Graphical User Interface
for the
Ghostscript for Windows
Command Line

Version 2.0

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Abstract:

The accompanying software is a MS Windows program. It makes the use of Ghostscript for Windows more convenient. Ghostscript can interpret and display Postscript files intended for expensive Postscript printers. This program was created for Ghostscript 2.5.2. It is a MS Visual Basic 2.0 creation.

About Postscript & Ghostscript:

Some of your software may produce output intended to go to a Postscript printer. The output may be text, images, or both. Postscript printers are very capable, and very expensive. Coloured Postscript printers are even more expensive.

Ghostscript for Windows is a MS Windows version of Ghostscript, a Postscript interpreter, from Aladdin Enterprises, Copyright 1989, 1992. It is distributed by the Free Software Foundation, Inc.

Postscript is a "Page Description Language" used in Desktop Publishing by high-end systems, and printed on Postscript Printers, the high end of laser printers. It is also used by commercial printers. Ghostscript makes it possible to print Postscript on common printers, preview output on the screen, and convert Postscript files into image files. As freely distributable software, it is an incredible piece of work. Watch for new revisions of Ghostscript.

Ghostscript can be downloaded from various sites on the Internet, and some BBS's. One well known Internet site for Ghostscript is:

> wuarchive.wustl.edu

Look under:

> mirrors/msdos/postscript

and get the Ghostscript files, the font files, and the samples. There are many mirror sites for wuarchive.

Ghostscript originated on UNIX systems, but has been ported to the PC. There are PC, 386 PC, and MS Windows versions available. The 386 PC version is fastest, while the Windows version is far more convenient.

To use this Command Line GUI software you will need:

|	
A 386 or better PC with enough memory	
MS Windows 3.1 running Enhanced Mode	
Ghostscript 2.5.2 for Windows	gs252win.zip
Ghostscript ini files	gs252ini.zip
Ghostscript font files	24*.zip & 25*.zip
This software	gswngui2.zip
The Visual Basic 2.0 DLL file	vbrun200.dll
The Visual Basic VBX file	threed.vbx

This interface software has been tested on a '486 PC with large RAM, under DOS 6.0 and Windows 3.1.

The Command Line GUI for MS Windows:

The present piece of software was created to make the use of Ghostscript for Windows convenient. The Windows version of Ghostscript (GS) is similar to the DOS and UNIX versions. It will output graphics to a separate window in the MS Windows version, and take advantage of a 256 colour display if you have one. The output can be directed to the screen, various affordable *Non-Postscript* printers, and image files.

Unless you know Postscript programming, you may find using Ghostscript awkward, especially since the GS documentation is very brief. GS can be used conveniently if it is launched with command line parameters. However, using command line parameters is a bit difficult under MS Windows so I wrote a program in Visual Basic to make it easier. I created this software in order to access and manipulate the output from a commercial finite element package. I have automatically processed many files of Postscript output. You may have a variety of good uses for it.

The program has file browsing tools that let you move through drives and subdirectories looking for your Postscript files. You can click on one file to enter it into the command line, which you can see on the yellow horizontal bar. There is also a MultiSelect feature for selecting several files in one directory.
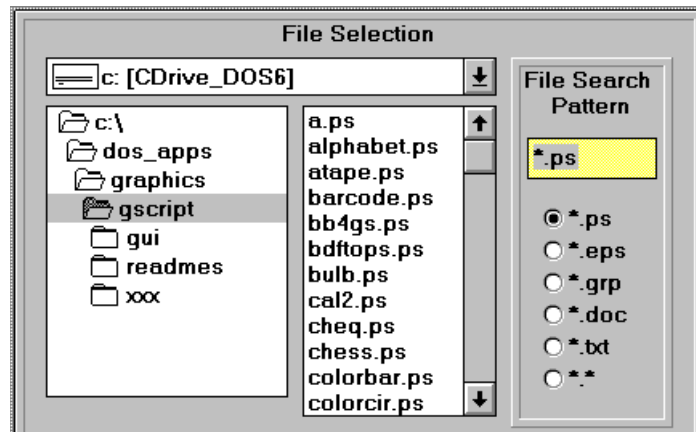
File Selection Tools

You can click option buttons or manually enter the file search pattern, in order to look for `*.ps`, `*.eps`, `*.grp`, or other files.

I have included a command button to bring up the notepad program of MS Windows in order to manually edit your selected Postscript file, if it is not too long for notepad. Use this feature carefully. Check buttons include a multiple file selection feature, an automatic Ghostscript quit feature, the @filename input method for long command lines, and a [-q -dNOPAUSE] button for "production runs", while the RESET button returns to the starting condition of the interface program.
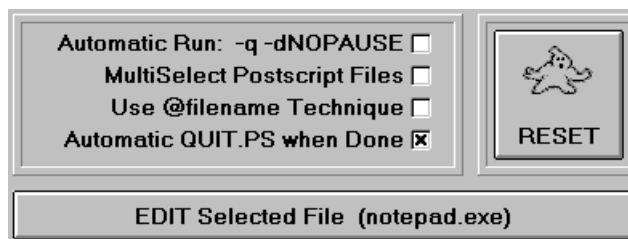
Command line options, Reset, and Edit

The @filename feature puts the options for the command line into a file, and refers to the filename on the command line. This feature is helpful under DOS because DOS has limitations on command line length which do not exist under UNIX. This program creates a temporary file called `~fname~.nam` which will be automatically deleted after Ghostscript is launched. The disk drive on which it is created will have to be writable, or an error message will result.

The @filename feature is automatically selected if the multiselect feature is active. The files chosen under multiselect are processed by Ghostscript in sequence. The user cannot choose the order of the sequence of files with this interface software.

There is a list box for selecting output devices and there are option buttons for output destinations (screen, printer, or file). Some of the device/destination combinations are incompatible and not selectable.

Output Device Selection

There are option buttons for some of the alternative resolutions (usable resolutions are printer dependent). Other printer or screen resolutions can be manually entered into the command line. Note that GS can convert Postscript files into `*.gif` files of stated resolution or image dimensions. The user can manually enter any gif file dimensions. You may want to use an image processing program to rotate the output image 90 degrees.

There are option buttons for turning a landscape Postscript image by 90 degrees and reducing its size to either 640x480 or 800x600 pixels. With a printer, this option fits the image at printer resolution on the upper part of a portrait page.
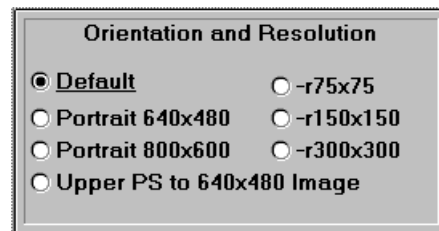
Orientation and Size Options

There is an [Upper PS to 640x480 Image] button to create an image of the upper part of a PS page inside a 640x480 screen image or gif file. The image is enlarged (margins are clipped) so the command will not be satisfactory for all Postscript files. I created this particular option in order to get output from certain commercial software into a gif file. You will have to edit the `uppr_gif.ps` and `uppr_scr.ps` files in order to change magnification and position on the page. Use trial and error, or expertise.

The [Execute...] button launches Ghostscript for Windows with the command line parameters displayed in the text box. If the line is too long for DOS, it will have to be shortened. One way is to output to a file in the C:\ directory or in the default directory. Another is to use the @filename facility provided by Ghostscript and implemented in this version of my program.

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Execute Ghostscript Command Line

Execute Command Button

Installation:

You will need the Visual Basic DLL file `vbrun200.dll` in your Windows directory in order to use the interface. This file is freely distributable and can be found on the Internet and many BBS's. The file `threed.vbx` has been included and should be moved into the `windows\system` directory. It enables the 3D appearance control devices used with the interface.

Unzip this interface software into a subdirectory... I suggest C:\GSCRIPT. Unzip Ghostscript for Windows and its support files into this same directory (e.g. C:\GSCRIPT). Move the file `threed.vbx` to the `windows\system` directory.

Set up the following environment variables in your AUTOEXEC.BAT file. Enter these lines into AUTOEXEC.BAT:

```
SET GS_LIB=C:\GSCRIPT
SET GSWN_LIB=C:\GSCRIPT
```

or substitute whatever subdirectory you have chosen. (If you don't know what I am talking about, get help!) The `GS_LIB` variable is used by Ghostscript, while the `GSWN_LIB` variable is used by this command line interface. Some users set the `GS_LIB` variable to point to more than one directory, in order to place elsewhere the font files used by Ghostscript. The `GSWN_LIB` variable must point to **one directory only**, since it is used to create the command line.

Reboot the PC, then bring up MS Windows. Under the Program Manager menu system, select **File,New** and install a new program item into your Applications program group. The program is:

```
c:\gscript\vb_gs2.exe
```

and also set the working directory to C:\GSCRIPT (assuming this is the subdirectory you have chosen. You may wish to use your own icon).

Run the program in the usual way. Hit the [Execute Ghostscript Command Line] button to launch Ghostscript with whatever parameters you have chosen.

You can also use Ghostscript interactively if you know how. There are a few suggestions in the GS documentation - read it (`use.doc` and others).

To quit, if you have not used the QUIT.PS option button, type `quit` into the Ghostscript interactive session. You cannot run two Ghostscript sessions simultaneously, so be careful to kill one session before starting another.

Hints:

When GS for Windows generates a screen image, it is in a Form called Ghostscript Image. You can click this icon to full size to see the image being generated. The Ghostscript Image will display when done, anyway. It can be sent to the Windows Clipboard once displayed.

The image size can be user set with the `-r` parameter (pixels per inch) or by setting the image size with the `-g` parameter (image size in pixels). See the GS documentation.

Ghostscript can be redirected to use other Type 1 fonts. These can be better than those that ship with Ghostscript. See the GS documentation.

*.PS Files:

There are some accompanying `*.ps` postscript files here. The `port_*.ps` files, when used with the `-g640x480` parameter should turn a landscape picture upright and fit it in a 640x480 image. For printers the portrait mode was set up to work with 300 DPI printers. Other aspect ratios may not work. There is probably a better way to do this. The proportions are about right, but not exactly right. The `p800_*.ps` files are for 800x600 images.

The `uppr_scr.ps` and `uppr_gif.ps` files when used with the -g640x480 parameter give a slightly enlarged view of the upper part of a Postscript page. They were written for output to screen or gif file.

Final Notes:

This program was written with Visual Basic for Windows ver. 2.0. You will need the `vbrun200.dll` file in your Windows directory in order to run it. This file can be found on Internet sites or on many BBS's. The `threed.vbx` file comes with the Professional Version of Visual Basic 2.0 and should be moved to the user's `windows\system` directory.

This interface program is freely distributable and is not to be sold.

This Version 2.0 is intended to be an improvement over 1.0. It uses tools available in Revision 2.0 of Visual Basic Professional Version, and I hope that the interface will be more attractive and convenient than in the first version. I could always be interested in some custom programming...

I am very pleased with Visual Basic, and look forward to exploring Visual C/C++.

```
        Use at your own risk.   I accept no responsibilities for its use,
        inability to use, damages, or consequential damages, etc., etc., etc.
```

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