Starters orders

How to get applications to open on startup, getting stuck in to Paste, and gaining the upper hand when your computer hangs. With Panicos Georghiades and Gabriel Jacobs.

The usual way of automatically starting programs when Windows is loaded is by moving (dragging) or copying (dragging while pressing down the Ctrl key) all the application icons you require into the Startup group window. To automatically start all the applications found within a particular group, you can change the name of the Startup group entry in the progman.ini file. Using Notepad, edit this file to contain the line

`Startup="group name"`

where "group name" (quotation marks are needed) is any acceptable group in Windows. For example, to start the applications in the group Project A (a group you created, and added in all the programs you require for a particular project you are working on), you would add the following line to the progman.ini file:
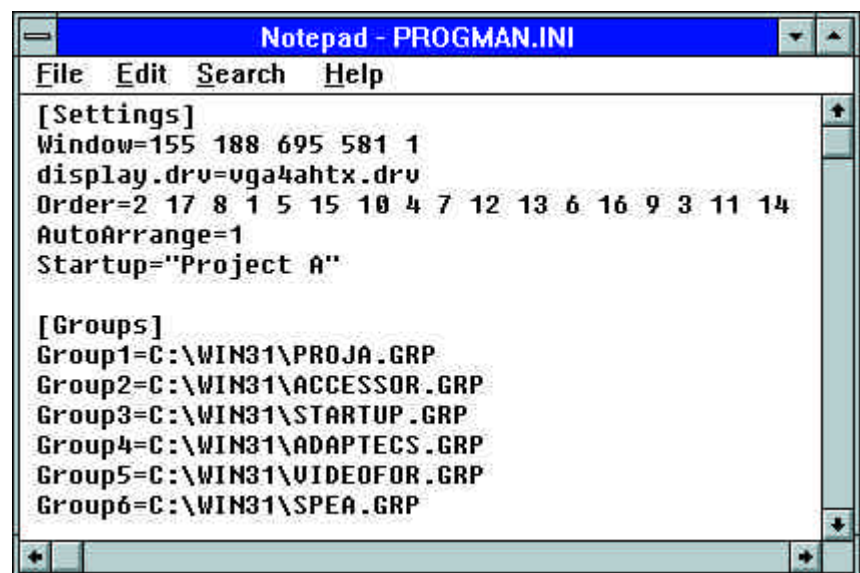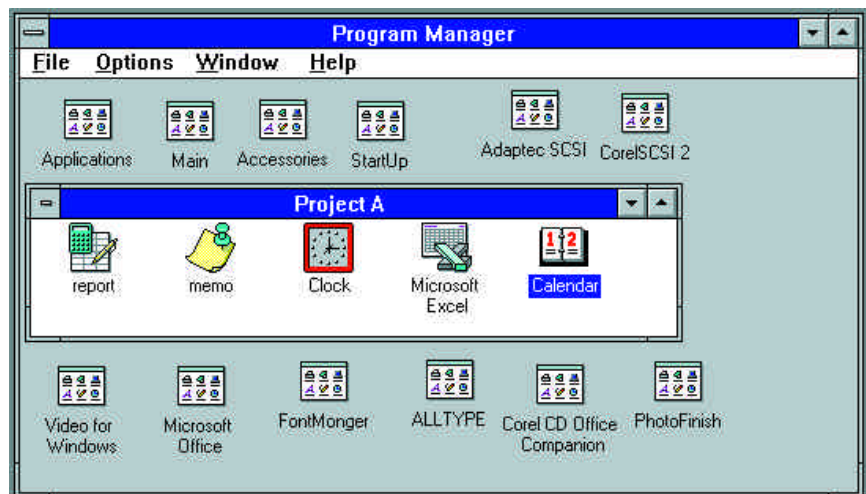
`Startup="Project A"`

Acceptable group names are what's listed in the Window menu in Program Manager or at the title bar of the group you want to start automatically. Adding the above line in the Progman.ini disables the Windows Startup group until the line is removed or commented out with a semi-colon (;) at the beginning of the line.

What's a bitmap and what's a picture?

One of the great things in Windows is the ability to copy and paste from one application to another, especially graphics. But this isn't so great when you're slowed down by all sorts of obscure options. For instance, do you use Paste or Paste Special, and what about all the options in the Paste Special dialogue box?

Well, Paste is paste — simple as that. But the choices you see in the Paste

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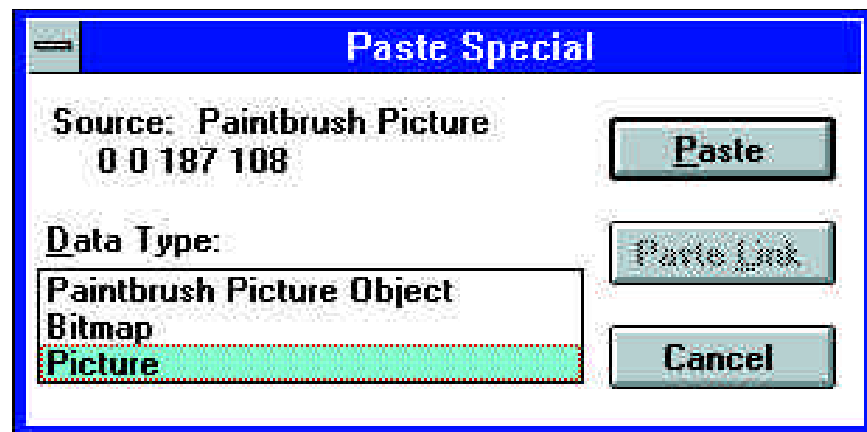
Special dialogue box will depend on the format of the object in the Clipboard. This can be a bitmap or a Windows metafile (Microsoft calls this a Picture), and selecting either of these means that the object is not part of an OLE (Object Linking and Embedding) library: it's a so-called static object with no links to anything else.

If you select Bitmap from the Paste Special dialogue box, the object will be painted more quickly but will take up more disk space when the file is saved. The reverse is true of a Picture.

A bitmap file (extension may be BMP, PCX, TIF, GIF etc.) is a grid filled in with coloured dots. Its file size depends on its width and height in pixels and its colour depth: black and white (1-bit), 256 (8-bit) or 16 million (24-bit) colours. Scaling (resizing) of bitmaps creates distortions, jaggedness, and other unwanted effects.

A metafile or picture (the extension is usually WMF) often consists of a variety of different data structures (usually scalable vector graphics, but it can include bitmaps) and takes up little space. Metafiles can be scaled, and printed using the highest resolution of the printer. However, if one of the data structures includes a bitmap, then scaling will produce the same kinds of distortion of the bitmap element as you would get with an ordinary bitmap.

Try copying a graphic from a paint program to the Clipboard and pasting it into another application. You won't see much difference whether you choose Bitmap or Picture in the Paste Special dialogue box. Now copy a graphic from an application which normally uses the metafile format (Excel, say). Do this first by choosing Bitmap, then Picture, and see the difference.

When in trouble ...
When your computer hangs, or when you get a message about something being

unrecoverable, giving the machine the three fingers treatment (Ctrl + Alt + Del) isn't always the best choice. Various problems can cause software to behave badly or crash, and even make your machine go into a deep sleep. Some of these problems may be caused by incompatibilities between programs, or between programs and hardware, or between different pieces of hardware.

Sometimes (although not often) you may find an answer in the documentation. If not, you may have to contact a support service. But when you do, you'll have to tell them exactly what has happened, and for them to be able to diagnose the problem, it has to be one that can be repeated. If it can't be, you may have to do a lot of detective work to find out the cause. Most problems in computing are solved by a process of elimination, which means you often have to make a fresh start. And if your system has crashed, you will have to do this anyway.

There are three ways to restart a machine: (a) pressing Ctrl + Alt + Del (the three-finger method); (b) pressing the Reset button; and (c) turning the machine off, waiting for a while, then turning it back on. Never turn the machine off, then immediately on, as you risk wrecking your hard disk.

Which method?
The three-finger method is known as a warm reboot and in most cases skips the power-on self test. What's more, it generally doesn't reset all the adaptor cards in the adaptor slots. Using the Reset button (a cold reboot) usually makes the machine go through its self test, but doesn't necessarily cut power to the motherboard or (once again) to the adaptor slots. Therefore, to be sure that everything has been reset from scratch, you should turn off the power completely. After about 15 seconds, the

capacitors in the motherboard will have discharged and the hard disk will have stopped spinning.

If you use the three-finger method or the Reset button and the problem isn't cured, but it is cured if you turn the machine off and on, this implies a hardware problem, usually with a graphics card, internal modem, sound card or other controller.

One final, important point: If you're using a write-behind cache, make sure that the contents of the cache have been saved to disk before turning off the machine. You can do this with smartdrv.exe 4.0 or later by entering SMARTDRV /C at the DOS prompt.

Disk dilemma
Christian J. van den Bosch writes: *"I had an empty 0.5Gb partition on my hard disk, and I decided to turn it into a compressed volume so I could copy a CD-ROM into it. I went into DOS, typed DRVSPACE, chose the partition, and chose to have 2Mb of uncompressed space on the drive (this being the minimum offered), but there were a number of anomalies. The process took about half an hour and included at least three defragment operations using Scandisk. The result was a 0.5Gb compressed drive occupying 340Mb of real space and a claimed compression ratio of 2:1, leaving 160Mb free (not 2Mb as requested).*

"All attempts to enlarge the compressed drive (reduce the uncompressed space) were rebutted: apparently, the remaining 160Mb of uncompressed space contained files that could not be compressed. In the end I just created a larger partition.

"Can you explain?"

<cjb@homenet.ie>

It's normal for the process to take a long time, even half an hour, and normal for the Scandisk operations to check the disk. DOS DrvSpace (originally known as DoubleSpace) does not precisely double the space on your hard disk. Doubling is an estimation derived from an average compression ratio. Different files compress at different ratios depending on what they contain. We carried out some experiments on this, with the results shown *(see the next column).*

We can't explain why you got an estimate of 2Gb with a compression ratio of 2:1, except that sometimes the possible compression is overestimated. In any case, changing a drive's estimated compression

Utility of the month: SYSEDIT.EXE

If you like playing about with system files — editing your autoexec.bat, config.sys, win.ini, or the system.ini files — there's a Windows utility called SysEdit which has been designed especially for this purpose. SysEdit.exe can be found in the Windows\System directory (it can't be run from DOS) and it opens all four files at the same time. It also creates a backup of the original file with an SYD extension. When booting a system from a floppy drive, note that SysEdit brings up the autoexec.bat and config.sys files found in the root directory of your boot hard drive, not the ones on your floppy.
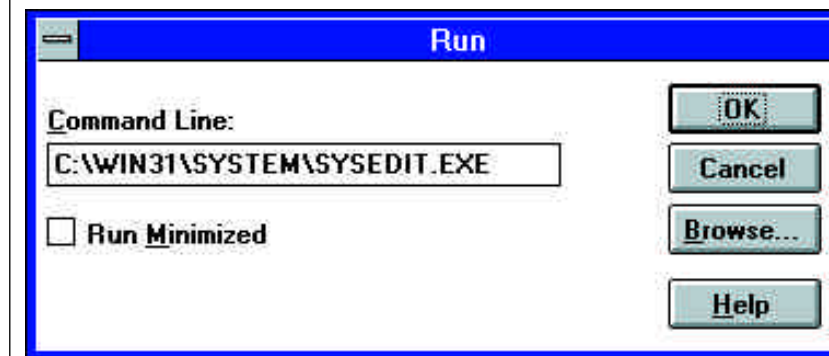
You can run SysEdit by selecting File and Run from Program Manager
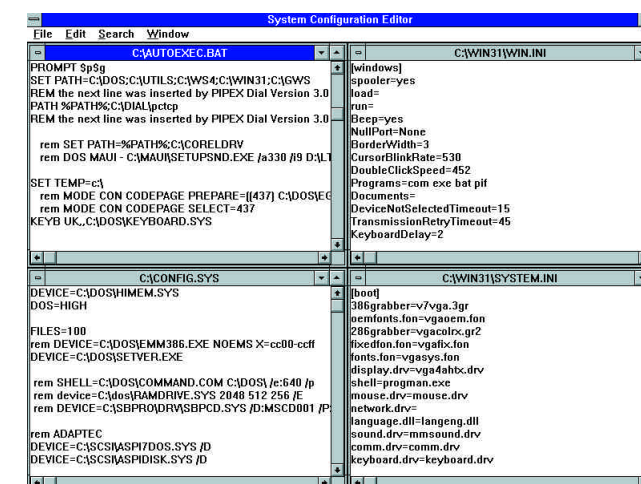
FILE TYPE	COMPRESSION RATIO (X:1)
Zip/GIF	1.0
BMP	1 - 10
ASCII	2*
Excel/Word Programs (EXE, COM)	2.4 / 1.7

Depends on content and whether it's 16,256 or 24-bit colour

ratio doesn't affect how much DrvSpace actually compresses the files: it changes only the way DrvSpace estimates the free space on the compressed drive. However, having the wrong estimated compression ratio for your files can cause DrvSpace to provide inaccurate space estimates to

DOS, which can, in turn, result in problems when storing files.

Anyway, we don't recommend the use of DrvSpace any longer because hard disk prices have dropped so low. You can buy a 2Gb IDE drive for just over £160, so why bother with compression? DrvSpace takes memory from your 640K, it's slower to defragment or to check with Scandisk, and can affect performance in other ways. And there may be conflicts with other programs. Our advice is: hard disk compression out, larger hard disk in.

PCW Contacts

If you have any queries or Win3.1-related topics to discuss, contact **Panicos Georghiades** and **Gabriel Jacobs** at **Win3@pcw.vnu.co.uk**