi* argument is optional (since the font will not be generated).
- v, --version**  
Print the version number and exit.

**ENVIRONMENT VARIABLES**

- DVIPSRC**                      Name of file to read instead of **\$HOME/.dvipsrc**. This should be the full name of the file (in other words, no path searching algorithms are applied).
- GSFTOPKFONTS**              See **TEXTFONTS**.
- GSFTOPKHEADERS**            See **TEXPSHEADERS**.

<b>PSHEADERS</b>	See <b>TEXPSHEADERS</b> .
<b>TEXCONFIG</b>	Colon-separated list of paths to search for map files. An extra colon in the list will include the compiled-in default paths at that point. A double slash will enable recursive subdirectory searching at that point in the path.
<b>TEXTFONTS</b>	Colon-separated list of paths to search for the <i>.tfm</i> file associated with the font. Double slashes and extra colons behave as with <b>TEXCONFIG</b> . This information may also be supplied by using the environment variables <b>TFM FONTS</b> or <b>GSFTOPK FONTS</b> . These environment variables are checked in the order <b>GSFTOPK FONTS</b> , <b>TFM FONTS</b> , <b>TEXTFONTS</b> ; the first one (if any) having a value is used.
<b>TEXPSHEADERS</b>	Colon-separated list of paths to search for the Ghostscript driver file <b>render.ps</b> and for any PostScript header or font files ( <i>.enc</i> , <i>.pfa</i> , <i>.pfb</i> , <i>.gsf</i> , or <i>.ttf</i> files). Double slashes and extra colons behave as with <b>TEXCONFIG</b> . This information may also be supplied by using the environment variables <b>PSHEADERS</b> or <b>GSFTOPK HEADERS</b> . These environment variables are checked in the order <b>GSFTOPK HEADERS</b> , <b>TEXPSHEADERS</b> , <b>PSHEADERS</b> ; the first one (if any) having a value is used.
<b>TFM FONTS</b>	See <b>TEXTFONTS</b> .

## CONFIGURATION

In order to determine the set of map files to be used and the path for finding PostScript files, **gsftopk** reads, in order, the files **config.ps**, **.dvipsrc**, and **config.gsftopk**. The files **config.ps** and **config.gsftopk** are searched for using the environment variable **TEXCONFIG** or the compiled-in default paths. The file **.dvipsrc** is searched for in the user's home directory.

These files are in the same format as for **dvips** (as well as being in the same locations). The entries used by **gsftopk** are as follows.

**H path** Indicates that the Ghostscript driver file **render.ps** and the PostScript header and font files are to be searched for using *path*.

**p file** Indicates that the list of map files is to be erased and replaced by *file*.

**p +file** Indicates that *file* is to be added to the list of map files.

All other entries are ignored.

This is similar to the handling of these options when running **dvips -Pgsftopk**.

## BUGS

**gsftopk** sometimes has trouble with fonts with very complicated characters (such as the Seal of the University of California). This is because **gsftopk** uses the **charpath** operator to determine the bounding box of each character. If the character is too complicated, then old versions of Ghostscript fail, causing **gsftopk** to terminate with an error message

### Call to gs stopped by signal 10

(The number may vary from system to system; it corresponds to a bus error or a segmentation fault.) The best way to fix this bug is to install a current version of ghostscript. As an alternative, **gsftopk** can be instructed to use the bounding box provided with the font (if one exists) instead of finding a bounding box for each character. To do this, include the string

```
/usefontbbox true def
```

in the font map file; *e.g.*,

```
ucseal "/usefontbbox true def"
```

This will not affect use of the font by **dvips**.

**SEE ALSO**

**gs(1), gftopk(1), tex(1), xdvi(1), dvips(1)**

**AUTHOR**

Written by Paul Vojta. This program was inspired by Karl Berry's **gsrenderfont**.