

**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 **tfmtoedit(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 **tfmtoedit**.

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 paper-size 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.

**-Fdir** Prepend directory *dir/devname* 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.
- wn** 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:

<b>TR</b>	CM Roman (cmr10)
<b>TI</b>	CM Text Italic (cmi10)
<b>TB</b>	CM Bold Extended Roman (cmbx10)
<b>TBI</b>	CM Bold Extended Text Italic (cmbxti10)
<b>HR</b>	CM Sans Serif (cmss10)
<b>HI</b>	CM Slanted Sans Serif (cmssi10)
<b>HB</b>	CM Sans Serif Bold Extended (cmssbx10)
<b>HBI</b>	CM Slanted Sans Serif Bold Extended (cmssbxo10)

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

<b>CW</b>	CM Typewriter Text (cmtt10)
<b>CWI</b>	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 *devname* 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  $\text{\TeX}$ . Incorrectly written drivers which assume the resolution used by  $\text{\TeX}$ , 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 T<sub>E</sub>X 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)**