



California dreaming

Everything seems to be rosy in the Apple garden, as Howard Oakley discovered when he went to California. Mac OS 8 is under construction, and famous faces are in the corridors.

Finding myself in California, I took the opportunity to visit Apple's R&D building at the wryly-named 1 Infinite Loop, Cupertino, ostensibly to find out about QuickTime 2.5 and its future. Bearing in mind tales of imminent corporate disaster, I was pleasantly surprised to see a huge and active campus, from the Apple Fitness Centre on Bandley Drive, to giant models of the infamous "dogcow" (an intermediate species featured in the page orientation icons of the Page Setup dialogue) and other iconic nobility.

There were no vacant parking spaces, empty offices, or worried faces. Plenty of employees were walking round barefoot, some arrived on skateboards or inline rollerblades, but all were purposefully busy.

Star spotting

While in the lobby of 1 Infinite Loop, sensing the nearby industry of hundreds of programmers crafting Mac OS 8, I saw Don Norman, emeritus Professor of Cognitive Science, and Apple Fellow. Thankfully I had just left the Apple Company Store with a copy of Voyager's CD-ROM, "First Person: Donald A. Norman", which contains his three seminal works on human-centred design. Back in the UK, I thought it would be a delight to browse his thought-provoking books with the added benefit of original talks and hypertext links. But there were some hurdles to overcome first.

This CD is one of a series (others cover Marvin Minsky's work on artificial and real intelligence, and Stephen Jay Gould on evolution) released in 1994, using HyperCard, QuickTime and custom fonts. So, I first had to install the stacks and their fonts onto my hard disk.



Another acquisition from the Apple Company Store's fine collection of Mac software was Fractal Design's Poser. This allows you to pose and render an infinite variety of different human models, against PICT backgrounds. Already widely used in as diverse fields as ergonomics and advertising, it is also great fun

As I had bought all three, I opened one of the font suitcases and ensured it contained all the fonts required for the different CDs, by opening the other two suitcases and dragging extra fonts over to it. Sometimes you can avoid actually having to put such a suitcase in the system folder, by keeping it in the same folder as the application. But as this was HyperCard, this ploy did not work, and I had to drop the composite suitcase onto my active system folder to install the fonts.

HyperCard hassle

Once this was done, I tried opening Don Norman's stack using my copy of HyperCard 2.3, the latest version which runs well on Power Macs. While much of

the text content worked correctly, graphics and displays were missing. My next thought was that this was the result of running at 800 x 600 pixels screen resolution and 32-bit colour, so I quit HyperCard and opened the Monitors and Sound control panel. This quickly brought me to a more standard 640 x 480 and 256 colours, but the stacks were still broken.

The solution lay in reverting to the copy of HyperCard 2.1 supplied on each CD. Although not as fast and fancy as version 2.3, this still runs sweetly on modern Power Macs, and clearly provides facilities on which Voyager's stacks are dependent. A more traditional printed book which had nearly cost me excess baggage was Hayden Books' 1300-page *Maclopedia*, a monumental compilation of all things Mac, from Apple history to internet shareware.

QuickTime 2.5

Back at the leading edge, this latest version of QuickTime is a major release which will delight those with Power Macs (bringing them speed increases of 20 to 200

Crash course

An Aide Memoire

1. If the crashed application remains open, try Cmd-Opt-Esc which forces it to quit, or click on a "bomb" dialogue to quit the application, or restart your Mac.
2. Restart your Mac using, in order of decreasing preference: **Special/Restart** Finder menu command. **Power key** produces the restart/sleep/shutdown dialogue. **Cmd-Power** breaks into MacsBug (if installed), then type `rb` and press return to restart. **Cmd-Control-Power** forces restart (on some models). **Cmd-Opt-Shift-Power** forces restart (on some models). **Restart switch/button**. Press this if provided on the case of your Mac. Press on/off switch to turn off, if one is fitted.
3. **Disconnect from mains** if all else fails (most damaging). For the last two, you will then have to start your Mac up again.
4. **Get your Mac restarted successfully**. Using Shift disables all extensions if held during startup. **Cmd-Opt-Shift-Del** bypasses the current startup disk, picking the next instead. **Cmd-Opt-P-R** zaps the parameter RAM, which may be messed up.
5. Run Disk First Aid to verify at least the startup disk (containing the active system folder).
6. Using Disk First Aid, repair any disks reported as being damaged. Remember it cannot repair the startup disk: you may need to restart from another hard disk, or the Disk Tools floppy disk. Don't soldier on with a potentially damaged file system. It will only lead to more crashes.
7. Look at the Wastebasket. If it contains a folder named (for example) "Rescued items from HD20", you may be able to recover those files by starting the application which crashed.
8. Check possible causes of the crash, including extensions, control panels, disk drivers, applications, and preferences (in the preferences folder within the active system folder). If damaged, they should be thrown away.



Apple's Disk First Aid remains the primary utility for checking and repairing disk damage

percent), MIDI musicians, and many more. Unlike other system software components, there are only cosmetic differences between the British and US localised versions, so you can use whichever is easier to download.

Charles Wiltgen is maintaining informative FAQ pages on the web which list the new features in 2.5, and detail all the compression/decompression "codecs" available. Sadly, these still exclude AVI, making it messy to convert or run many Windows movies, but now include MPEG. I was heartened to hear that QuickTime is already running well under Mac OS 8.

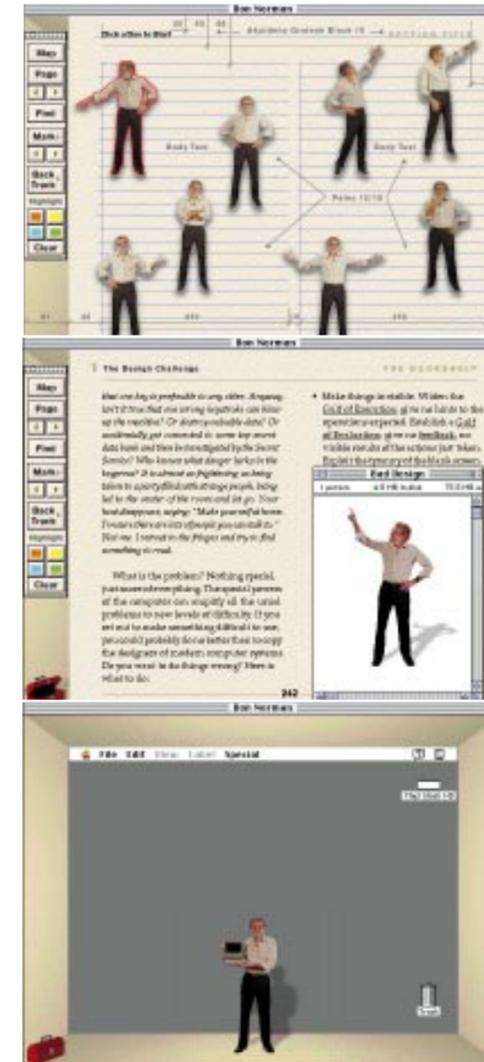
Mac OS 8

A major advance touted for Mac OS 8 is memory protection, to make Macs more stable in the face of crashing software. The current situation is a mess. Although almost all Macs have hardware memory management units (MMUs) which could implement this, legacy usage and code in the system and third-party applications have made it impossible.

In order to maintain an acceptable level of backward compatibility and accommodate other design requirements, Mac OS 8 will not place the system and each application in their own protected memory spaces. Most applications will share a single address space of up to 4Gb, with only faceless "server" applications enjoying their own protected spaces.

Critics claim that this is a major weakness, and that Mac OS 8 will not improve stability much. In practice, though, it should prevent most situations in which a crashing application can take the system out too, forcing you to restart.

Another major culprit is the rogue or conflicting extension. Mac OS 8 will introduce a new architecture to support system patches which are currently the bread-and-butter of most extensions. This new Patch Manager should be a big step forward. In practical terms, you should be weaning yourself away from dependency on large and complex extensions, but need not



Don Norman, on his Voyager CD-ROM, doesn't even spare Apple his sharp criticism of interface design

be scared of investing in new applications, or upgrading existing ones.

Next month I will consider the changes in human interface under Mac OS 8.

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