Eps2pgf 0.7.0 User Manual

Paul Wagenaars

Contents

1 Introduction 1

2 Requirements 1

3 Command line arguments 2

4 Including PGF gures in LATEX documents 2

5 Text handling 2

6 Copyright and license 6

1 Introduction

Eps2pgf is a PostScript interpreter that converts Encapsulated PostScript (EPS)

gures to the Portable Graphics Format (PGF). PGF/TikZ is a TEX macro

package for generating graphics. It support several back-end drivers, including

pdfTEX and Dvips. The major advantage of Eps2pgf is that all texts are typeset

by LATEX, giving you all the powerful typesetting features and a uniform look

of the nal document. It has several options to control how text in gures is

handled: (i) reproduce text labels accurately (with same font size and formatting

as in EPS gure), (ii) copy text labels verbatim (text in EPS gure is LATEX

code), or (iii) replace text labels using PSfrag -compatible rules from a separate

le, or using tags embedded in the text labels.

The goal of Eps2pgf is to support all PostScript gures created by programs

regularly used by LATEX users to create gures, such as MATLAB, Mathematica

and Maple. If you encounter a gure that Eps2pgf fails to process, please

report it using the bug tracker ( http://sourceforge.net/tracker/?group\_

id=188852&atid=926973 ), or send it via email.

2 Requirements

Java Runtime Environment (version 1.5 or higher)

1

--1/6--

LATEX, with the pgf package

3 Command line arguments

java -jar eps2pgf.jar < input file > -o < output file >

<input file >

(Encapsulated) PostScript (EPS or PS) input le.

(-o|--output) < output file >

Write output to this le. (default: input le with .pgf extension)

The following arguments are optional:

[(-m|--text-mode) < text mode >]

Text label handling. Accepted values: exact { text is reproduced as

closely as possible, or directcopy { text is directly copied to the out-

put and scanned for embedded PSfrag text replacement rules. (default:

exact )

[--text-replace < text replace file >]

File containing PSfrag commands describing text replacements.

[--verbose]

Display more information during the conversion.

[--version]

Display version information.

[-h|--help]

Display program usage.

4 Including PGF gures in LATEX documents

After the the PGF gure has been created it can be included in LATEX docu-

ments. The pgf package is required in order to use PGF gures. A minimal

example can be found in gure 1.

5 Text handling

Eps2pgf can handle text labels in PostScript gures in various ways. By default

it will try to reproduce the text labels as accurately as possible, while using the

default font in the LATEX document. That means that it will use the same font

size, style and formatting as in the EPS gure. The center of the text label in

the output is aligned with the center of the text label in the PostScript gure.

In the second mode, invoked using the command line argument --text-mode

directcopy , the text in the text labels is directly copied to the PGF gure. This

2

--2/6--

ndocumentclass farticle g

nusepackage fpgfg

nbegin fdocument g

nbegin ffigure g

ncentering

ninput ffigure .pgf g

ncaption fpgf figure g

nend ffigure g

nend fdocument g

Figure 1: Minimal example of a LATEX document using a PGF gure.

allows you to use custom LATEX code in the gure. Unless specied otherwise

the center of the text label in the output is aligned with the center of the text

label in the PostScript gure. Additionally, it is possible to specify anchor,

scaling and rotation using the PSfrag -style tag as text label in the PostScript

gure:

ntex [pgfanchor ][ psanchor ][ scale ][ rotation] fLaTeX text g

The rst four arguments are optional, the last argument is required.

[pgfanchor] | the LATEX text reference point. It species both the vertical

and the horizontal alignment. One of the letters t,c,Borb(top, center,

baseline, bottom) species the vertical alignment, and one of the letters l,

corr(left, center, right) species the horizontal alignment. For example,

[br] indicates that the anchor is the bottom-right corner of the text label.

If the vertical or horizontal alignment is omitted, then cis used. If the

argument is omitted completely, [Bl] is used.

[psanchor] | the PostScript text reference point. This argument has the

same formatting as the pfganchor argument.

[scale] | Scaling factor for font size. It is recommended not to use this

parameter, it's better to specify the font size using LATEX's font sizing

commands. Default: [1] .

[rotation] | Extra rotation of the text. The rotation specied here is

added to the rotation of the text in the PostScript gure. Default: [0] .

fLaTeX text g| LATEX code for the text label.

It is also possible to use PSfrag text replacement rules, which are specied in

a separate le. An external le with replacement rules can be specied using the

command line argument --text-replace < text replace file >. The rules in

3

--3/6--

this text replacement le specify which text labels must be replace by another

text. The le can contain one or more of these rules. These rules follow the

exact same syntax as the PSfrag package:

npsfrag ftext g[pgfanchor ][ psanchor ][ scale ][ rotation] fLaTeX text g

npsfrag ftext g[pgfanchor ][ psanchor ][ scale ][ rotation] fLaTeX text g

The rst and last arguments are required, the other four arguments are optional.

ftext g| text in the PostScript gure that will be replaced by the LATEX

text in the last argument.

[pgfanchor] | the LATEX text reference point. It species both the vertical

and the horizontal alignment. One of the letters t,c,Borb(top, center,

baseline, bottom) species the vertical alignment, and one of the letters l,

corr(left, center, right) species the horizontal alignment. For example,

[br] indicates that the anchor is the bottom-right corner of the text label.

If the vertical or horizontal alignment is omitted, then cis used. If the

argument is omitted completely, [Bl] is used.

[psanchor] | the PostScript text reference point. This argument has the

same formatting as the pfganchor argument.

[scale] | Scaling factor for font size. It is recommended not to use this

parameter, it's better to specify the font size using LATEX's font sizing

commands. Default: [1] .

[rotation] | Extra rotation of the text. The rotation specied here is

added to the rotation of the text in the PostScript gure. Default: [0] .

fLaTeX text g| LATEX code for the text label.

Note: Eps2pgf does not correctly handle the starred \psfrag\* command. Eps2pgf

treats the starred version exactly the same as the normal \psfrag command,

while PSfrag handles it slightly dierent.

As a demonstration of the dierent text modes a gure is converted using

dierent text modes. The original gure, before conversion by Eps2pgf, can

be found in gure 2. Converting this gure with Eps2pgf with default options

results in gure 3. As you can see it looks pretty similar to the original. It uses

the sans-serif font, the label eqis bold, and the font size is the same. The only

dierence is the font itself. Next, the same gure is converted with text mode

directcopy and an external le with the following text replacement rules:

npsfrag fxlabel g[cc ][ cc] fReplaced ntexttt fxlabel gg

npsfrag feqg[bc][ tl ] f$y = nsin (2x) + nsqrt fxg$g

The resulting gure is gure 4. All labels use the standard text font and for-

matting. The title label is replaced using the inline \tex[][]{}, rule. The eq

and xlabel labels are replaced using the rules in the external le. Note the usage

of the pgf- and psanchor in the rule for the eqlabel.

4

--4/6--

Figure 2: Original gure create by MATLAB

0

2

4

6

8

10

0

1

2

3

4

5

eq

xlabel

Amplitude (

)

ntex[cc][cc]

fThis is the title $

nsqrt

fx^2

g$gFigure 3: Converted by Eps2pgf with default options

5

--5/6--

0

2

4

6

8

10

0

1

2

3

4

5

y= sin(2 x) +

p

x

Replaced xlabel

Amplitude (-)

This is the title

px2

Figure 4: Converted by Eps2pgf with text replacements

6 Copyright and license

See the les

NOTICE.txt

and

LICENSE.txt

. Or run Eps2pgf with the command

line option

--version

.

6

--6/6--