NAME

gsftopk − render a ghostscript font in TeX pk form

SYNOPSIS

gsftopk [−i *path*] [−q] [−t] [−−debug=*n*] [−−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

−−debug=*n*

Set the **Kpathsea** debug flags according to the integer *n*.

−−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 **TFMFONTS.**

GSFTOPKHEADERS See **TEXPSHEADERS.**

PSHEADERS See **TEXPSHEADERS.**

TEXCONFIG 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.

TFMFONTS Colon-separated list of paths to search for the *.tfm* file associated with the font. Double slashes and extra colons behave as with **TEXCONFIG.** This information may also be supplied by using the environment variables **TFMFONTS** or **GSFTOPKFONTS.** These environment variables are checked in the order **GSFTOPKFONTS, TFMFONTS, TFMFONTS;** the first one (if any) having a value is used.

TEXPSHEADERS Colon-separated list of paths to search for the Ghostscript driver file **render.ps** and for any PostScript header or font files (*.enc*, *.pfa*, *.pfb*, *.gsf*, or *.ttf* files). Double slashes and extra colons behave as with **TEXCONFIG.** This information may also be supplied by using the environment variables **PSHEADERS** or **GSFTOPKHEADERS.** These environment variables are checked in the order **GSFTOPKHEADERS, TEXPSHEADERS, PSHEADERS;** the first one (if any) having a value is used.

TFMFONTS See **TFMFONTS.**

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,** the **Kpathsea** configuration file, 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**. For more details, see the **Kpathsea** manual.

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**.

MODIFICATIONS

Modified by Yves Arrouye to use Karl Berry's **Kpathsea** library.