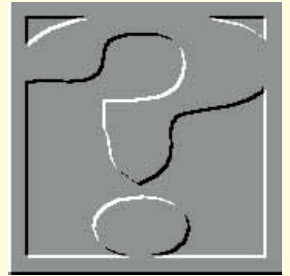


Any questions?

If you've got a PC problem or think you could help out other readers, contact **Frank Leonhardt**.



For anyone who's just spent six months marooned on a desert island, the news is that Microsoft has finally released a new version of Windows called Windows 95. To make sure everyone knew about this earth-shattering event, Microsoft's publicity machine went berserk, going as far as buying a certain well-respected newspaper and converting it into an advertising freebie for the day.

Everyone knew something had happened, but most were a little unsure as to exactly what it was, and most of them have phoned me for clarification (it feels like it, anyway).

This has had two immediate effects: firstly, my answering machine has broken down for the first time since 1986; and secondly, I have noticed the same questions constantly arising.

Here, then, are my thoughts on the subject.

Q. Is Windows 95 any good?

A. What kind of a question is this? Yes, in many ways it is an improvement on 3.11. It is faster (in some circumstances) and it promises to be more robust. It could be easier for some people to get to grips with, and the low-level redesign allows for future expansion. What this means to you, in practical terms, is probably very little.

Q. Should I upgrade to Windows 95?

A. Changing operating systems almost always means grief. If you buy a new machine it will probably come with Windows 95 as standard. If, on the other hand, you have a perfectly serviceable computer running Windows 3.1 there is no real need to upgrade; at least for now.

Q. Will I need to upgrade my PC's memory?

A. One supposed advantage is improved performance. This has been realised, but the increased RAM requirements completely negate this on systems with 8Mb or less of RAM. This is caused by the use of virtual memory; the process by which hard disk space is used as a substitute for real RAM. Once your real RAM is full up, Windows will swap areas of RAM to and from an area on the disk. Swapping is a very slow process in

computing terms and its avoidance is to be desired. Because Windows 95 uses more RAM than its predecessor, you will find that you can load less applications before swapping starts. Microsoft may be right when they say a system with 8Mb of RAM will run Windows 95 at the same speed as Windows 3.11, but the question you should be asking is whether your applications will run faster or slower.

If you were happy with the level of



performance you got with Windows 3.11 in 8Mb of RAM, you will need an extra 4Mb to stop Windows 95 from swapping. If you do stop it swapping, however, it is noticeably faster than 3.11.

Q. What advantage will upgrading to Windows 95 give me?

A. Apart from performance, an important perceived advantage of Windows 95 is its ease of use. This might make a difference to new users, but if ease of use had been a priority in your case you would have bought an Apple Macintosh in the first place. To take advantage of the new front-end you'll have to convert to a different way of thinking about files and applications, and you may be better off with the devil you know.

In the future, Windows 95 will be supported by new application software. This is the most compelling reason most people will have for upgrading. Windows 95 will handle the so-called 32-bit applications in a different way from the existing 16-bit versions. At present, a

rogue 16-bit program can cause everything running on the machine to crash. Windows 95 can physically keep the 32-bit applications apart, so the dreaded system crashes may become a thing of the past. If you really need a reliable system, however, Windows NT has been multi-tasking all types of application in a robust manner, for a long time.

In theory, 32-bit applications can run faster, too, but I'll believe it happens in practice when I've seen it for myself.

Windows 95 can handle resource-hungry applications far more effectively than could 3.1. This may be of interest to Microsoft Office, which eats up system resources as if it were never designed to fit on Windows 3.1. Considering the lengthy delay in releasing Windows 95, this may be the case.

Q. Is there any good reason why I shouldn't upgrade?

A. One very good reason for not upgrading a system is backward compatibility. Microsoft has gone to a lot of trouble to make existing DOS and Windows 3.1 software work with Windows 95, but they haven't accommodated everything. For new machines and users this is not a problem — simply buy software and hardware which works with Windows 95. If, however, you bought your software more than a few months ago you're not going to want to fork out to upgrade again.

Q. Can I install Windows 95 along with Windows NT or OS/2?

A. This is generally not a problem. If you have DOS and another operating system installed on your hard disk, Windows 95 can be installed over DOS. Boot Manager, NT loader and so on should keep working. If you want to select between DOS and Windows 95 you can simply press F8 at startup to get back to a DOS prompt. In my experience, absolutely everything which worked under DOS 6 works from a Windows 95 DOS prompt (before Windows 95 proper is allowed to start), including Windows 3.11.

Q. I want to keep my old version of Windows after installing 95 — does this

mean I need to buy the full version of Windows 95?

A. *Not at all. The only difference between the full and upgrade versions is that the upgrade checks to see that you have an old copy of Windows somewhere before it installs. If you no longer have Windows 3.1 or Windows NT on your hard disk, it will accept the first installation floppy disk as proof.*

Q. Should I install Windows 95 over my old system as the documentation suggests?

A. *No — unless your old system is fully backed up. My recommendation is to make a boot floppy for your existing version of DOS (see Computer Answers, October issue) and then install Windows 95 to a new directory. This has the disadvantage that you will have to re-install most of your Windows applications, but after a few years' use most machines could do with a fresh start.*

Make sure you keep backups of your old AUTOEXEC.BAT and CONFIG.SYS files. Your existing DOS and Windows directories will remain intact during the process but you may need to move them elsewhere to make space on your system partition. To avoid having two swap files on your disk, use the Windows 3.1 Control Panel 386 Enhanced option to set the swap file type to "Temporary" (if it is currently set to "Permanent").

By not overwriting your existing version of Windows, you will find you can switch between old and new by pressing F8 when the "Starting Windows 95..." prompt appears at startup and selecting the Command Prompt option from the menu which appears. This is very useful while you are finding out what works with Windows 95 and what doesn't.

Q. How can I get my machine back the way it was before?

A. *If you haven't installed Windows 95 in the way I've suggested, you will have to rely on Microsoft's uninstall utility. The documentation for this is supplied with the floppy disks and on the CD-ROM in \README.TXT. During installation you will have been asked whether you wanted to create uninstall files, assuming you opted to overwrite your original system. If you installed to a new directory then you wouldn't have been asked.*

To get rid of Windows 95 without using the uninstaller, simply boot from your DOS floppy and transfer the system back to drive C: using the command "SYS C:". Then copy your AUTOEXEC.BAT and CONFIG.SYS files, together with your old Windows and DOS directories if necessary, back into place and delete all

SIMM conversion device

In the September issue, I said that there was no way to convert 30-pin SIMMs to work with a 72-pin SIMM motherboard. But apparently, Tim Nott had mentioned (on page 290 of that issue) a device called SIMM Swapper which did just this... Oh well, you can't win 'em all. Although I haven't yet seen this new device, there are a couple of points which worry me. For a start, high-performance memory systems can be a bit fussy about their SIMMs so this may not work for everyone. Additionally, most Intel PCI Pentium motherboards are set out with the SIMM sockets right under the drive bay metalwork; clearance, even for normal SIMMs, can often be a problem.

Thank you to everyone who wrote to tell me about this.

the Win95 stuff.

If you didn't make a DOS boot disk before installing Windows 95; don't say I didn't warn you.

All things considered

I've only considered practical issues of Windows 95 so far. If you are the type of person who simply enjoys computers then Windows 95 is a lot of fun. It will transform your old machine into something different; a new toy to play with. Windows 95 will inevitably displace Windows 3.1 in the future but, for now, if you rely on your computer to make a living you'd be mad to fix something which isn't broken.

P60 gets the boot

"I have a Dell Pentium computer. Both MSD.EXE and INFOPLUS identify the processor as a 486. I am a little disturbed by this. At boot, the operating system displays P60, so why does both MSD and INFOPLUS say it is a 486?"

Joseph M Farrugia

[<JoeF@harlon.demon.co.uk>](mailto:JoeF@harlon.demon.co.uk)

Programs like these identify processors using heuristic methods. They try out a few things which produce different results on all the processors which the programmers know about and take a guess at what they are running on.

As the Pentium didn't exist when the programs were written, and is backwards compatible with the 486, the heuristic tests performed to detect a 486 would have passed. Newer versions of the software will try things which only work on a Pentium (or a P6) and thus be able to tell the difference.

Upgrade options

The honour of being the most far-flung correspondent this month goes to Adb-El-Kadir M.M, from Baghdad:

"I currently have a 486 DX2/66, with an ISA motherboard, using an Xtechnology Xgraphic graphics board which I need to upgrade. I don't want to spend money on a new ISA graphics board because the technology is outdated. I want to upgrade my motherboard to either VESA or PCI: I'm not sure which is the recommended architecture.

"I've seen boards available with and without CPUs — although those without CPUs state that they are ZIF. My current board is LIF and I'm not sure if I could make use of my current CPU on one of these new boards. I'm considering an upgrade in processor as well, to a DX4 100 VESA/PCI board.

"This leads to my next problem: the DX4s seem to be 3.3v, and I'm sure my power supply is 5v. Do these 3.3v motherboards have the ability to 'step down' the voltage or would my power supply fry a 3.3v CPU?

"What do you recommend I do?"

Gary Mot

[<100072.1661@compuserve.com>](mailto:100072.1661@compuserve.com)

PCI has some theoretical advantages over VESA but in practice your choice should be dictated by the expansion cards you wish to use. If you want to upgrade your processor too, I'd suggest you forget about the DX4-100 and go straight to a Pentium. The price/performance ratio definitely favours a P60. Personally, I'd prefer a P75 because it's a second generation Pentium running at 3.3v instead of 5v. And it's faster.

The 3.3v motherboards have a built in voltage regulator for their CPU and support chips only. The rest of the board must still run at 5v, otherwise all the expansion cards wouldn't work. The power connection is just the same as for the 5v boards. There may well be jumpers on the motherboard to select different CPU voltages.

PCW Contacts

Frank Leonhardt is an independent computer boffin who can sometimes be contacted on **0181 429 3047** or via email as frank@dircon.co.uk or leo2@cix.clink.co.uk. Letters may be sent to PCW at VNU House, 32-34 Broadwick Street, London W1A 2HG, but individual replies are not normally possible. Please do not ask about cover disks or CD-ROMs.