Fighting the flab

Tim Nott shows you how to discipline your hard disk using FAT and partitions.

Before we tackle the subject of partitioning and FAT (file allocation table), let's take a quick look at something less serious. You can see a picture of my desktop [Fig 1] luxuriating in its wallpaper — your job is to estimate the size of the wallpaper file.
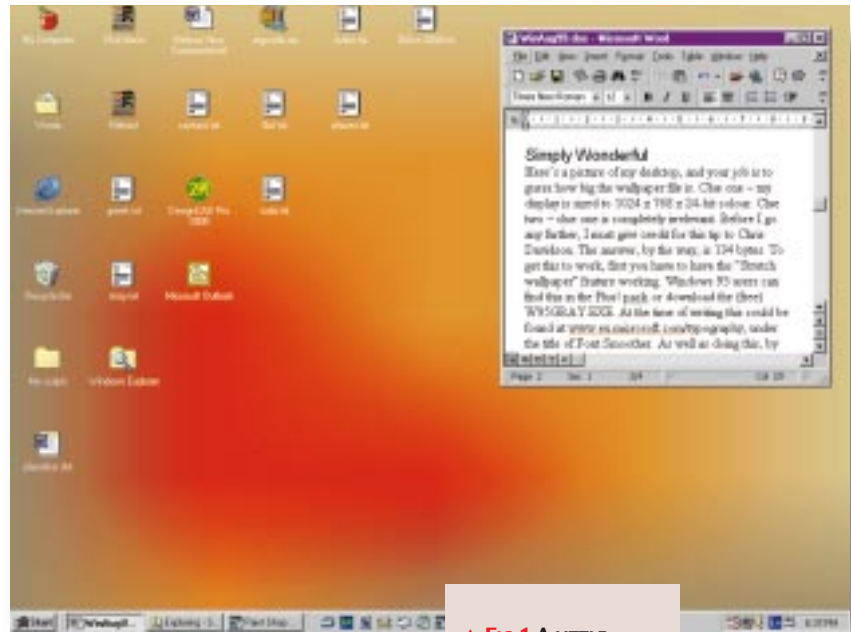
Clue one; my display is sized to 1,024 x 768 x 24-bit colour. Clue two; clue one is completely irrelevant. Before I go any further, I must give credit for this tip to Chris Davidson. The answer, by the way, is 134 bytes.

To get this to work, you first have to have the 'Stretch wallpaper' feature working [Fig 2]. Windows 95 users can find this in the Plus! pack or download the (free) W95GRAY.EXE. At the time of writing this could be found at www.eu. microsoft.com/ typography, under the title of Font Smoother.
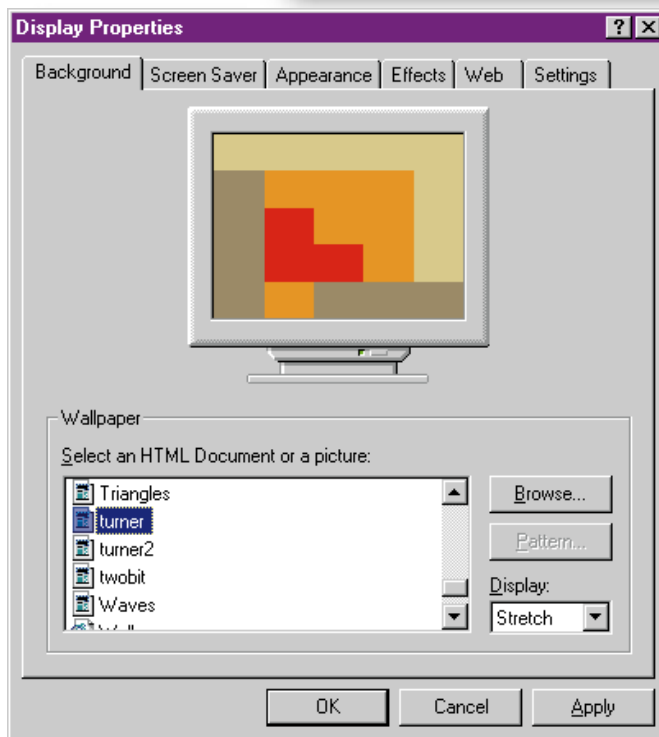
As well as doing what that title suggests, by 'anti-aliasing' characters above a certain size, it adds various other goodies such as full-window dragging and wallpaper stretching. Windows 98 users get this built in, though.

.BMP to your Windows folder.

☞ **Open** Display Properties, Background and select your new file, making sure the 'Stretch' option is selected in the bottom right of the tab. Click 'Apply' and watch your wallpaper change to a smoothly-shaded background [Fig 2].

Try experimenting with various sizes and colours. You will generally find that the smaller the size the smoother the shading, but you can get rather nice night sky effects by using single-pixel stars on a dark background of around 48 x 32 pixels.

■ Taming your hard disk

It is a truth, universally acknowledged, that if your hard disk is over one or two years old, it is too small. This has been the case ever since Windows 3.0 landed on our desktops. It has also been the case that the disk you need (at any point in that time frame) costs around £200.

At the time of writing, this buys you around 10Gb of storage. When Windows 3.0 launched, you would have been hard pressed to find a two-hundredth of that for a similar price. The need for, and affordability of, those ten gigs is all

☞ **If you do not have** the option to Stretch in Display Properties, Background, then you need to go to TweakUI, turn to the IE4 tab, and tick the 'Active Desktop enabled' box. This doesn't appear to have any drastic side effects. You can still view folders in the 'Classic' style, and turn off the 'View my

Active Desktop as a web page' option in the Web tab of Display properties.

☞ **Next,** prepare your bitmap. In Paint, set the Image Attributes to something really small. Start with 2 x 1 pixels, in colour.

☞ **Crank** the zoom level right up, colour the two pixels differently and save the

part of the merry-go-round of progress. Office 2000, for instance, weighs in at about 250Mb, which is roughly double the size of Office 95.

What's even more astonishing is the way Windows itself snowballs. I have an old PC downstairs which runs — or rather walks — Windows 95, MS Works and a few games and other odds and ends, all in 200Mb of disk space.

On the PC I'm using now, the Windows 98 folder and its subfolders alone take up 300Mb, even when well-weeded. Size, therefore, is important but equally so is what you do with it. Whether you are installing a new hard disk, or simply trying to make the most of what you have got, the following suggestions may help.

The secret of successful disk management is to divide and rule

WSH LIST UPDATE

Following the *Hands On* columns in May and June, on the Windows Scripting Host (WSH), several Windows 95 users have asked if they, too, can join in the fun. I am happy to say that they can. Although I briefly referred to a 'free download' in the May column, I neglected to give an address. At the time of writing, the files can be downloaded from msdn.microsoft. com/scripting/default.htm?/scripting/ windowshost/.

■ **Unsightly FAT**
With FAT16, the file storage system used by Windows 3.x and earlier versions of 95, there were strong reasons for 'partitioning' a hard disk, or dividing it up to appear as several drives.

First, there were hardware limitations to the size of a partition. Second, the larger the disk or partition, the larger the 'cluster size' — the physical minimum amount of disk space which could be used to store all or part of a file. For example, on a 1Gb partition, the cluster size is 32Kb so each 360-byte shortcut adds an extra 31Kb-odd of wasted packaging.

FAT 32, an available option with Win98 and later versions of Win95, solves both problems. It supports drives of up to two terabytes (mega-megabytes) and for those of 8Gb or less, has a minimum cluster size of just 4Kb.

Despite the wonders of FAT32, it still makes sense to partition a hard disk, unless there are compelling reasons for not doing so, such as editing huge audio or video files.

Questions & answers

Q Following a crash — computer, not car — Scandisk ran when I restarted and now I have a number of large files in C:\, with the .CHK extension. How can I tell what is in these files? Does Windows need them to work or can I delete them?
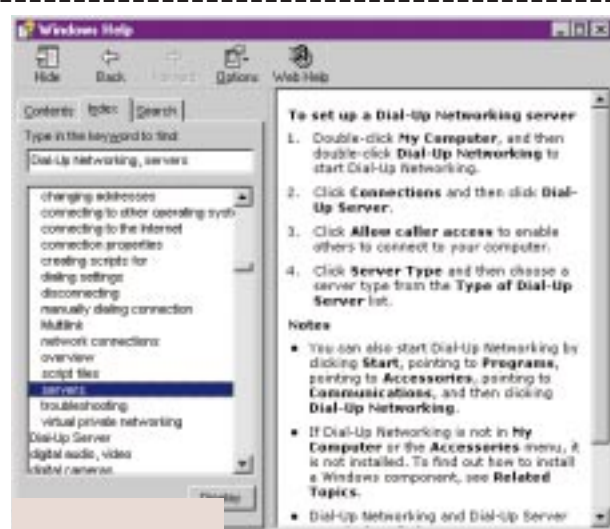
MIKE SIMPSON

a *These are 'lost clusters', that is areas of storage on your hard disk which, although marked as being used, are lacking a file name. If you have lost some data after a crash, it might be worth looking through these in a text editor — not Notepad as it won't load files larger than 64Kb. You might just be able to recover fragments of lost text but anything else will be pretty meaningless. Apart from that, Windows doesn't need them and neither do you; delete away.*

Q How do you connect directly to one PC, by-passing the net, so it is PC-to-PC like a LAN — just so me and my mates can swap information? Do you need a specific software program? If so, which do you recommend and how much does it cost?

JONATHON DAY

a *You need the Windows Dial-up server on the machine into which you want to dial. This was part of the Windows 95 Plus! pack, but it is included in Windows 98. Go to Control Panel, Add/Remove, Windows Setup, Communicat-ions, Dial-Up Server to install it. Then look in the Windows help file under 'Dial-Up Networking, Servers'* **[Fig 3].**

Q From 'View, Folder Options, File Types' in Explorer, I can assign tasks to certain file types. For example, I could open files with extension .ABC with Notepad if I wanted. However, is there a way of

▲**FIG 3**
PHONE HOME USING WINDOWS 98 DIAL UP SERVER

assigning a task to all files, regardless of extension? Some programs, such as virus checkers do this automatically but I wondered if I could do it myself, say with a hex editor? Can you help?

ROHAN SHENOY

a *You'd need to create a new action for each file type, which would be a long business. Or you'd have to write a shell extension dll, like the anti-virus stuff or WinZip. A much easier way is to stick a shortcut to the program in the Windows\Send To folder.*

Q I have used your tip to put the control panel on the start menu and it is a great time saver. ➤
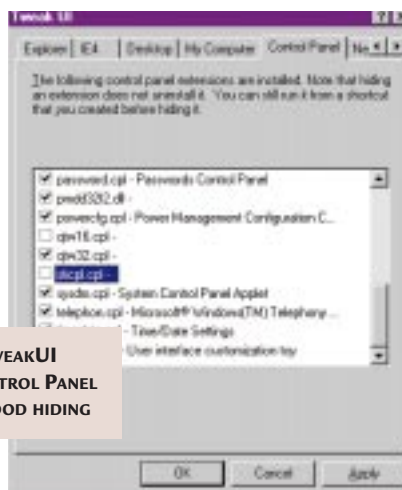
Questions & *answers*

➤ The problem I have is that there are so many things in the control panel it makes two columns on the screen. Although it is not really a problem, it is very annoying, especially since three or four have no application to go with them. I have searched my registry and all the Windows folders. I have found the Control Panel folder but it won't let me remove any of the shortcuts. Do I need Poledit?

MED HORNECKER

a **You don't need Poledit and you should not try to remove Control Panel compon-ents. Hide them, instead. TweakUI has the option to do this on the Control Panel, tab. See Fig 4.**

Q Is there a limit to the number of fonts that can be installed on Windows

►**FIG 4 TWEAKUI GIVES CONTROL PANEL ITEMS A GOOD HIDING**

98 without any of them not working?

JACEK KRANKIKOWSKI

a **According to the Windows 98 resource kit, and assuming you are referring to TrueType fonts, the limit is 'around 1,000', all of which, it seems, can be used in the same document. Which would make eye-watering reading… but still. The limit arises 'because of the size of registry keys and available storage space for font names in**

the Graphics Device Interface'.

Q My Windows 95(B) PC with IE4 has a problem with its screensaver. When the screensaver is de-activated it leaves a little blank bar in the Windows task bar, on which I have to click in order to get rid of it.

MICHAEL ENDERBY

a **Funny you should say that. My Windows 98 + IE5 does exactly the same. It is an annoying but harmless bug to which I can find no reference on the MS knowledge base.**

Q My clock remains in 24-hour format. Even when I change it to 'h:mm:ss tt' and set AM and PM, it reverts back to 24-hour format the next time I start Windows.

DANIEL HOULT

a **This, and some other settings, can fail to 'stick' if you have multiple users enabled on the PC. The trick is to log on as a 'Default User' and change the setting from there. You should then find that re-logging as an individual user will enable the setting to be saved.**

Q I've just had to re-install Win98 and notice that my date setting displays 'Aprilta' for April. I've tried going into Regional Settings in Control Panel, clicking on the Date Tab (at the end) and it shows Gregorian in the calendar. However, it is greyed out and does not give me the opportunity to pull down a choice!

ROB IGO

a **Go to the first tab in CP, Regional, and check that Regional Settings are set to English (United Kingdom). Second, go back to the Date tab and verify what's in the Long Date Style box — the default is dd MMMM yyyy which gives (e.g.) 30 April 1999.**

I'm not going to go into detail, because my fellow columnist Roger Gann has covered the subject comprehensively in his *Hands On Hardware* column (see the back issues on the *PCW* CD-ROM) but to partition a new hard disk you use the DOS-based FDISK utility.

This destroys any data already on the disk, so if you want to change the partitioning on a disk in use, you will need to buy software such as Partition Magic. It does this non-destructively and helps out with chores like moving applications and their related registry settings between partitions.

Why partition? Well, the secret of successful disk management is to divide and rule. It makes eminent sense to keep volatile data, such as your work, mail, template and customisation files, away

from files that don't change, such as application and operating system executables and libraries.

For a start, it makes it a lot easier to back up your work if you keep all your documents, spreadsheets, graphic files and so on in appropriate folders all grouped in a master folder, rather than dotted around the system. The second reason for separating data from programs is fragmentation.

When a file occupies multiple clusters it can become 'fragmented'. That is, the clusters are no longer physically adjacent on the hard disk and performance suffers as the disk heads dodge around looking for them. Normally, you would install Windows and any app-lications before you create the data files, so they should remain unfragmented. But if you then use the same partition to

When a file occupies multiple clusters it can become 'fragmented'

store a lot of constantly-changing data, the data will become fragmented as file sizes change. This is unavoidable, but a worse side effect is that should you then install, or upgrade, more applications, these will be fragmented as they 'fill in the gaps', unless you defragment before every installation. Third, if data on a disk gets corrupted, partitioning can limit the extent of the damage.

This is all very sound in principle but in practice it is rather difficult to achieve because you have to fight Windows and applications every inch of the way. Next month, I will look at some practical methods of segregation and will do my best to explain why I have five 'Local Disks' in My Computer.

PCW CONTACTS

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