

NAME

`mp`, MetaPost – system for drawing pictures

SYNOPSIS

`mp` [**-I**] [**-T**] [*first-line*]

DESCRIPTION

Mp interprets the MetaPost language and produces *PostScript* pictures. The MetaPost language is similar to Knuth's *METAFONT* with additional features for including *tex*(1) or *troff*(1) commands and accessing features of PostScript not found in METAFONT. The **-T** flag selects *troff* instead of *tex*.

An argument given on the command line behaves as the first input line. That can be either a (possibly truncated) file name or a sequence MetaPost commands starting with and including an command. Thus processes the file The basename of becomes the *jobname*, and is used in forming output file names. If no file is named, the *jobname* becomes The default extension can be overridden by specifying an extension explicitly.

There is normally one output file for each picture generated, and the output files are named *jobname.nnn*, where *nnn* is a number passed to the macro. The output file name can also be *jobname.ps* if this number is negative.

The output files can be used as figures in a TeX document by including

`\special{psfile=jobname.nnn}`

in the TeX document. Alternatively, one can and then use the macro **`\epsfbox{jobname.nnn}`** to produce a box of the appropriate size containing the figure.

btex TeX commands etex

This causes *mp* to generate a MetaPost picture expression that corresponds to the TeX commands. If the TeX commands generate more than one line of text, it must be in a or a minipage environment.

verbatimtex TeX commands etex

This is ignored by *mp* except that the TeX commands are passed on to TeX. When using LaTeX instead of TeX the input file must start with a block that gives the and commands.

Since most TeX fonts have to be downloaded as bitmaps, the feature works best when the output of is to be included in a TeX document so that *dvips*(1) can download the fonts. For self-contained PostScript output that can be used directly or included in a *troff* document, start your MetaPost input file with the command and stick to standard PostScript fonts. TeX and MetaPost use the names in the third column of the file

MetaPost output can be included in a *troff* document via the macro package. In this case *mp* should be invoked with the **-T** flag so that the commands between and or between and are interpreted as *troff* instead of TeX. (This automatically sets).

Here is a list of the environment variables affect the behavior of *mp*:

MPINPUTS

Search path for files. It should be colon-separated, and start with dot. Default:

MFINPUTS

Auxiliary search path for files with extensions.

TEXTFONTS

Search path for font metric files.

MPXCOMMAND

The name of a shell script that converts embedded typesetting commands to a form that *mp* understands. Defaults: for *tex* and for *troff*

TEX The version of TeX to use when processing and commands. Default:

TROFF

The *troff* pipeline for and commands. Default:

MPMEMS

Search path for files. Default:

MPPOOL

Search path for strings. Default:

MPEDITOR

A command for invoking an editor with in place of the file name and in place of the line number.

TEXVFNDS

Search path for virtual fonts.

MPTEXPRE

Name of a file that is prepended before running tex. If this file exists, *mp* behaves as if the file were inside of a block at the beginning of each input file. Default:

A file is a binary file that permits fast loading of fonts and macro packages. *Mp* reads the default unless another file is specified at the start of the first line with an just before it. There is also an that simulates plain METAFONT so that *mp* can read fonts. (Plain METAFONT is described in *The METAFONTbook*).

Experts can create files be invoking *mp* with the **-I** switch and giving macro definitions followed by a command.

The MetaPost language is similar to METAFONT, but the manual *A User's Manual for MetaPost* assumes no knowledge of METAFONT. MetaPost does not have bitmap output commands or METAFONT's online display mechanism.

FILES

macros,

files, and tables for handling included *tex* and *troff*

Directory for programs that handle included

tex and *troff*. table of corresponding font names for *troff*, PostScript, and TeX

The source file for a few sample figures.

troff.

SEE ALSO

tex(1),

Donald E. Knuth, *The METAFONTbook*, Addison Wesley, 1986,

John D. Hobby, *A User's Manual for MetaPost* CSTR 162.