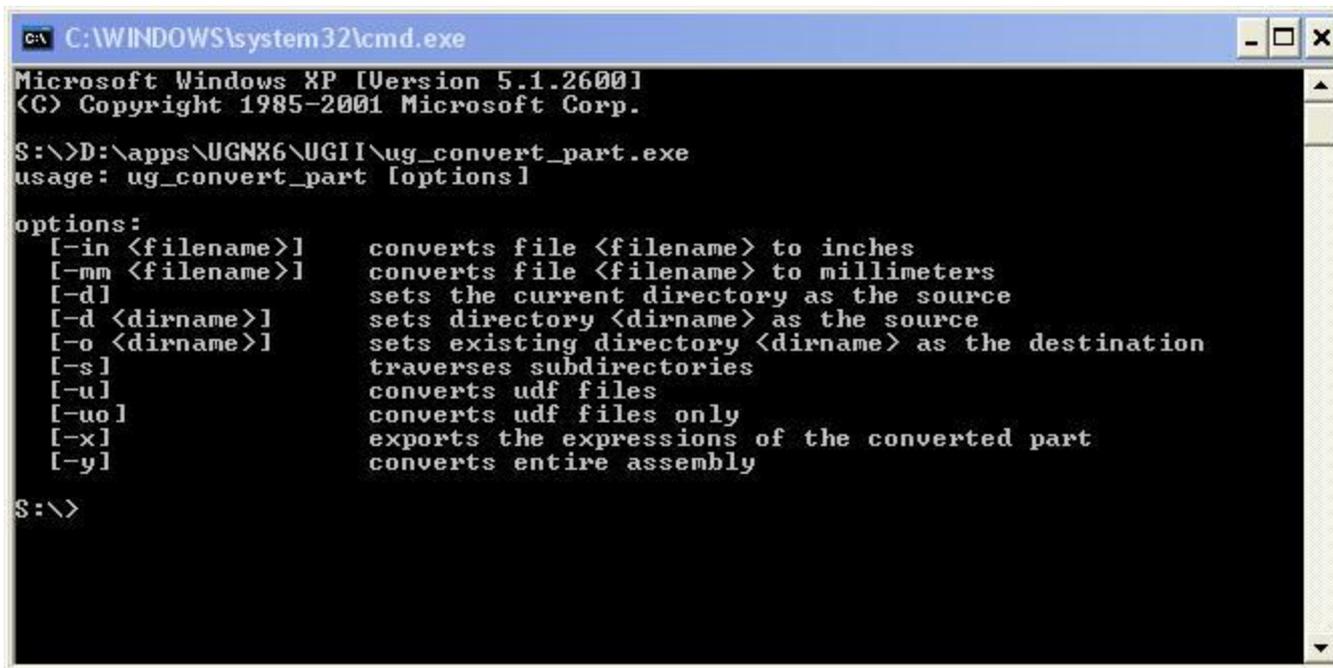


# NX: convert inch part to metric (or vice versa)

Problem: you have a file that was created in inches that you want to use with your metric assembly. While NX will let you add an inch file to your metric assembly, life is easier if all the parts use the same system of units.

Solution: convert the part to metric! But don't bother looking through the menus for an option to convert your part, you will find no help there. Instead we turn to the UGII directory and look for a helper program. The program we seek is named "ug\_convert\_part.exe".

Navigate to your UGII directory (in my case it is D:\apps\UGNX6\UGII), look for ug\_convert\_part.exe and double click on it. Apparently nothing happens, but if you have had your morning caffeine you might have noticed a black window appear and quickly disappear. If you can manipulate time itself (it's a strange hobby, I know) you will be able to slow that window down enough to see that it is trying to politely tell you that it needs more information to do anything useful. I'll put my powers to work so that you can see for yourself:



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

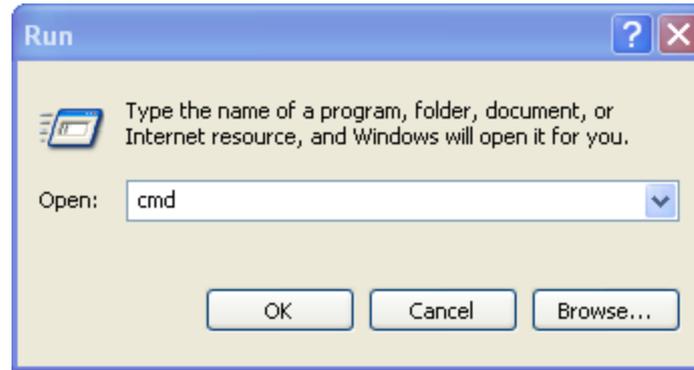
$:\>D:\apps\UGNX6\UGII\ug_convert_part.exe
usage: ug_convert_part [options]

options:
[-in <filename>]   converts file <filename> to inches
[-mm <filename>]   converts file <filename> to millimeters
[-d]               sets the current directory as the source
[-d <dirname>]     sets directory <dirname> as the source
[-o <dirname>]     sets existing directory <dirname> as the destination
[-s]               traverses subdirectories
[-u]               converts udf files
[-uo]              converts udf files only
[-x]               exports the expressions of the converted part
[-y]               converts entire assembly

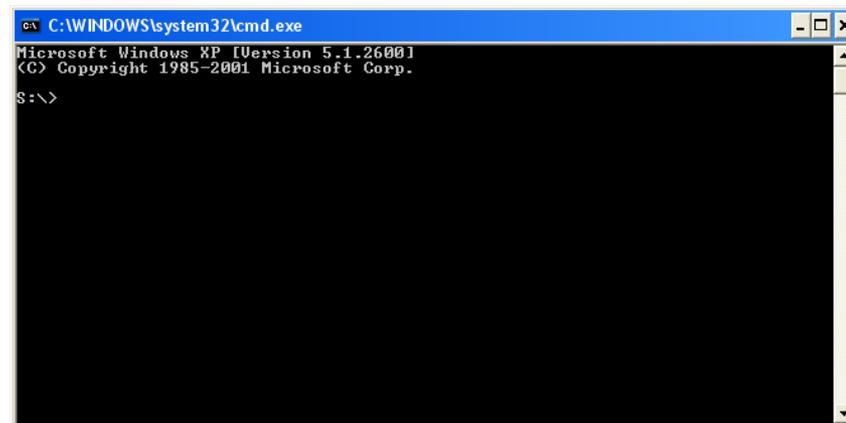
$:\>
```

For those unfamiliar, this is MS-DOS speak for “stop randomly bashing the keyboard and use one of these 10 options that I understand”

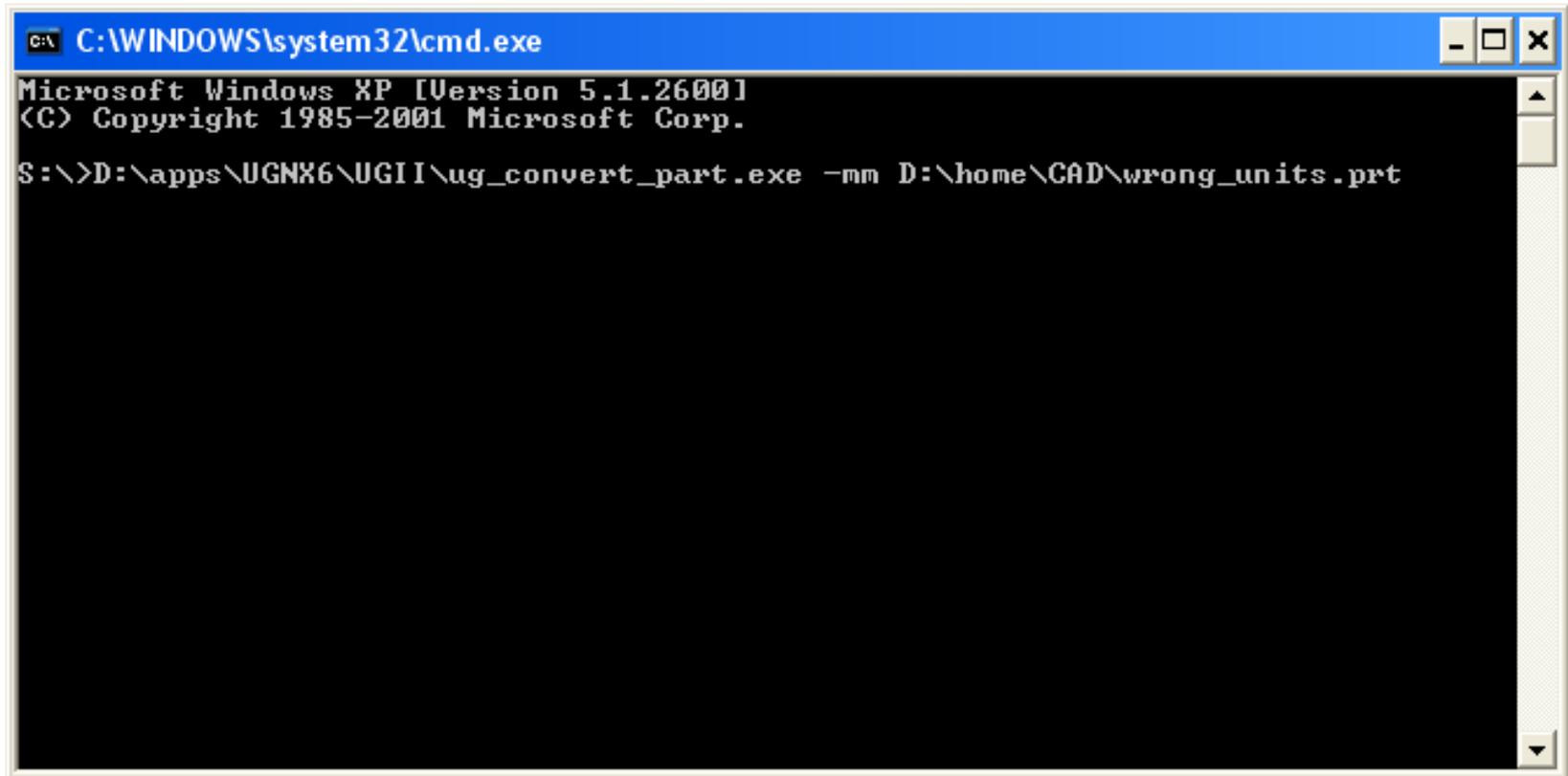
To begin speaking MS-DOSian, begin by opening a command window. On Windows XP, this can be accomplished by opening the Start menu, choosing 'Run...', typing "cmd" (without the quotes) in the Run dialog box, and pressing the OK button.



A window to the past will open that will make all the users who time warped in from 1982 feel right at home.



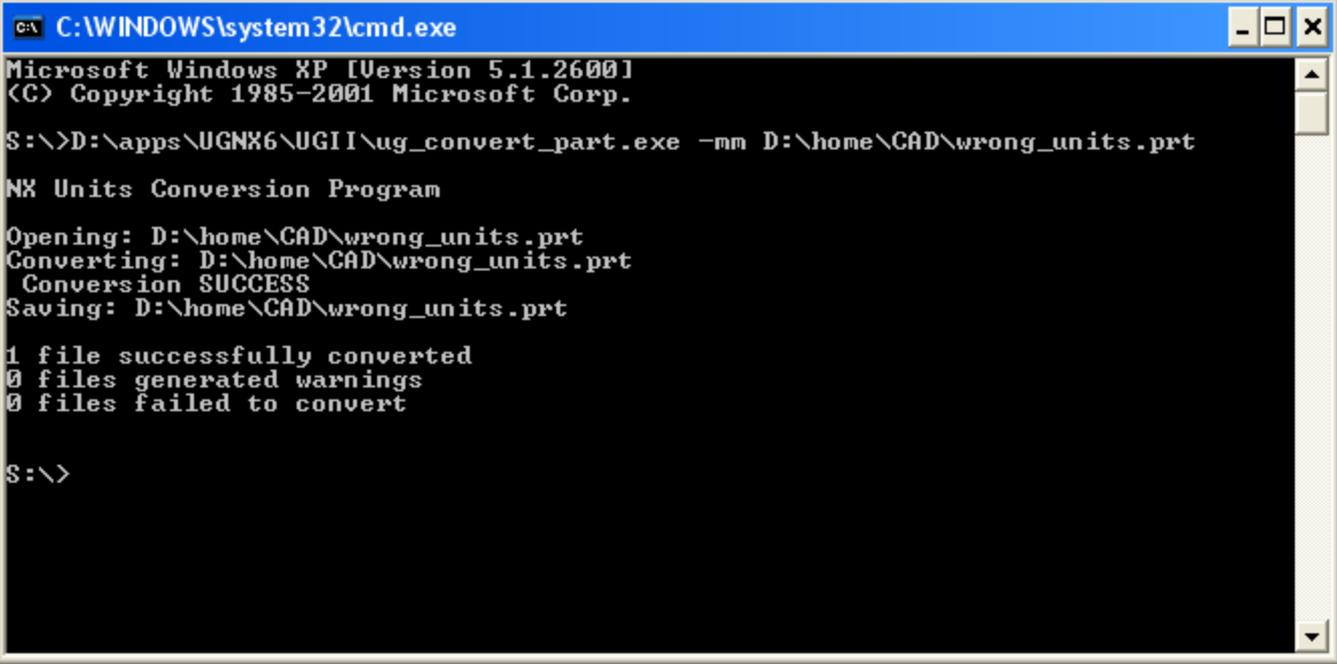
We are now ready to put “ug\_convert\_part.exe” to work for us. As an example, I have a file named “wrong\_units.prt” that I would like to convert to metric. Referring back to the options that “ug\_convert\_part.exe” can work with, I need to type in something like: “ug\_convert\_part.exe -mm wrong\_units.prt”. However, I will need to use the full path so that the command window can find both the executable file and my part file. *I suggest you close the part file and create a backup before attempting to convert it.* Here is what I will use:



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

S:\>D:\apps\UGNX6\UGII\ug_convert_part.exe -mm D:\home\CAD\wrong_units.prt
```

After an awkward pause, we get a response in broken english telling us that our MS-DOSian was understood and the results were successful.



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

S:\>D:\apps\UGNX6\UGII\ug_convert_part.exe -mm D:\home\CAD\wrong_units.prt

NX Units Conversion Program

Opening: D:\home\CAD\wrong_units.prt
Converting: D:\home\CAD\wrong_units.prt
Conversion SUCCESS
Saving: D:\home\CAD\wrong_units.prt

1 file successfully converted
0 files generated warnings
0 files failed to convert

S:\>
```

We made it to our destination, but the journey was a bit rough.

Next up, let's hire a translator to speak MS-DOSian for us.

# Meet Mr. Batch

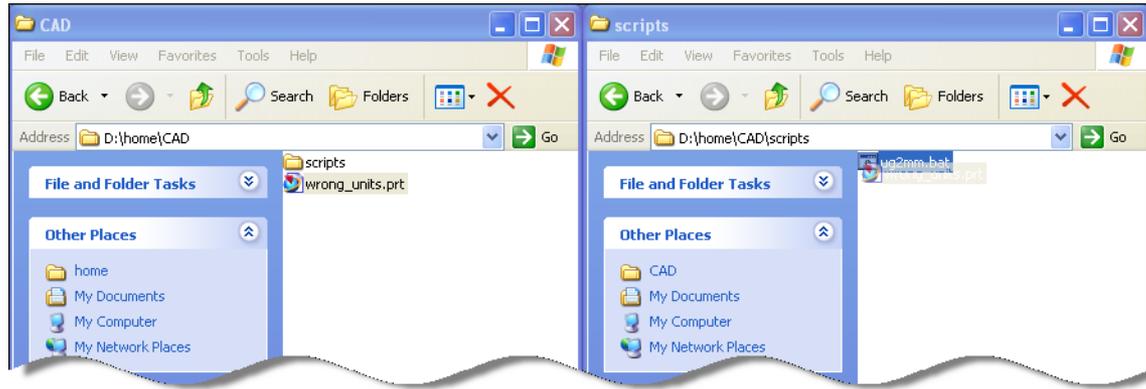
Mr. Batch is a native MS-DOSian speaker who is also quite fluent in Windosian. He will be a helpful companion in our travels. Open notepad and paste in the following:

```
@echo off
set PATH=%PATH%;%UGII_ROOT_DIR%
"%UGII_ROOT_DIR%ug_convert_part.exe" -mm %1
Pause
```

Name the file and save it with the “.bat” extension instead of the typical “.txt”. I have named mine “ug2mm.bat”.

Now you can drag and drop your inch part file onto this .bat file and it will take care of the file paths and program options (in this case it converts the part to metric and overwrites the existing file).

%UGII\_ROOT\_DIR% is an environment variable that points to (surprise) your UGII\_ROOT\_DIR location. “-mm” is the option to use to convert the part to metric. The “%1” is a variable that holds the path of the file that you dropped on the batchfile.



To convert, simply drag and drop your file onto the appropriate batch file.

Here is ug2mm.bat's twin, ug2in.bat:

```
@echo off
set PATH=%PATH%;%UGII_ROOT_DIR%
"%UGII_ROOT_DIR%ug_convert_part.exe" -in %1
pause
```

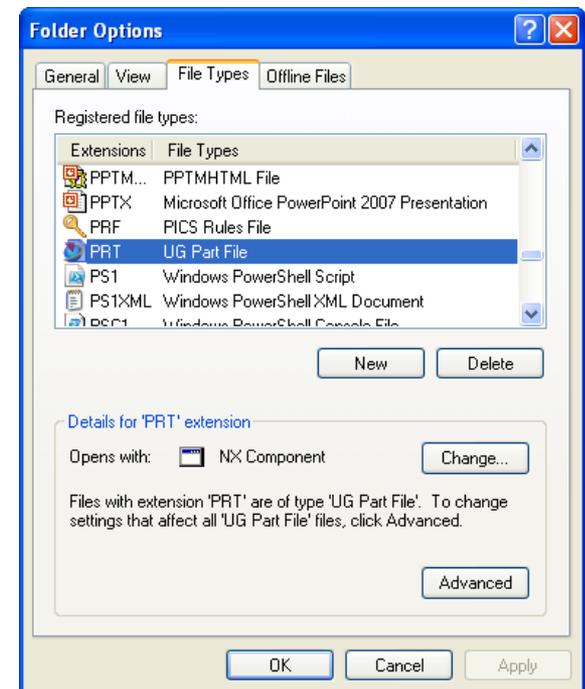
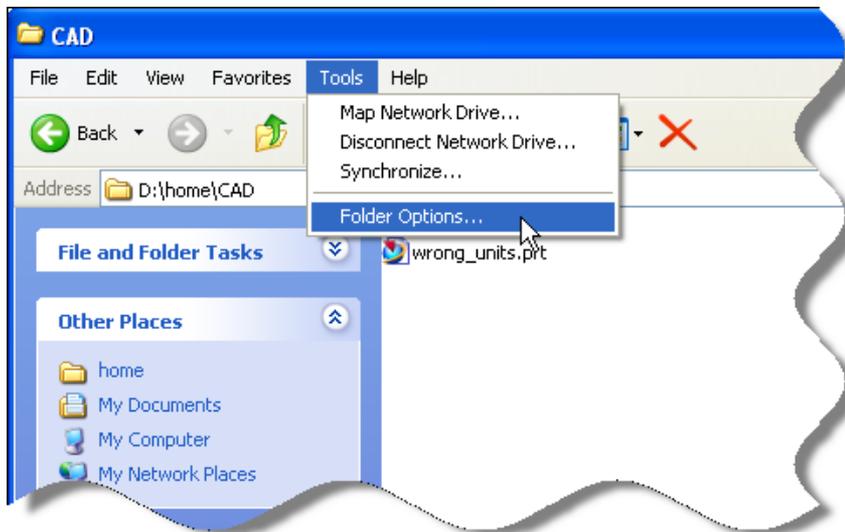
A keen observer will notice the “-in” option rather than the “-mm” seen before. This would convert a metric file to inches.

# Explorer integration

What if you could package this all up so you could choose to convert a part with a simple right click?

Wish granted. Here's how to do it:

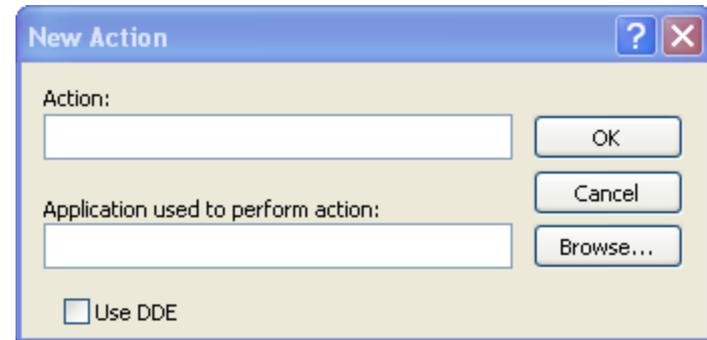
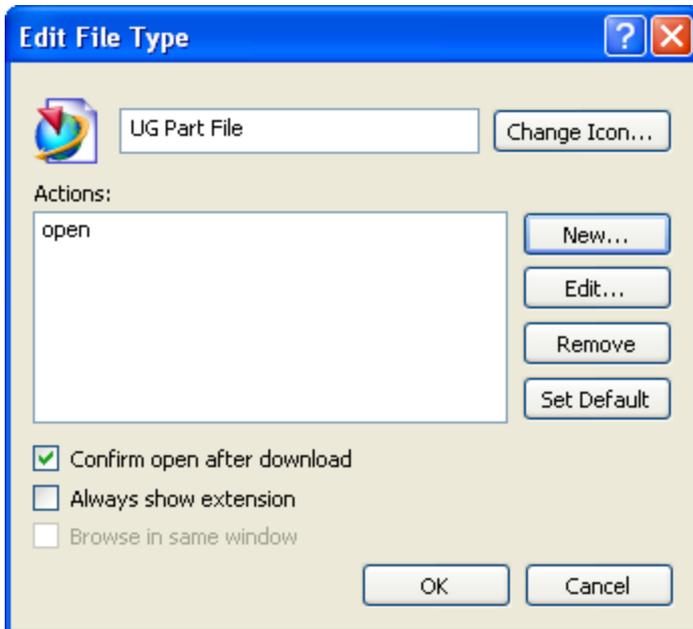
Open Windows explorer and go to Tools -> Folder options...open the 'File Types' tab and scroll down until you find the PRT extension.



See that tempting button labeled “Advanced”? Go ahead and push it.

You will see a list of Actions displayed, press the New... button on the right side.

Yet another dialog box will open allowing you to define a new “Action” (a new command on the right click menu).



In the 'Action:' text box, enter the text you want to see in the right click menu.

In the 'Application used to perform action:' text box, enter the full path to your batch file followed by a space and "%1" (with the quotes). OK through all the dialogs and now you will be able to right click on a file to convert it.

