NAME
grodvi – convert groff output to TeX DVI format

SYNOPSIS
grodvi [−**dl**] [−**F** *dir*] [−**p** *papersize*] [−**w** *n*] [*file . . .*]

grodvi −−**help**

grodvi −**v**
grodvi −−**version**

DESCRIPTION
grodvi is a driver for **groff** that produces TeX DVI format. Normally it should be run by **groff −Tdvi**. This will run **troff −Tdvi**; it will also input the macros in */usr/share/groff/1.22.4/tmac/dvi.tmac*.

The DVI file generated by **grodvi** can be printed by any correctly-written DVI driver. The troff drawing primitives are implemented using the tpic version 2 specials. If the driver does not support these, the **\D** commands will not produce any output.

There is an additional drawing command available:

\D'R *dh dv***'**
> Draw a rule (solid black rectangle), with one corner at the current position, and the diagonally opposite corner at the current position +(*dh*,*dv*). Afterwards the current position will be at the opposite corner. This produces a rule in the DVI file and so can be printed even with a driver that does not support the tpic specials unlike the other **\D** commands.

The groff command **\X'***anything***'** is translated into the same command in the DVI file as would be produced by **\special{***anything***}** in TeX; *anything* may not contain a newline.

For inclusion of EPS image files, −**Tdvi** loads *pspic.tmac* automatically, providing the **PSPIC** macro. Please check **groff_tmac**(5) for a detailed description.

Font files for **grodvi** can be created from tfm files using **tfmtodit**(1). The font description file should contain the following additional commands:

internalname *name*
> The name of the tfm file (without the *.tfm* extension) is *name*.

checksum *n*
> The checksum in the tfm file is *n*.

designsize *n*
> The designsize in the tfm file is *n*.

These are automatically generated by **tfmtodit.**

The default color for **\m** and **\M** is black. Currently, the drawing color for **\D** commands is always black, and fill color values are translated to gray.

In **troff** the **\N** escape sequence can be used to access characters by their position in the corresponding tfm file; all characters in the tfm file can be accessed this way.

By design, the DVI format doesn't care about physical dimensions of the output medium. Instead, **grodvi** emits the equivalent to TeX's **\special{papersize=***width***,***length***}** on the first page; **dvips** (and possibly other DVI drivers) then sets the page size accordingly. If either the page width or length is not positive, no papersize special is output.

OPTIONS
Whitespace is permitted between a command-line option and its argument.

−**d**   Do not use tpic specials to implement drawing commands. Horizontal and vertical lines will be implemented by rules. Other drawing commands will be ignored.

−**F***dir*   Prepend directory dir*/dev*name to the search path for font and device description files; *name* is the name of the device, usually **dvi**.

−l   Specify landscape orientation.

−p *papersize*
   Specify paper dimensions. This overrides the **papersize**, **paperlength**, and **paperwidth** commands in the *DESC* file; it accepts the same arguments as the **papersize** command (see **groff_font**(5) for details).

−v   Print the version number.

−w*n* Set the default line thickness to *n* thousandths of an em. If this option isn't specified, the line thickness defaults to 0.04 em.

USAGE

There are styles called **R**, **I**, **B**, and **BI** mounted at font positions 1 to 4. The fonts are grouped into families **T** and **H** having members in each of these styles:

  TR CM Roman (cmr10)
  TI CM Text Italic (cmti10)
  TB CM Bold Extended Roman (cmbx10)
  TBI CM Bold Extended Text Italic (cmbxti10)
  HR CM Sans Serif (cmss10)
  HI CM Slanted Sans Serif (cmssi10)
  HB CM Sans Serif Bold Extended (cmssbx10)
  HBI CM Slanted Sans Serif Bold Extended (cmssbxo10)

There are also the following fonts which are not members of a family:

  CW CM Typewriter Text (cmtt10)
  CWI CM Italic Typewriter Text (cmitt10)

Special fonts are **MI** (cmmi10), **S** (cmsy10), **EX** (cmex10), **SC** (cmtex10, only for **CW**), and, perhaps surprisingly, **TR**, **TI**, and **CW**, due to the different font encodings of text fonts. For italic fonts, **CWI** is used instead of **CW**.

Finally, the symbol fonts of the American Mathematical Society are available as special fonts **SA** (msam10) and **SB** (msbm10). These two fonts are not mounted by default.

Using the option **−mec** (which loads the file *ec.tmac*) provides the EC and TC fonts. The design of the EC family is very similar to that of the CM fonts; additionally, they give a much better coverage of groff symbols. Note that *ec.tmac* must be called before any language-specific files; it doesn't take care of hcode values.

ENVIRONMENT

GROFF_FONT_PATH
   A list of directories in which to search for the *dev*name directory in addition to the default ones. See **troff**(1) and **groff_font**(5) for more details.

FILES

/usr/share/groff/1.22.4/font/devdvi/DESC
   Device description file.

*/usr/share/groff/1.22.4/font/devdvi/*F
   Font description file for font *F*.

/usr/share/groff/1.22.4/tmac/dvi.tmac
   Macros for use with **grodvi**.

/usr/share/groff/1.22.4/tmac/ec.tmac
   Macros to switch to EC fonts.

BUGS

Dvi files produced by **grodvi** use a different resolution (57816 units per inch) from those produced by TeX. Incorrectly written drivers which assume the resolution used by TeX, rather than using the resolution specified in the DVI file will not work with **grodvi**.

When using the **−d** option with boxed tables, vertical and horizontal lines can sometimes protrude by one pixel. This is a consequence of the way TeX requires that the heights and widths of rules be rounded.

SEE ALSO

tfmtodit(1), **groff**(1), **troff**(1), **groff_out**(5), **groff_font**(5), **groff_char**(7), **groff_tmac**(5)