P C Forum

This month Gordon Gilmore has a few useful hints and tips.

Having survived for 13 issues, our P C Emulator Survival Guide has amply proved its point! With the advent of the Risc PC, Acorn users can now enjoy a real PC rather than a mere emulation, so we felt the time has come to open out our PC pages a little and invite readers with experience of both platforms to contribute ideas which may help other readers to cope with the PC world when the necessity arises.

DOS 6.X UPDATE
Such is the market penetration of Microsoft that whenever DOS is mentioned we assume that means MS-DOS. Perhaps we shouldn t. Nowadays there are other players in the field. IBM have recently issued PC-DOS 6.1 and Novell, new to the operating system field, have jumped a version number by releasing Novell DOS 7.0.

In RISC User 6:9 we looked at MS-DOS 6.0 and the new features available. Almost as soon as this was released it became apparent that there were problems with it. In particular, using DoubleSpace could have serious consequences. Magazines featured letters from poor souls who had converted their complete hard disc to a DoubleSpaced compressed drive which, some time later, was found to have a corrupted directory structure. Not much fun! The problem was eventually attributed to physical hard disc faults which were blithely ignored by DoubleSpace.

Another problem was the disc cacheing used by MS-DOS 6.0. If you were a bit too speedy in switching off the machine after quitting a program (or worse still, didn t quit to DOS before switching off) data not written to disc from the cache would be lost. These matters were put right in MS-DOS 6.2. DoubleSpace now checks the integrity of the disc before creating a compressed drive and checks data integrity before writing to the drive. The cacheing problem has been solved by ensuring that the DOS prompt doesn t appear until the write cache has been cleared (if you really want to lose data you can still switch off before the prompt appears!).

Although regarded as only a technical upgrade, DOS 6.2 also included one or two other useful improvements. A disc analysis and repair program, called ScanDisk, is included and, to help diagnose problems, you can now step through your AUTOEXEC.BAT file during boot-up in the same way as stepping through the CONFIG.SYS file, introduced with DOS 6.0. Also welcome is the fact that compressed floppy drives are automatically mounted by DOS 6.2 and any compressed drive can now be (in Microsoft-speak) decompressed (or in English, expanded). If you already have DOS 6.0 you can buy an upgrade to 6.2 from the Microsoft Upgrade centre for £10 (plus VAT).

PAUSE FOR THOUGHT
A.J. Whitehead from Bath wrote to me some time ago, requesting assistance in getting his coloured prompts to appear at the correct time. The problem, which others may have experienced, tends to manifest itself when ECHO OFF commands, or the @ at the start of a line, are used to suppress screen output. The mysterious characters we put into the PROMPT command string to set the display colours, and the like, must pass, via ANSI.SYS through the display drivers and must, therefore, appear on the screen to take effect. If you are having problems in getting a

coloured prompt to take effect put ECHO ON just before the PROMPT command.

TIMING PROBLEM

Mr Whitehead also reported a potential timing problem with the Aleph PC486 board during disc accesses. It would appear that when the board passes over control to the external filing system (for example the ADFS or SCSI filing system) it loses immediate contact with the Archimedes clock which, in effect, stops the DOS clock. The moral is clear: don t rely on the DOS clock for timing purposes if disc

'Inaccessible' part of memory

?   We could load another program

COMMAND.COM   'Shelling-out' loads another copy of DOS

PROGRAM

COMMAND.COM   DOS loads program

Buffers, Drivers DOS Kernel etc.

accesses are likely during the timed period.

SHELLING OUT

In the DOS world, the word SHELL can crop up in all sorts of places. At one level, shells are programs which protect us from the nitty-gritty of DOS by providing a user-friendly means of handling files and certain other simple maintenance tasks. Before MS-DOS 5 came along with DOSSHELL the field was occupied by third party utilities such as PC-Shell. Leaving these aside, a glance through the DOS command list reveals a little used command called SHELL. This is intended to

be used in your CONFIG.SYS file to specify the name and location of the command interpreter you want DOS to use. Normally the command line interpreter you would use would be COMMAND.COM found in the root directory. Since this is the default we usually don t bother with the SHELL command. Presumably, there are are people around who need to write custom command line interpreters and this is for them.
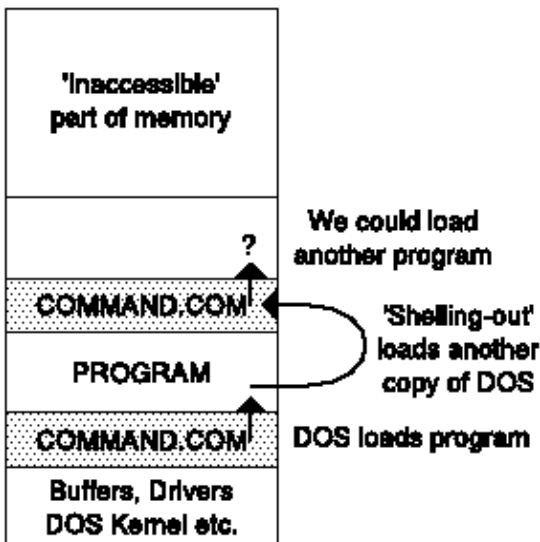
Another place where you might find a SHELL command is in QuickBasic. In this context SHELL allows you to perform DOS commands from within programs. For example, in QBASIC (and other DOS based Basics) the instruction:

   SHELL "DIR"

would print a current directory list on the screen (this is equivalent to the RISC OS Basic commands *. or OSCLI .). If you use the instruction without a following command, SHELL will take you right outside QuickBasic and you will find yourself in DOS. No need to panic - this is not back in DOS. What has happened is that another copy of DOS (strictly speaking) is loaded on top of QuickBasic and you are using that (see the diagram). Many programs - spreadsheets, word processors, editors etc. - have an option within them to do this. The buzz word is shelling-out . Once shelled-out you can perform all the usual DOS operations - even running another program, from which you could shell-out again. Bear in mind, though, that you will soon run out of memory. It is surprisingly easy to forget that you have shelled-out, try to run another program and suddenly get an Out of memory message.

How do you return to the program? Simply type EXIT and