eps2pdf v4.0 for Windows *

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Abstract

The **eps2pdf** is GUI shell that makes conversion of the EPS file(s) into the PDF one(s) easier. The actual conversion is carried out by the **GhostScript**.

The **eps2pdf** can be found at the *download* pages of Laboratory for dynamics of machines and structures: http://www.fs.uni-lj.si/ladisk/ and on CTAN.

The **eps2pdf** has been tested on the Win 98 SE, Win Me, Win NT4.0 SP6, Win 2000 SP2, Win XP, with the **GhostScript** 6.50 up to 8.00.

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*Version of this manual: 2.0; Version of the **eps2pdf**: 4.0.0.20

Contents

1 Introduction

The **eps2pdf** is a tool designed to make conversion of EPS files into PDF ones as easy as possible. It utilizes the **GhostScript**'s batch mode and conversion capabilities. Although the actual conversion is done by the **GhostScript**, the **eps2pdf** equips a user with the friendly EPS file(s) selection and manipulation, and with the easy **GhostScript**'s switches settings.

There are several ways to convert the EPS file(s) into the PDF one(s):

Adobe Destiler It is Adobe converter in form of "almost everything" into the PDF. It is not free distributed software.

GhostScript The driver and converter for PostScript (PS), Encapsulated PostScript (EPS) and Portable Document Format (PDF). It is free under the GNU licence. The **GhostScript** may have difficulties when converting files with space (␣) in the path or file name, e.g:

```
c:\my files\my picture.eps
```

or if bounding box of the eps file is not moved to the coordinate system origin,...

GhostView The viewer for PS, EPS and also PDF files that comes with the **GhostScript**. It enables one to convert a whole page or number of pages of PS or EPS into the PDF.

epstopdf Converter written in perl by Sebastian Rahtz, available on http://tug.org/applications/pdftex/epstopdf.

epstopdf The command prompt program written in C that also needs **GhostScript**'s converting capabilities and is based on Rahtz's **epstopdf**. Written by Kong Hoon Lee, konghoon@hyowon.cc.pusan.ac.kr, changed by Juergen Bausa, Juergen.Bausa@Online.de and bugfixed by Pascal Perichon, Pascal.Perichon@u-bourgogne.fr

eps2pdf This GUI shell, written in Delphi. It bases on work of authors of both **epstopdf**s.

2 What is new?

1. The configuration file `eps2pdf.config` is unified in a way that all configurations are saved within this file. The configuration file `eps2pdf.config` is moved to the Windows directory. The positions and sizes of all the widows (dialogs) are saved in the configuration file.

2. The control over converting a EPS file if its PDF already exists is added in configuration.

3. The maximal or minimal age of the PDF file can be set.

4. The control of figure rotation is added. It should be used with GS version 7.04 and newer ones.

5. The hints are added in the GUI.

6. The batch mode is added with full functionality.

7. The batch mode enables usage of the shell command. The EPS file can be converted to PDF by selecting the EPS file in **Windows explorer** or any comparable application and by clicking the menu command `Convert EPS to PDF` in popup menu.

8. Some minor bugs concerning the saving/loading of a configuration are resolved.

3 How to include EPS/PDF pictures into LaTeX document?

If you would like to compile the same LaTeX code with LaTeX and PDFLaTeX compiler, it is good idea to include pictures with the command

```
\includegraphics{xyz}
```

where `xyz` is the picture's file name without the extension.

The LaTeXcompiler will look for the EPS extension and the PDFLaTeX will look for the PDF extension. Following that rule, you need one LaTeX code and all pictures saved in EPS and PDF format.

The additional code should be included in the document's preamble to facilitates different drivers for different compilers. The dvips driver is assigned when normal LaTeX compiler is used and the pdftex driver is used when compiling with the PDFLaTeX compiler.

```
\makeatletter
\@ifundefined{pdfoutput}\% Definitely not using pdftex.
{\% Standard TeX
\usepackage[dvips]{graphicx,color}
}
{\%  Running pdftex.
  \ifnum\pdfoutput=0\relax% Are we outputting pdf?
    \% No it is dvi output
    \usepackage[dvips]{graphicx,color}
  \fi
  \ifnum\pdfoutput=1\relax% Are we outputting pdf?
    \% Yes it is pdf output
    \usepackage[pdftex]{graphicx,color}
  \fi
}
\makeatother
```

4 How does the eps2pdf work?

It works like the perl script without perl but requires **GhostScript** and is capable of converting a list of selected files. This program invokes `gswin32c.exe` with the selected parameters.

There are two major steps in processing a EPS file:

1. Creating an temporary EPS file in order to shift the coordinate system of the figure inside of the EPS file to cause the BoundingBox's lower left corner to be placed in the coordinate origin.

2. Calling the `gswin32c.exe` with the selected parameters to do the actual conversion.

4.1 The creation of the temporary file

The **eps2pdf** searches for `%%BoundingBox:` string in the EPS file. Then it moves the coordinate system's origin in a way to cause the BoundingBox's lower left corner to be placed in the coordinate origin. In order to achieve this, a existing bounding box is replaced by the new one and two lines of code are added, see example.

The few first lines of the original file:

```
\%!PS-Adobe-3.0 EPSF-3.0
\%\%Title: WMF2EPS 1.2  : WMF->EPS conversion for clip000.emf
\%\%Creator: Pscript.dll Version 5.0
\%\%CreationDate: 4/13/2001 13:40:47
\%\%For: Nikola
\%\%BoundingBox: 56 56 399 333
\%\%Pages: 1
\%\%Orientation: Portrait
```

The few first lines of the created temporary file:

```
\%!PS-Adobe-3.0 EPSF-3.0
\%\%Title: WMF2EPS 1.2  : WMF->EPS conversion for clip000.emf
\%\%Creator: Pscript.dll Version 5.0
\%\%CreationDate: 4/13/2001 13:40:47
\%\%For: Nikola
\%\%BoundingBox: 0 0 343 277
<< /PageSize [343 277] >> setpagedevice
gsave -56 -56 translate
\%\%Pages: 1
\%\%Orientation: Portrait
```

The temporary file is created in the same directory as the EPS one and under the original file name with added extenson `.eps2pdf.tmp-of-eps`. There are two different ways of creating the temporary file according to the size of the EPS file. The EPS files of 10 Mb or less are read into the RAM, updated there and saved as temporary file on the disk. Bigger EPS files are read, updated and saved as temporary file in blocks of 1kb. The **eps2pdf** assumes that the bounding box is stored within first 1024 bytes of the EPS file (which is rarely not true!).

4.2   The conversion of the temporary file

The conversion is done by invoking the **gswin32c.exe** with the selected parameters. The path to the GhostScript executable file `gswin32c.exe` may be added to the Windows system's PATH variable. Better way of handling this is to determine the path to the `gswin32c.exe` in the **eps2pdf** configuration utility, see the Manual section. The parameters can also be configured there and can be changed and saved for subsequent use. Keep in mind that the input and output file names are added automatically to any set of parameters. For example:

```
 -sOUTPUTFILE=xyz.pdf -f xyz.eps.eps2pdf.tmp-of-eps
```

where `xyz` is the name of the original EPS file and `xyz.eps.eps2pdf.tmp-of-eps` the name of the temporary file.

5   Manual

This manual is a substitute for non-existent help. The meanings of the commands are given according to the window of appearance. The windows are listed in logical sequence.

The configurations and settings can be saved in `eps2pdf.config` file in Windows directory under different names. The default configuration is always named the same as current user name that is logged on the system.

5.1   Graphical User Interface - GUI

5.1.1   Main window

Application's main window controls operations, file list and configuration. It harbors list of EPS files, line with current file name, some Checkbox controls, a Button, Main menu, and Popup menu over the list. The sum of operations is as follows:

- *Convert options* group settings:

  ALL If unchecked then only those EPS files are converted that the PDF file is lacking. If checked, all of the EPS files that theirs PDF files are lacking or does not fit into prescribed filter are converted. The filter consists of three options:

    all convert all EPS files,

    older convert only those EPS files that their PDF files don't exists or are older than prescribed number of days,

    newer convert only those EPS files that their PDF files don't exists or are newer than prescribed number of days,

- *Files found* group shows how many files was found in the last file search action.

- *Current configuration* group shows the name of the current configuration.

- *Button* action:

  | **Convert** | Button starts the conversion by showing the Convert window.

  | **Stop** | Button interrupts searching for EPS files. The button is visible only while searching.

- *Main menu* actions:

  – **Select**

    Files The open file dialog is opened, which allows manual search and selection of EPS file(s) on disk drives. The selected file(s) are added to the EPS file list. This procedure may be repeated over and over again.

    Directory The Select directory window is invoked. After selecting directory, **eps2pdf** searches for EPS files in chosen directory and in its sub-directories if told so. This procedure may be repeated over and over again.

  – **List**

    Convert Converts files in the list. The conversion starts with showing the convert window.

    Remove file Removes current file from the list.

    Remove checked files Removes all checked files from the list.

    Clear Clears the list.

  – **Configuration**

    New Shows the Configuration window in NEW mode in order to create a new configuration.

    Open Shows the Configuration window in OPEN mode in order to open an existing configuration.

    Save Saves current configuration.

    Save as Shows the Configuration window in SAVE mode in order to save current configuration under a new name.

    Delete Shows the Configuration window in DELETE mode in order to delete chosen configuration.

    GhostScript Shows the GhostScript window in order to locate GhostScript executable file.

    Parameters Shows the GhostScript parameters window in order to set the GhostScript's conversion switches.

    Settings Shows the Settings window in order to set the **eps2pdf** settings.

Default position Restores default position and size of each window of the **eps2pdf**.

– **Help**

Help Sorry, no help is available at the moment.

About Shows the comment about the application with author's e-mail and **eps2pdf** download page.

- *Popup menu* actions (on the list control only):

Remove file Removes current file from the list.

Remove checked files Removes all checked files from the list.

Clear Clears the list.

View Preview of current file.

5.1.2 Select directory window

The dialog is used to select certain drive and directory within which the EPS files are searched for. If the Include sub-directories is checked then all of the sub-directories are searched for the EPS files.

- *Button* actions:

  | OK | Accept the directory!

  | Cancel | Don't accept the directory, neglect the changes!

5.1.3 Configuration window

The dialog is used to open the configuration, to save the configuration with a new name, to create new configuration and to delete chosen configuration.

- *New* option:

  It creates a new configuration. The new name is entered into New configuration edit line. If the new name is identical to the existing configuration, seen in Configuration memo, the old configuration is rewritten.

  – *Button* actions:

    | New | Save the current configuration as new one!

    | Cancel | Cancel the action, neglect the changes!

- *Open* option:

  It opens an existing configuration. The configuration is chosen from the Configuration memo. Current configuration is not automatically saved prior opening the new one.

  – *Button* actions:

    | Open | Opens selected configuration!

    | Cancel | Cancel the action, neglect the changes!

- *Save as* option:

  It saves current configuration under a new or under the current name. If the new name is identical to the existing configuration, seen in Configuration memo, the old configuration is rewritten.

  – *Button* actions:

    | Save | Saves the configuration!

    | Cancel | Cancel the action, neglect the changes!

- *Delete* option:

  It deletes an existing configuration. The configuration is chosen from the Configuration memo. If there is only one configuration in the list left, it can not be deleted.

  - *Button* actions:

    | **Delete** | Deletes selected configuration!

    | **Cancel** | Cancel the action, neglect the changes!

5.1.4 GhostScript window

The dialog is used for searching the **GhostScript**'s executable file `gswin32c.exe`.

- *Button* actions:

  | $\cdots$ | The open file dialog is opened allowing manual search of the **GhostScript**'s execute file `gswin32c.exe`.

  | >> | The Searching for GhostScript window is invoked, which searches for the **GhostScript**'s execute file `gswin32c.exe` on all local hard disk drives.

  | **OK** | Accept the path!

  | **Cancel** | Don't accept the path, neglect the changes!

5.1.5 GhostScript parameters window

The dialog is used for setting the **GhostScript**'s parameters. About the GS's switches consult the `use.htm` and the `ps2pdf.htm` file in GS's `doc` directory for more information.

- *Resolution*:

  Sets the PDF's file resolution in dots-per-inch (dpi). The default value is 600 dpi and the predefined values are 300, 600 and 1200 dpi. All values not smaller than 10 are valid an could be entered manually.

  The GS's switch is -r followed by the resolution in dpi: -r 600 sets 600 dpi resolution.

- *Colour model*:

  Sets the PDF's file colour model. There are three different models: RGB, CMYK and Gray. The default model is RGB. If the Gray model is selected the coloured EPS picture will be converted into grey PDF one.

  The GS's switch is -dProcessColorModel= followed by /DeviceRGB or /DeviceCMYK or /DeviceGray: -dProcessColorModel=/DeviceRGB sets the RGB colour model of the PDF file.

- *Compatibility level*:

  Sets the PDF's file compatibility mode. There are three different modes: 1.2, 1.3 and 1.4. The default mode is 1.3. The compatibility level of 1.2 is readable with Adobe Acrobat Reader 3 and later, the level 1.3 is readable with Adobe Acrobat Reader 4 and later and the level 1.4 is readable with Adobe Acrobat Reader 5 and later.

  The GS's switch is -dCompatibilityLevel= followed by 1.2 or 1.3 or 1.4: -dCompatibilityLevel=1.3 sets the compatibility with the Adobe Acrobat Reader 4 and later.

- *Interpolate*:

  If it is checked then picture is interpolated when the PDF resolution is greater then the EPS one.

  The GS's switch is -dDOINTERPOLATE if the Interpolate is checked and -dNOINTERPOLATE otherwise.

- *FlatCompression*:

  If it is checked then picture is internally compressed.

  The GS's switch is -dUseFlateCompression=true if the FlatCompression is checked and -dUseFlateCompression=false otherwise.

- *AutoRotate*:

  If it is checked then picture is rotated in a way that longer picture's side is parallel to the page's longer side. According to the author's experience, it may not work as expected in some cases.

  The GS's switch is -dAutoRotatePages=/PageByPage if the AutoRotate is checked and -dAutoRotatePages=/None otherwise.

- *Orientation*:

  The Orientation is dealing with the `%% Orientation:` declaration in the EPS file header.

  In the case of

    - *No change* the definition in the EPS file is left as it is.
    - *Flip* the definition in the EPS file is changed from `Portrait` to `Landscape` or vice versa.
    - *Remove* the definition is simply neglected.

- *Additional parameters*:

  The additional parameters (GS's switches) may be used.

- *Button* actions:

  | Default | The default parameters are set.

  | OK | Accept the parameters! They are not saved!

  | Cancel | Cancel the action, neglect the changes!

5.1.6 Settings window

The dialog is used for defining the settings of the **eps2pdf**.

- *Show* group:

  The group is dedicated to messages:

    - If *Search results* is checked then the message with search results is shown.
    - If *Confirmations* is checked then the confirmation message is shown when deleting, converting, ...

- *When done* group:

  The group is dedicated to the action when conversion is done:

    - If *Beep* is checked then the **eps2pdf** beeps when the conversion ends.
    - If *Exit* is checked then the **eps2pdf** closes itself when the conversion ends.

- *When exit* group:

  The group is dedicated to the action when **eps2pdf** closes itself:

    - If *Save position* is checked then the **eps2pdf** saves positions of all of its windows (dialogs) when closes itself.
    - If *Save everything* is checked then the **eps2pdf** saves complete current configuration when closes itself.

- *File's attributes* group:

  The group is dedicated to the PDF file attributes:

    - If *Preserve attributes of an EPS file in the PDF one* is checked then the **eps2pdf** copies all EPS file attributes to the PDF file, otherwise only the archive attribute is turned on.
    - If *Preserve date/time of an EPS file in the PDF one* is checked then the **eps2pdf** copies the EPS file creation date and time to the PDF file, otherwise the current date and time is used.

- *EPS Previewer* group:

  The group is dedicated to the EPS previewer designation:

  – If *System's default* is selected then the selection of the previewer is done by the Windows. The Windows would normally use **GhostView** or any other software. If no previewer is available then the **GhostScript** is used.

  – If *GhostScript* is selected then the **GhostScript** is used for previewing EPS files.

- *Shell command* group:

  The shell command is enabled or disabled here. More can be read in a separate section dedicated to the Shell command.

- *Button* actions:

  | **OK** | Accept the settings! They are not saved!

  | **Cancel** | Cancel the action, neglect the changes!

5.1.7   Convert window

The window shows the conversion progress. The click on Cancel button will interrupt conversion. The window is shown even in the batch mode.

- *Button* actions:

  | **Cancel** | Cancel the conversion!

5.2   Batch mode

The batch mode was added on request of some users. It also enables us to use shell command of the windows system. The **eps2pdf** must be configured prior the use of the batch mode. The PDF file is always created in the bach mode regardless of the configuration settings.

Only seven switches are available:

/? switch that invokes batch help.

/h switch that invokes batch help.

/help switch that invokes batch help.

/gui switch that invokes GUI (not batch mode).

/f= switch for the single EPS file name to be converted with or without the '.eps' extension.

/d= switch for the single directory name within which all of the EPS files will be converted.

/c= switch for the single configuration name within the `eps2pdf.config` configuration file.

Switches **/f=** and **/d=** can be used alone or with additional switch **/c=**. There are some examples:

```
eps2pdf /?                    help screen of the bach mode is shown,
eps2pdf /h                    help screen of the bach mode is shown,
eps2pdf /help                 help screen of the bach mode is shown,
eps2pdf /f=test.eps           the test.eps file is converted using the default configuration,
eps2pdf /f=test.eps /c=nikola the test.eps file is converted using the nikola configuration,
eps2pdf /d=epsdir             all of the EPS files in the epsdir are converted using the default configuration,
eps2pdf /d=epsdir /c=nikola   all of the EPS files in the epsdir are converted using the nikola configuration.
```

5.3   Shell command

The shell command is Windows way of designating different actions to the similar groups of files, EPS files in our case. It is done within the windows registry. The **eps2pdf** writes a new key into the registry and thus enables the conversion to be done from the **Windows explorer** or similar browser, say **Windows commander** or newer **Total commander**.

5.3.1   How to use it?

In the **Windows explorer** select one or more EPS files (EPS files only!) and click on right mouse button to show popup menu. The *Convert EPS to PDF* submenu should be visible. Click it and see the results! The **eps2pdf**must be configured first.

5.3.2   How it is done?

The **eps2pdf** creates a new key to the registry. In the existing key

`HKEY_CLASSES_ROOT\psfile\shell`

the new one is added

`Convert EPS to PDF`

and within this new key another key is added

`command`

so we end up with the registry structure

`HKEY_CLASSES_ROOT\psfile\shell\Convert EPS to PDF\command`

In `command` key the `(Default)` field is set to the value (example only, the path is arbitrary):

`"c:\program files\eps2pdf\eps2pdf.exe" /f="\%1"`

If the *Shell command* is disabled the registry is cleaned and added keys are deleted.

6   Acknowledgement

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