GSBatchPrint

Batch printing, directory monitoring, tray choice, …

of PDF-Files

with

Ghostscript

Version 1.0.0.3 -

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License Agreement

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Only the original text is legally binding.

Conditions of use:

You may install and use this software ("GSBatchPrint") without charge on any number of computers on any Windows operating system.

Transfer the software

You may distribute this software with your own software if you regard the conditions of use.

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Conclusion

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Introduction

Possibilities:

- Permits the output of one or more PDF-files to a windows printer with the Ghostscript device *"mswinpr2"*.

- Allows continuous operation with moving of successfully respectively faulty printed documents to different folders

- If multiple documents are printed, they may be sorted in alphabetical order by file name or alternatively by file date (reverse ordering also possible).

- With an extension of the Ghostscript device *"mswinpr2"*, it is possible to specify the input tray. Download the sources from:
  (http://www.lvbprint.de/bin/gsbatchprint/ghostscript_8_61_changes.zip)

- Additional Ghostscript parameters can be supplied on the command line or configured in an ini file (*"gsbatchprint.ini"* in the same path as the executables).

- There is a console- (*"gsbatchprintc.exe"*) and a windows version (*"gsbatchprint.exe"*) available.

Limits:

- The paper size and orientation should be defined (by parameter or ini file). They are used for all pages.

- The *„mswinpr2"* device prints the pages as bitmap. This is not suitable for documents with many pages or high quality printings especially for colour printers.

Command line parameters:

- Parameters start with "-" or "/" and are case sensitive.

- Parameters containing spaces, must be surrounded by double quotes.

- A parameter with a capital letter expects an additional parameter value. Lower case letters not.

Base parameters

-P \<printer\>	Define a local or a network printer (with UNC name) to print to. Use „*STD*" to select the standard windows printer.
-F \<PDF-Pattern\>	Select the documents to print. • From the current folder (e.g. *.pdf), • From a sub folder (e.g. pdfs*.pdf) or • From an absolute path (e.g. c:\temp*.pdf). The option can be used more than once. It is obligatory, if the parameter *"-s"* is not used at the same time.

Extended parameters

-N \<paper format\>	Define a numeric value (see option „*-s*") or (part of) a string. The search algorithm is the same as for the trays.
-O \<orientation\>	Paper orientation. 1 or „*Port*" for portrait, 2 or „*Land*" for landscape. Only the first four letters are tested (case insensitive).
-I \<tray\>	Provide the name of an input tray. For an inexactly search, the option can be used more than once. If the name is not found, a search will be performed without testing blanks and after that, part of the name are tested. (*"tray1"* will find *"Tray1", "Tray 1", "Tray 1 (2000 sheets)"* in that order.
-R \<resolution\>	Resolution for the bitmaps used for printing. Take care with high values. Huge temporary (spool)-files are generated, especially for colour printers.
-C \<colour\>	Can be used to print mono to a colour printer. 0 = mono, 1 = colour (default)
-B \<bits per pixel\>	Colour depth for colour printers to reduce the data size. Possible values are 1, 4, 8 and 32. The default value is driver dependent.

Sorting parameters

-n	If multiple files are printed, sort them by name and not by date (the full path is used for files from different folders). The default is to sort by file date. The sorting is case sensitive.
-r	Reverse the sorting order (e.g. Z→A for sorting by name)

Batch parameters

-M <MoveOkDst> Folder to save successfully printed pdf documents. If a file with the same name already exists, a new name will be generated by appending a number.

-E <MoveErrDst> Folder to save faulty printed documents.
For both options the actual path will be prefixed if a relative path was used and the last folder part created, if it does not exist.

-l Loop usage. Waits a certain amount of time and restarts the search afterwards. The looping can be stopped with Ctrl + C but only in the console version. The windows version executable does not show any windows and must therefore be terminated by the task manager.

-T <loop time> Waiting time for the option "-l" between the loops. The default is 30 seconds.

Extended Ghostscript parameters (see the ini-file)

-G <GS-Option> Options, that are normally used as command line parameters to call Ghostscript. If you meet a problem, activate (in the gsbatchprint.ini) and consult the Ghostscript log output.
A reasonable application is to restrict the pages to print (see Ghostscript help files and the example in the ini).

-Z <GS-Option> Can be used to set printer options for Ghostscript like duplex setting (see source code *"gdevwpr2.c"*).

-U <GS-Option> Additional options for the msprwin2-device (see source code *"gdevwpr2.c"*). Most possible options are available through gsbatchprint parameters.

Additional parameters

-q Suppress the output of debug information in the console version.

-s Appends information for the given printer to the text file *"PrinterInfo.txt"* in the current folder. The supplied information contains all input bin codes and all available paper formats. The text file will be opened automatically with the assigned application for text files.

-t Test! Only show the names of the files that would be printed, but do not really print. Only useful for the console version.

Configuration parameters in the ini file

The provided *„GSBatchPrint.ini"* contains all possible parameters with explanations.

Use the ini file for:
- Definition of additional parameters for Ghostscript, that you cannot or don't want to use in the command line call.
- Define log file names

- Set default values for most of the command line parameters.

Ghostscript…

How the DLL is searched:

GSBatchPrint expects an installed Ghostscript. It uses the *"gsdll32.dll"*, which needs a LIB path to find Postscript- and font files, where required.

First the current directory is searched for the DLL. If it is found there, the sub folders *"Fonts"*, *"Lib"*, *"Resource"* and *"Bin"* are used as LIB-Path. Normally these folders are not used and not created during the installation. If you need the folders for any purpose (e.g. additional configuration files) – just create them and put the files in.

If the DLL is not present in the current path, then the ini file *"gsbatchprint.ini"* (same path as the gsbatchprint.exe), section *"Ghostscript"*, is examined for the entries *"GS_DLL"* and *"GS_LIB"*. It is possible to use another name for the DLL in this case.

```
[GhostScript]
;Verwendet ein ghostscript aus dem angegebenen Unterverzeichnis.
;Copy-Deployment von ghostscript reicht hierfür aus!
GS_DLL=ghostscript\bin\gsdll32.dll
GS_LIB=ghostscript\fonts;ghostscript\resource;ghostscript\lib
LogFile=gs.log
```

If the paths are relative, the place where the *"gsbatchprint.exe"* is located, is added.

If even this search is unsuccessful, the registry will be searched for Ghostscript installations.
If more than one is found, the installation with the highest version is used.
(HKEY_LOCAL_MACHINE\SOFTWARE\GPL Ghostscript)

The place, where the DLL is found, will be noticed in the Ghostscript log file, if activated.

Ghostscript offers the possibility to include all configuration files, fonts, .. into the gsdll32.dll.
The provided DLL is compiled in this way (and therefore bigger as expected). The "gswin32.exe" is part of a ghostscript installation, but not used for "gsbatchprint".

Common Ghostscript parameter:

Consult mainly the files *"use.htm"* and *"devices.htm"* in the doc-folder of a Ghostscript installation and the source file *"gdevwpr2.c"* (contained in the downloadable Ghostscript changes from http://www.lvbprint.de).

If settings should be permanently effective, the ini file is the right place to store them.

Unfortunately there are three different places, where Ghostscript expects the parameters. For this purpose the options /G, /Z and /U are available.

An extract of the ini:

```
; Ghostscript commandine options (see. use.html and devices.html in ghostscipt/doc-path)
; ---------------------------------------------------------------------------------------
; Example to change the printed pages or set a pdf password
;Arg0=-dFirstPage=1
;Arg1=-dLastPage=1
;Arg2=-sPDFPassword=password

; Printer arguments (see gdevwpr2.c)
; ---------------------------------------------------------------------------------------
; ghostscript shows a cancel dialog if /NoCancel is not set to true
PrinterArg0=/NoCancel true

; for color output reduce the dpi (with command line option or UserArg) or the BitsPerPixel.
;PrinterArg1=/BitsPerPixel 4

; does not work as expected.
;PrinterArg2=/QueryUser 0

; Print Duplex, if the printer supports it
;PrinterArg3=/Duplex true

; use vertical duplex
;PrinterArg4=/Tumble true


; User options inside mswinpr2-Device (see gdevwpr2.c), most available options can be set with
; gsbatchprint parameters (resolution, paper, orientation, ...)
; ---------------------------------------------------------------------------------------
; 0 = default, 1 = Mono, 2 = Color
UserArg0=/Color 2
```

Examples

```
gsbatchprintc -P Testdrucker -F *.pdf -G -dFirstPage=1 -G
-dLastPage=1 -Z "/BitsPerPixel 4" -R 300
```

Print the first page with reducing the resolution to 300 dpi and 16 colours.
The switches *–Z "/BitsPerPixel 4"* could be replaced with the option *"/B 4"*.

```
gsbatchprintc -P Testdrucker -F *.pdf –C 0 –Z "/Duplex true"
```

Printing on both paper sides in black/white even on colour printers. Printers that have no duplex feature, ignore the setting.

```
gsbatchprintc /l /n /T 5 /R 150 /P TestAllColor /F *.pdf /I Tray1
/N A4 /O Landscape
```

Search in the current folder for PDF files and prints them in landscape to an A4 paper format. Paper from input bin *"Tray 1"* will be used (Blanks are ignored in the search, if the name is not exactly found),
The program will not stop after printing but remain in a loop with retesting the files after a pause of 5 seconds. The options /E and /M should be defined in the ini file to prevent endless printing of files.

```
gsbatchprintc /P TestAllColor /s
```

Append information of the given printer to the file *„printerinfo.txt"*, located in the current directory.

Miscellaneous

To build Ghostscript for yourself, download a source package of Ghostscript from the internet:
e.g. from http://pages.cs.wisc.edu/~ghost/doc/GPL/gpl861.htm

Copy the changed source file *"gdevwpr2.c"* into the src-directory of the extracted Ghostscript package.

If necessary change the makefile *"msvc32.mak"*. e.g set *"Debug=1"* or *"COMPILE_INITS 1"*.

Invoke the compiler from the Visual Studio Command Prompt (here 2005) with:
nmake -a -f src\msvc32.mak MSVC_VERSION=8 DEVSTUDIO="d:\vs2005"

To rebuild everything use „-a"; adapt the DEVSTUDIO-entry to your needs.

Afterwards the bin-path contains the new *„gsdll32.dll"*.

Install as service

The tools *"instsrv"* and *"srvany"* from the *"Windows Resource Kit Tools"* offer the possibility to use a program as service.
This is especially useful for the monitoring of directories with automatically printing of dropped pdf files with gsbatchprint.

"Instsrv" is used to install the service. *"SrvAny"* contains the service functionality of windows and allow to start another program. Further information (command line parameters) are read from the registry by SrvAny.
The three keys *"AppDirectoy"*, *"Application"* and *"AppParameters"* are interesting.

The following example should clarify, how a service could be installed.

„Monitoring of two different directories with automatic printing of the containing files. For each directory the paper should be taken from a different input tray. The output goes to the printer *"TestAllColor"*.
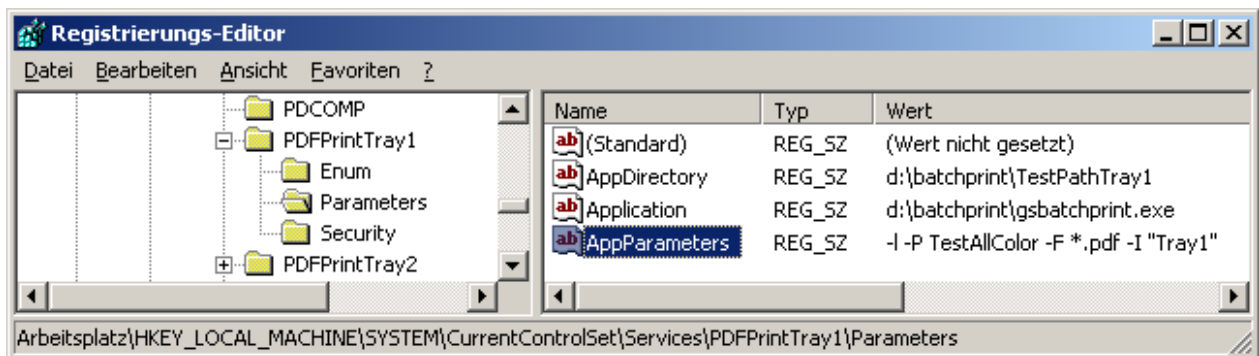
The folder *"D:\BatchPrint"* contains at least the files *"gsbatchprint.exe"* and a *"gsbatchprint.ini"* with the common entries. The *"srvany.exe"* could be stored at any place. In the example it is placed in the same folder.
The monitored directories are the sub folders *"TestPathTray1"* and *"TestPathTray2"*. They could be shared for connected clients.

The both services are installed as follows:
```
"instsrv PDFPrintTray1 d:\BatchPrint\srvany.exe"
"instsrv PDFPrintTray2 d:\BatchPrint\srvany.exe"
```

After that some values must be added to the registry:

This should be done for the other service as well. The difference is only another tray parameter *„-I Tray2"*.

The destination folders for the moved files are stored in this case in the gsbatchprint.ini. Of course they could also be provided by command line parameters. The folders are created, if necessary.

```
d:\batchprint\TestPathTray1\PDFPrintOk
d:\batchprint\TestPathTray1\PDFPrintErr
d:\batchprint\TestPathTray2\PDFPrintOk
d:\batchprint\TestPathTray2\PDFPrintErr
```

```
[GSBatchPrint]
; info about printed or not printed pdf files
LogFile=batch.log

; Move pathes can be defined here. Command line options /M and /E
has preference
; actual path will be prefixed and pathes created.
MoveOkPath=PDFPrintOk
MoveErrPath=PDFPrintErr
…
```

Valid tray names for a printer can be determined by calling „gsbatchprint" with the option „-s".

For the service the property „Allow service to interact with desktop" should be activated, so that configuration errors will become visible.

Problems ?

If something don't work as expected, then activate the both log possibilities in the ini file.
The Ghostscript log file will contain detailed information concerning the call to Ghostscript.
Unfortunatelly the error source could often not located exactly, because the message are very common. There are additional debug possibilities that can be switched on
(see use.htm, e.g.: "-G –dDEBUG")

Please take care in particular of the Ghostscript options spelling. They are **case sensitive**.
"-Z /duplex" will not work, "-Z /Duplex" will do.