

The package epspdfconversion

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Contents

1	What is it for?	1
2	Installation	2
3	Usage	3
4	Options	3
5	The command <code>\epspdfconversioncmdline</code>	5
6	A test	5
7	Switching options temporarily	6
8	A note for users of latexmk	7
9	<code>-help</code> of <code>epstopdf</code>	7
10	What <code>epspdfconversion</code> writes in your log-file	8
11	Version-history, ToDo's	8

1 What is it for?

This package can be used to use the epspdf tools (see <http://tex.aanhet.net/epspdf/>) from within (pdf)LaTeX “on the fly”. It is similar to and based on the epstopdf package that uses the script `epstopdf` for the actual conversion while this packages uses `epspdf` (Note the `epsT0pdf` vs `epspdf`).¹ It is possible to pass several options to the `epspdf` conversion-command.

*Many thanks to Siep Kroonenberg and Heiko Oberdiek for their help.

¹You might also want to read the documentation of `epstopdf`. See <http://www.ctan.org/tex-archive/macros/latex/contrib/oberdiek/epstopdf.pdf>.

This package can be used for the conversion of eps-files to pdf. The **epspdf-tools** itself can do the conversion both ways.

I am by no means an \TeX pert. Use this package at your own risk. What I did is to take the **epstopdf**-package (<http://www.ctan.org/tex-archive/help/Catalogue/entries/epstopdf.html>) and adjusted it to my needs and then gave this the new name **epspdfconversion**. Heiko Oberdiek then improved the code a lot.

This package is helpful in general when you include eps-figures in a (pdf)LaTeX-document. The author uses it for the inclusion of eps-figures that are produced en-masse by a software packages like Stata, Mathematica or Maple and that are often updated. The package makes sure that I can include the eps-figures easily and the updating of the corresponding pdf's is done "on-the-fly". Using the **epspdf-tools** (and not **epstopdf**) helps a lot to prepare a final pdf that is, for example, accepted by your print shop (really grayscale, prepress-ready, ...).

2 Installation

- Go to <http://tex.aanhet.net/epspdf/> and follow the installation instructions there.

Alternative URL's for **epspdf** are

<http://www.ctan.org/tex-archive/support/epspdf/> or

<http://www.ctan.org/tex-archive/help/Catalogue/entries/epspdf.html>

See also Bruno Voisin's notes at <http://tug.org/pipermail/macostex-archives/2007-April/030318.html>.

- Make sure that you can use **epspdf** from the command line. I am using Mac OS X. After the installation of **epspdf**, the following command is working from the command line (assuming the file `/Users/daniel/Desktop/testimage.eps` exists):

```
[ibook-daniel:~] daniel% epspdf /Users/daniel/Desktop/testimage.eps
```

It results in a file `/Users/daniel/Desktop/testimage.pdf`.

I did no testing for other Systems (Windows,...) – simply follow the instructions at the **epspdf**-website. It would be nice if you let me know whether this package works for you.²

- Put the sty-file **epspdfconversion.sty** for this package where TeX can find it. For example in the same directory as your main .tex file. Or – again on Mac OS X – in `~/Library/texmf/tex/latex/` where the “~” stands for your home directory.

If you are using MikTeX, you can use the package-manager to install **epspdfconversion**.

If you are using a recent version of TeXLive, it might be included in your distribution already.

- The package requires that shell escapes are enabled. You should get a warning in your .log-file if this is not the case.³ Look for “shell escape” in the Help-Section of your preferred application for Typesetting on how to enable it (TeXShop, WinEdt, ...).

²The package seems to work as expected with a Linux/TeXLive2007 and with a Windows/MikTeX2.5 installation.

³However, a test with MikTeX and the command-line option `-shell-escape` resulted in the warning “Package **epstopdf** Warning: Shell escape feature is not enabled.”

- the package needs the `epstopdf`-package as a prerequisite. Usually, it is already part of your installation of \TeX . It is recommended that `epstopdf` is at least at version 1.5.

New in 0.4: It is recommended that `epstopdf` is at version 1.5 or higher

3 Usage

Put in the preamble of your `.tex`-file the line

```
\usepackage[OPTIONSHERE]{epspdfconversion}
```

where “OPTIONSHERE” can be either empty or be filled with the options described below.

If you typeset your document, and (pdf)LaTeX detects that you want to use an eps-figure, the `epspdfconversion`-package makes sure that it is converted to pdf to include it in your final pdf.

There are two possibilities. If you include your eps-figure *with* the `.eps` extension, every typesetting procedure will trigger a conversion to pdf again. This makes sense if your eps-figure changes very often. Or, alternatively, you can include the figure without the extension. Then there will be only a conversion if there is no corresponding `.pdf`-file.

If you have at least version 1.5 of the `epstopdf`-package installed, the situation is better: If you include your eps-figure with the extension `.eps`, the conversion `eps->pdf` is only done if the pdf-version of your figure is either missing or outdated because the eps-file has been modified. This saves a lot of time for the typesetting process. If you include the file without the extension, the same rule applies.⁴ It is easy to switch back to the old behaviour where all figures included with the extension `.eps` are converted with every run of `pdflatex`. Simply put `\epstopdfsetup{update=false}` in your `.tex`-source file. This might be useful if you play around a lot with the several options this package provides for the conversion.

New in 0.4: Why you should install `epstopdf` at least in version 1.5....

Below, I include a figure `testimage.eps` and another `testimage-static.eps` with the following lines.

```
\begin{center}
\includegraphics[width=0.5\textwidth]{testimage.eps}\\
\includegraphics[width=0.5\textwidth]{testimage-static}
\end{center}
```

4 Options

`epspdfconversion` accepts several options. All options change the conversion command that is used for the conversion of `.eps` to pdf. Table 1 gives an overview. The explanations are more or less taken from the `epspdf`-documentation.

Important: When there are several options in the first column, divided by |, this means that you should *choose only one* of them. For example, it does not make sense have this in the preamble:

New in 0.4: The list of options is a bit longer than before.

⁴This functionality is provided by loading the `epstopdf`-package with options `[update,prepend]` in the background. See the documentation for the `epstopdf`-package.

option	explanation
<code>help</code>	You will be shown the help of the <code>epspdf</code> command in your logfile. This option does not overrule all the others as previously.
<code>simple</code>	the <code>epspdf</code> -conversion will be done with no option at all. Don't use it together with any of the options below.
<code>gray grey GRAY GREY</code>	<code>gray grey</code> : convert eps-figures to grayscale (success not guaranteed); <code>GRAY GREY</code> : Try harder to convert to grayscale (success still not guaranteed)
<code>nogray nogrey</code>	<code>nogray nogrey</code> : do not try to convert eps-figures to grayscale
<code>default printer prepress screen ebook target=default target=printer target=prepress target=screen target=ebook</code>	target use of pdf
<code>pdfversion=default pdfversion=1.2 pdfversion=1.3 pdfversion=1.4</code>	Pdf version to be generated. Setting another version than those on the left will result in an error. 'default' means whatever Ghostscript's default is.
<code>bbox bbox=true</code>	Compute tight boundingbox
<code>bbox=false</code>	don't compute tight boundingbox
<code>nopdftops</code>	Ignore pdftops even if available (default: use if available)
<code>pdftops</code>	use pdftops if available
<code>custom={-dPDFX}</code>	This option allows you to pass a string to the ghostscript-commandline. On the left it would be Here you can set custom options for conversion to pdf, view Use.htm and ps2pdf.htm from the Ghostscript documentation set. The example on the left adds <code>-dPDFX</code> to the ghostscript-call by <code>epstopdf</code>
<code>psoptions={-level2}</code>	This sets the options for pdftops; the default is <code>-level2</code> , don't include <code>-eps</code> or page number options; these will be generated by <code>epstopdf</code> itself
<code>pagenumber={1}</code>	Page (in the eps-file) to be converted

Table 1: Options for the package `epspdfconversion`.

```
\usepackage[pdftversion=1.3,pdftversion=1.4]{epspdfconversion}
```

`\pdfminorversion`: When you choose the options `pdftversion=1.2` or `pdftversion=1.3`, you need to set `\pdfminorversion` accordingly. The package checks if you have done that properly and shows a warning if not.

Thanks to Heiko Oberdiek, changing the options somewhere in the middle of your `.tex` document is supported. Writing

```
\epspdfconversionsetup{target=prepress,bbox}
```

changes the options of `epspdfconversion` to `target=prepress,bbox`.

New in 0.3: This check is a new feature. Again thanks to Heiko Oberdiek.

New in 0.3: You don't need to redefine the whole conversion command to switch to other settings

5 The command `\epspdfconversioncmdline`

The options described above change the command that is used to call `epspdf` for the conversion from `.eps` to `.pdf`. Typing `\epspdfconversioncmdline` somewhere in your source-`.tex` file will output the call that you have defined in your preamble. For example, this file has in the preamble

```
\usepackage[pdftversion=1.3,GRAY]{epspdfconversion}
```

and the `\epspdfconversioncmdline` then is: `epspdf --GRAY --version=1.3`.

This means that you can use `\renewcommand` to define you own `\epspdfconversioncmdline`.

For example, to restore the behaviour of the `epstopdf`-package, you could write

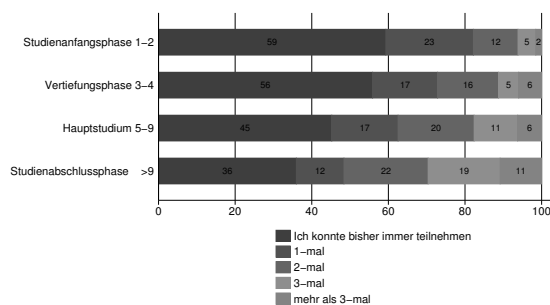
```
\renewcommand{\epspdfconversioncmdline}{%
{epstopdf }
}
```

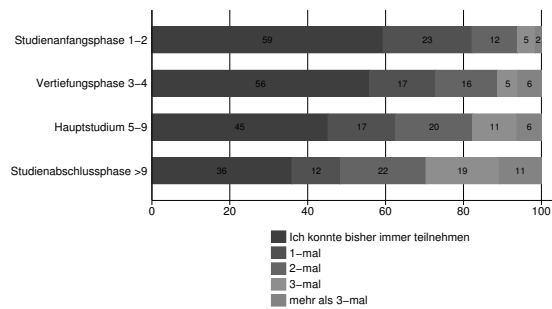
This allows you to use whatever tool you want for your conversion. But `epspdf` really seems the way to go for `eps->pdf`....

New in 0.3: the name of the command has changed

6 A test

What follows is the output of the `\includegraphics`-command from page 3.





7 Switching options temporarily

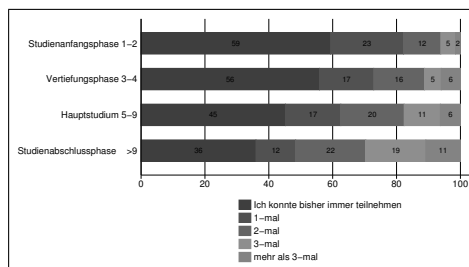
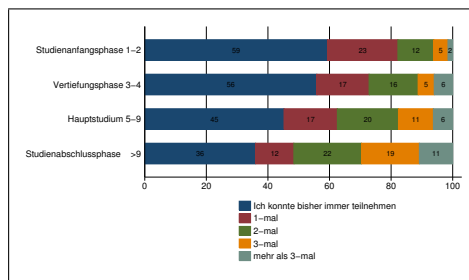
It is possible to switch the options only temporarily using curly braces. Consider you have set the options `GRAY` such that all your figures appear in grayscale. Now you want color for a single figure. This can be done like this:

```
{% <= New group started
\epspdfconversionsetup{nogray,bbox=false}

\begin{center}
\fbbox{\includegraphics[width=8cm]{testimage2.eps}}
\end{center}
}% <= New group ended; grayscale, bbox set to previous value.

\begin{center}
\fbbox{\includegraphics[width=8cm]{testimage3.eps}}
\end{center}
```

Figure `testimage2.eps` will be in color, figure `testimage3.eps` will then be converted according to the general rule for your document:



8 A note for users of latexmk

latexmk is a perl script for running LaTeX, BibTeX, Makeindex etc the correct number of times. See <http://www.phys.psu.edu/~collins/software/latexmk/>. It can be configured to run pdflatex if an eps-image has been updated (since version V. 3.21i). In your local configuration file, you should have something like this:

```
# Custom dependency and function(s) for epstopdf package

# FOR USERS OF epstopf v1.4 and before: should also work with v1.5 and later
# note: you may get extras runs if you use the .eps extension in the
#\includegraphics command
\add_cus_dep('eps', 'pdf', 0, 'cus_dep_delete_dest');

# FOR USERS OF epstopdf v1.5 and later only:
# load it as \usepackage[update,prepend]{epstopdf}
# triggers a pdflatex-run such that epstopdf will update the pdf-version of the image
\add_cus_dep('eps', 'pdf', 0, 'cus_dep_require_primary_run');
```

9 -help of epstopdf

The help of epspdf reads

```
[ibook-daniel:~] daniel% epspdf --help
Convert between [e]ps and pdf formats
Usage: epspdf.rb [options] infile [outfile]
```

Default for outfile is file.pdf if infile is file.eps or file.ps

Default for outfile is file.eps if infile is file.pdf

-I	Ignore pdftops even if available (default: use if available)
-U	Use pdftops if available (overrides previous -I setting)
-T, --target=TARGET	Target use of pdf; one of default, printer, prepress, screen, ebook
-V, --version=VERSION	Pdf version to be generated; one of 1.2, 1.3, 1.4, default
-C, --custom=CUSTOMOPTIONS	Custom options for conversion to pdf, view Use.htm and ps2pdf.htm from the Ghostscript documentation set
-P, --psoptions=PSOPTIONS	Options for pdftops; default -level2, don't include -eps or page number options; these will be generated by the program
-p, --pagenumber=PAGENUMBER	Page to be converted or selected
-b, --bbox, --BoundingBox	Compute tight boundingbox
-g, --gray, --grey	Convert to grayscale; success not guaranteed
-G, --GRAY, --GREY	Try harder to convert to grayscale; success still not guaranteed
-i, --info	Info: display detected filetype
-s	Save (some) settings
-d	Debug: don't remove temp files

-h, --help

Show this message

10 What epspdfconversion writes in your log-file

The package reports in the log-file what it is doing

```
This is pdfTeXk, Version 3.141592-1.40.3 (Web2C 7.5.6)
(format=pdflatex 2007.9.28) 2 OCT 2007 13:50
entering extended mode
\write18 enabled.
%&-line parsing enabled.

[... Schnipp ....]

(/Users/daniel/Library/texmf/tex/latex/epspdfconversion/epspdfconversion.sty
Package: epspdfconversion 2007/10/02 v0.3 Conversion eps->pdf with epspdf-tools
on the fly

(/usr/local/texlive/2007/texmf-dist/tex/latex/oberdiek/epstopdf.sty
Package: epstopdf 2006/08/26 v1.3 Conversion with epstopdf on the fly (H0)
)
(/usr/local/texlive/2007/texmf-dist/tex/latex/oberdiek/kvoptions.sty
Package: kvoptions 2006/08/22 v2.4 Connects package keyval with LaTeX options (
H0)
)
system(epspdf --help)...executed.

Package epspdfconversion Info: epspdf --version=1.2 <file>
(epspdfconversion) on input line 186.
)

[... Schnipp ....]

system(epspdf --version=1.2 testimage.eps)...executed.

<testimage.pdf, id=69, 505.89pt x 289.08pt>
File: testimage.pdf Graphic file (type pdf)
<use testimage.pdf>
<testimage-static.pdf, id=70, 505.89pt x 289.08pt>
File: testimage-static.pdf Graphic file (type pdf)
<use testimage-static.pdf>
[4 <./testimage.pdf> <./testimage-static.pdf>] (./epspdfconversion.aux) )

[... Schnipp ....]
```

11 Version-history, ToDo's

ToDo's Nothing at the moment. Please report errors and missing features.

v.0.4, 2007-11-24: the epstopdf-package is now loaded with options [update,prepend]
(works only when epstopdf version 1.5 is used) An update of epstopd.sty (part of

the oberdiek-bundle) is recommended. Added options nogrey,nogray

v.0.3, 2007-10-02: • check whether `\pdfminorversion` has been set in accordance with option `pdfversion=...`

- Use the `kvoptions`-package for the implementation of options. It uses key value syntax that can be used both as package options and a separate setup macro.
- Almost all options of `epstopdf` are now available as an option of this package.
- The command `\epspdfconversionsetup` is new and allows a change of the options for this package anywhere in your document.
- The command `\epspdfconversioncmdline` has been renamed to `\epspdfconversioncmdline`.
- the documentation has been updated

v.0.2, 2007-09-21: the package is now simply based on `epstopdf`. It essentially defines `\@namedef{Gin@rule@.eps}#1{{pdf}}{.pdf}}{\epspdfconversioncmdline #1}}` differently than `epstopdf`. The code has been cleaned up. Improvements of documentation and additional warning about `pdfminorversion....`

v.0.1, 2007-09-21: first try