NAME

  purifyeps – make an Encapsulated PostScript file work with both dvips and pdflatex

SYNOPSIS

  purifyeps −−**help**

  purifyeps −−**version**

  purifyeps [−−**fontmap**=*.fmp file*] [*.eps input file* [*.eps output file*]]

  purifyeps −−**make−man** [=*filename*] [−−**section**=*section*]

  purifyeps −−**make−ps−man** [=*filename*] [−−**section**=*section*]

DESCRIPTION

  While **pdflatex** has a number of nice features, its primary shortcoming relative to standard **latex**+**dvips** is that it is unable to read ordinary Encapsulated PostScript (EPS) files, the most common graphics format in the LaTeX world. **pdflatex** can read only the following types of graphics files:

  PDF

    Most people who use **pdflatex** convert their documents to PDF using a utility such as **epstopdf**. This works well and preserves the vector nature of the original EPS. Unfortunately, **dvips** does not read PDF, so two versions of the graphic must be maintained if the document is to be processed with both **latex**+**dvips** and **pdflatex**.

  PNG

    PNG is a bitmap format and therefore scales poorly. Also, **dvips** does not read PNG, so two versions of the graphic must be maintained if the document is to be processed with both **latex**+**dvips** and **pdflatex**.

  JPEG

    JPEG is a bitmap format and therefore scales poorly. Also, **dvips** does not read JPEG, so two versions of the graphic must be maintained if the document is to be processed with both **latex**+**dvips** and **pdflatex**.

  MPS

    This is probably the least-used **pdflatex**–compatible graphics format. MPS is actually a stylized version of EPS that MetaPost outputs. Like PDF, MPS is a vector format and remains as such when imported into a **pdflatex** document. Also like PDF, **dvips** does not read MPS, so two versions of the graphic must be maintained if the document is to be processed with both **latex**+**dvips** and **pdflatex**.

  The insight behind **purifyeps** is that there are only a few, small differences between MPS and EPS and that a file can be converted into a format that matches both the MPS and EPS specifications simultaneously. **purifyeps** inputs an EPS file, uses **pstoedit**'s `mpost` filter to convert the file to MetaPost (*.mp*), runs **mpost** on the file to convert it to MPS, and finally performs some touchups on the result to convert the file back to EPS, while preserving its ability to be parsed by **pdflatex**.

OPTIONS

  −−**help**

    Display "Usage" and "Options" from the **purifyeps** documentation.

  −**V**, −−**version**

    Display the **purifyeps** version number, copyright, and license.

--**fontmap**=*.fmp file*
>   Specify the name of a file that tells **purifyeps** how to map from TeX font names to PostScript font names. [Default: *mpost.fmp*]

--**make--man** [=*filename*]] [--**section**=*section*]
>   Automatically create a Unix man page for **purifyeps**. *section* specifies the section [default: 1 (User Commands)]. *filename* defaults to *purifyeps.1* or an analogous filename if *section* is specified.

--**make--ps--man** [=*filename*]] [--**section**=*section*]
>   Automatically create a PostScript version of the **purifyeps** documentation. The documentation is formatted like a Unix man page. *section* specifies the section [default: 1 (User Commands)]. *filename* defaults to *purifyeps.ps*.

In normal operation (i.e., when not run with --help, --make-man, or --make-ps-man), **purifyeps** takes the name of an input file and output file. The same filename can safely be used for both files. If the output filename is omitted, output will go to the standard output device. If the input filename is omitted, **purifyeps** will read from the standard input device.

EXAMPLES

Create a PostScript version of the **purifyeps** documentation, but call it *happydoc.ps* instead of the default, *purifyeps.ps*:

```
purifyeps --make-ps-man=happydoc.ps
```

Create a Unix man page for **purifyeps** (in the usual roff format), but indicate that it belongs in section LOCAL instead of the default of section 1:

```
purifyeps --make-man --section=LOCAL
```

Purify *sample.eps* (*mpost.fmp* is in the current directory):

```
purifyeps sample.eps sample.eps
```

Purify *sample.eps* (*mpost.fmp* is in a different location):

```
purifyeps --fontmap=/usr/share/pstoedit/mpost.fmp sample.eps sample.eps
```

Rename the purified version while purifying:

```
purifyeps sample.eps sample-pure.eps
```

Do the same, but in a Unix pipeline:

```
cat sample.eps | purifyeps > sample-pure.eps
```

When you run **purifyeps**, you should see the output from both **pstoedit** and **mpost**, followed by a success message from **purifyeps**:

```
% cat sample.eps | purifyeps > sample-pure.eps
pstoedit: version 3.30 / DLL interface 107 (build Mar 14 2002) :
Copyright (C) 1993 - 2001 Wolfgang Glunz
Interpreter finished. Return status 0
This is MetaPost, Version 0.641 (Web2C 7.3.1)
(/tmp/purifyeps-jdeGPkh9.mp [1] )
1 output file written: purifyeps-jdeGPkh9.1
Transcript written on purifyeps-jdeGPkh9.log.
```

```
    File seems to have been purified successfully.
```

FILES

mpost.fmp

File containing mappings between TeX and PostScript font names. See ''NOTES'' for a description of this file's contents.

BUGS

Error reporting could definitely stand to be improved. Error messages produced by **pstoedit** and **mpost** are sometimes silently ignored. Also, errors sometimes cause **purifyeps** to leave temporary files (*purifyeps–#####*) lying around.

purifyeps is subject to all of the limitations that affect **pstoedit** and especially the `mpost` backend to **pstoedit**. As a result, **purifyeps** ignores certain PostScript constructs, such as nonuniformly scaled text.

NOTES

purifyeps needs a file that tells it how to map from TeX font names to PostScript font names. This file must contain two, space-separated columns. The first lists a PostScript font name, and the second lists the TeX equivalent. Blank lines and lines that start with `%` are ignored. The following is a sample *.fmp* file:

```
% This is a sample font map for purifyeps.
Times-Bold                          ptmb
Times-Italic                        ptmri
Times-Roman                         ptmr
Helvetica                           phvr
Helvetica-Bold                      phvb
Helvetica-Oblique                   phvro
Courier                             pcrr
Courier-Bold                        pcrb
Courier-Oblique                     pcrro
```

Note that this is exactly the same format that **pstoedit** uses. By default, **purifyeps** looks in the current directory for a font map called *mpost.fmp*. The `--fontmap` command-line option tells **purifyeps** to use a different font map, which will typically be the *mpost.fmp* file that comes with **pstoedit**.

Once you create purified EPS files with **purifyeps**, you need to instruct **pdflatex** to use them. The pdfLaTeX configuration of the `graphics` and `graphicx` packages (*pdftex.def*) normally ignores *.eps* files. Putting the following LaTeX code in your document's preamble tells **pdflatex** that all *.eps* files are in MPS format:

```
% Tell pdfLaTeX that all .eps files were produced by MetaPost.
\usepackage{graphicx} % or graphics
\usepackage{ifpdf}
\ifpdf
  \DeclareGraphicsRule{.eps}{mps}{*}{}
  \makeatletter
    \g@addto@macro\Gin@extensions{,.eps}
  \makeatother
\fi
```

SEE ALSO

dvips (1), *epstopdf* (1), *latex* (1), *mpost* (1), *pdflatex* (1), *pstoedit* (1)

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