

DWG to PNG (*a.k.a. Dwg2Png*)

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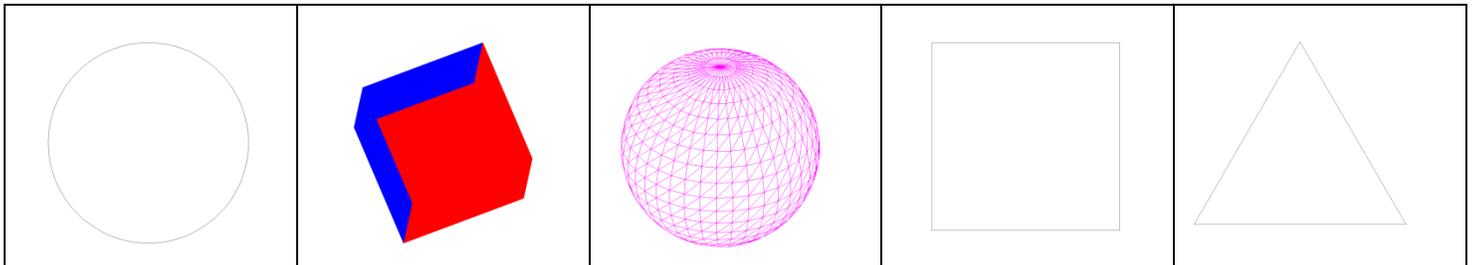
When working with CAD programs that utilize the DWG file format it is sometime desired to convert a group of the CAD files into another graphic format such PNG, SVG or PDF. This may be because these formats are required for documentation, menu systems or are to be used on web sites. Converting each DWG file using the built in functions and menu system is adequate for a single file but quickly becomes tiresome time consuming task for multiple files. The Dwg2Png process automates this task allowing one to utilize their time more efficiently.

The process is implemented by three Public Domain files:

Demo_Dwg2Png.cmd	This is the command file convert a directory of DWG files
Dwg2Png.Cmd	This is the command file that executes the CAD program
Dwg2Png.scr	This the script file use by your CAD program

The Dwg2Png.Zip archive also includes five file simple DWG files for testing and demonstration purposes:

Z_Circle.dwg	Two dimensional circle
Z_Cube.dwg	Three Dimensional Cube (<i>shaded, does not work well</i>)
Z_Sphere.dwg	Three Dimensional Sphere (wire frame)
Z_Square.dwg	Two dimensional Square
Z_Triangle.dwg	Two dimensional Triangle



This process is not limited to converting DWG files to PNG files. With three simple files this methodology may be used as the basis to automate processing an entire directory structure or a single file for such things as printing, backups, distribution or data extraction. This would of course require that someone develop the appropriate CAD script and/or command files(s) for the target process. It is a simple matter to do this for exporting PNG, JPG, PDF, DXF, SVG and EMF file formats. Tasks such as printing could be a tad more challenging.

Demo_Dwg2Png.cmd

```
@echo off
Rem This batch process was created by Lewis Balentine of KeyWild.com
Rem This command file and its associated script, cmd and dwg files are release to "PUBLIC DOMAIN"

Set WorkDirectory=C:\KeyWild_Cad_Library\Tips-Tricks\Dwg2Png

Rem Set the name of your CAD program here including the full path without Quote marks
Set CadProgram=C:\Program Files\Dassault Systemes\DraftSight\bin\DraftSight.exe
Rem Set CadProgram=C:\Program Files\Corel\CorelCAD 2013\BIN\CorelCAD.exe

Rem Set the name of your CAD program here including the full path without Quote marks
Set CadScript=C:\KeyWild_Cad_Library\Scripts

cd "%WorkDirectory%"
del *.png
cls

Rem When using the "for" command you cannot use environmental variables like %CadScript%
Rem The work around is to call another command file
Rem Set the name of your CAD command file here including the full path and quotes.
for %%f in (*.dwg) do call "C:\KeyWild_Cad_Library\Scripts\Dwg2Png.Cmd" %%f

del *.bak
rem Pause
```

This is the command file that is used to do the conversions. You can modify this file to use a different CAD program, Work Directory or Script program. Most of the operation is controlled by the three environmental variables. When Microsoft implemented “long file names” someone decided that it was acceptable to have a “space” character in the filename. Because of that decision many processes, including this one, are much more complex. Be certain that you do not accidentally insert a space on either side of the equal sign (=) for the variable definitions. Quotes have been used in both command files to allow for paths that include a space. They work as shown but other placements are likely to crash the process. It is possible to run this process without using the full paths for the environmental variables. The process is much more reliable and flexible when the full paths are used. It also allows you to relocate the script and command files to a directories that may be more appropriate for your system (*i.e. a common shared network directory*).

WorkDirectory

This variable controls the directory where the DWG files are found and it is also the directory where the output PNG files will be found. You must have sufficient right to read, write, delete and add files in this directory. Once you have the process set up this should be the only variable that needs to be modified. Alternately you can create several copies of this command file for directories that you need to update on a regular basis.

CadProgram

This variable identifies the executable file that will launch your CAD system. The command file has been tested with both CorelCAD and Draft sight. It should also work with Ares Commander and some others (*it does not work with BricsCAD because they do not implement the PNG export command*).

CadScript

This variable identifies the CAD script file that will be run against each DWG file. Note that this is not limited to the DWG2PNG script. You may implement scripts for other types of exports, printing or any other task that need to be run against a number of DWG files.

```
for %%f in (*.dwg) do call "C:\KeyWild_Cad_Library\Scripts\Dwg2Png.Cmd" %%f
```

This is the line runs the process for each DWG file in the target work directory. Environmental variables cannot be used in this command line because of the way that Microsoft implemented the “for” command. To get around this problem a second command file is used.

Dwg2Png.cmd

```
@echo off
Rem This batch process was created by Lewis Balentine of KeyWild.com
Rem This command file and its associated script, cmd and dwg files are release to "PUBLIC DOMAIN"
@echo %1
"%CadProgram%" "%WorkDirectory%\%1" /B "%CadScript%"
```

This command file is called by the main command file (*above*) to correctly format the command line for each DWG file. It also lists the file name being processed in the command window.

Normally this file should NOT be modified. One reason to modify this file is to extend the process such that the DWG file is copied to an alternate working directory to avoid changing the original file (*which of course will change the file date*). Here is an example:

```
@echo off
Rem This batch process was created by Lewis Balentine of KeyWild.com
Rem This command file and its associated script, cmd and dwg files are release to "PUBLIC DOMAIN"
@echo %1
Del C:\tempwork\*.dwg
Del c:\tempwork\*.png
Del c:\tempwork\*.bak
Copy "%WorkDirectory%\%1" c:\Tempwork\%1

"%CadProgram%" "C:\Tempwork\%1" /B "%CadScript%"
Copy c:\tempwork\*.png %WorkDirectory%\*.png /y
```

You might also have a situation where the source DWG files reside in a write protected directory such as a network distribution directory. In such a case you can set up an alternative directory for your PNG files. Here is an example:

```
@echo off
Rem This batch process was created by Lewis Balentine of KeyWild.com
Rem This command file and its associated script, cmd and dwg files are release to "PUBLIC DOMAIN"
@echo %1
Del C:\tempwork\*.dwg
Del c:\tempwork\*.png
Del c:\tempwork\*.bak
Copy "%WorkDirectory%\%1" c:\Tempwork\%1

"%CadProgram%" "C:\Tempwork\%1" /B "%CadScript%"
Copy c:\tempwork\*.png C:\DwgPngFiles\*.png /y
```

Dwg2Png.scr

```
; This batch process was created by Lewis Balentine of KeyWild.com
; This command file and its associated script, cmd and dwg files are release to "PUBLIC DOMAIN"
DisplayDialogs N
; FileDia off
; setvar filedia 0
Zoom E
exportpng

DisplayDialogs Y
; FileDia off
; setvar filedia 1
Qsave
Exit
```

This is the script file run by the CAD program to do the actual work. For those who are not familiar with script files:

- 1) It is a plain text file of CAD commands that can be normally entered from the keyboard
- 2) Any line beginning with a semicolon (;) is a comment and not processed
- 3) **Blank lines are critical.** It is the same as pressing enter on your keyboard.

DisplayDialogs N

This turns off the file dialog boxes so that filenames are input directly from the script file. Otherwise the system would pause and wait for user input. There are several ways to accomplish depending on the particular CAD in use. I have included two additional command line methods as comments. **DisplayDialogs** is the native command for Ares commander, Draftsight and CorelCAD but is NOT recognized by BricsCAD. **FileDia** is recognized by BricsCAD and DraftSight but not CorelCAD. The **Setvar** command can be used in Draftsight and BricsCAD but not in CorelCAD. An alternative for CorelCAD is to use the lisp version ("**setvar**" "**filedia**" "**0**").

Zoom E

This is the simplest way to get a "standard view". You could substitute commands for a particular view or sheet as appropriate for your environment or delete the line and simple export what comes up as default.

exportpng

BINGO! This is the command that makes it work. You could also substitute (or add) **exportjpg**, **exportemf**, **exportsvg** or **exportpdf**. **ExportDXF** takes a little more work to handle the filename.

<Blank Line>

This line accepts the default file name (*same as the drawing but with the appropriate extension*).

DisplayDialogs Y

Restore the setting for file dialog boxes (*see above for details*).

Qsave

Exit

Now we need to move on. The problem is that when you enter the **exit** command all can system that I have used will present a user interactive dialog box to save the file thus bringing the "automated" process to screeching halt. The only way I have found around this problem is to save the file immediately before the exit command. If you are concerned about changing the file date, size or other attributes then see the above examples for alternate Dwg2Png.cmd files.

enjoy ...