Mac OS X is here!
Your survival guide
New look, programs, and way of life

FireWire drives
We pick the best hard disks

Inside XML

Ergonomics for kids
Safe computing for children

Photoshop colour tips

Mac first aid
How to cure common ills
Bluffers’ guide to OS X

The public beta version of Apple’s all-new next-generation, all-singing/all-dancing operating system is available now (see pages 20-21, and 70-82). All you need is £25 and the ability to cross your fingers for at least four months, and you’ll find yourself at the forefront of Macintosh computing.

The road to Mac OS X enlightenment is crowded with many obstacles: missing drivers, non-optimized applications, and a bare-bones manual, for starters. Add to that the terror of the unknown (what the hell has Apple done to the Finder?!), and you’ll soon discover why everyone else didn’t rush to sample the delights of living on the edge.

Stick with OS X, however, and you’ll be the envy of your friends and colleagues. OS X’s Aqua interface looks simply superb next to the rather plain Platinum desktop of Mac OS 9. Don’t hide your brave adventure from the rest of the world. Embrace change and nail your Aqua colours to every cubicle in your office. Here’s Macworld’s top 10 tips for bluffing your total mastery of Mac OS X, and becoming the hero of all around you.

1. Don’t, for God’s sake, pronounce it “Mac OS X” – it’s Mac OS “Ten”. One mention of the letter “X” and you’re exposed as a fraud. Apple itself hasn’t got the foggiest what to call its upgrades to the new operating system – OS X I is OK, but OS X IV looks more like the date of the Roman invasion of Britain.

2. Pump up the Dock to its maximum size and maximum magnification. This will help you in two ways. First, installing Mac OS X is all about showing off. And the Dock is the most showy part of the whole Aqua interface. Minimize all available documents. Roll your mouse (one of the new optical ones, of course) slowly over the Dock as if you were stroking a sleeping tiger. Listen to your audience “ooh” and “ahh” more than a crowd of kids on Bonfire Night.

Second, enlarging the Dock will slow down even your multiprocessing G4 Power Mac to a crawl – letting you work out where the blazes you’re supposed to be, before your onlookers realize that you don’t know what you’re doing.

3. Load as many QuickTime movies as possible, and stick one in every single folder you create. Mac OS X’s ability to play QuickTime movies even in the Finder’s third Preview column is another sure-fire hit with those backwards-thinking OS 9 users. Make sure that these movies are trailers to the very latest US box-office releases – never miss the chance to show how culturally far ahead you are to those who still think Sherlock 2’s interface is pretty shocking.

4. Aqua-fy everything. Apple has added the ability to turn the glowing and throbbing bright blue parts of Mac OS X into a cold, hardly noticeable Graphite. Stuff that (with the Carbonized Stuffit, of course…)! Your use of Mac OS X must be as conspicuous as an Uncle Sam impersonator at one of Saddam Hussein’s dinner parties. Turn your display to maximum brightness, and get as many pulsing Aqua Progress and Default bars on your screen as pixely possible.

5. Be ruthless about the old ways. No matter how much you miss the simple, familiar interface protocols of Mac OS 9 and earlier, you must constantly rubbish such antiquite items as the Chooser, control panels, and the Apple Menu.

6. Let others “have a go”. Watch in amusement as your friends suddenly don’t know anything about the Mac any more. Chuckle when they attempt to pull-down menu items from the central Aqua Apple logo. Guffaw when they try printing a document.

7. Get connected to the new, optimized Address Book. Sure, it’s almost impossible to work-out the wayward thinking behind this free OS X utility. But, remember that if you can’t work out what’s what, no one else is going to have a chance to send or receive emails from your OS X-loaded Mac. Kudos!

8. Draw yourself a map. Keep it hidden, but a map is the only way that you can keep track of where your files are on your hard drive. It gets easier as you get used to OS X, but, for the first weeks, locating anything with the new Finder sure is tough going.

9. Nest like a desperate cuckoo. The more folders that you have nested in other folders, the more fun navigating gets when you’ve got the hang of the Finder. Then you can flick around innumerable folders, making onlookers dizzy with the new List column views speeding past their wide-open eyes.

10. Keep very quiet about Classic, Apple’s crafty way to let you do all your important work in Mac OS 9 while still being able to play with the Dock when anyone else is watching. Pretend that all of your applications are early Cocoa alphas or beta Carbons. Install the ‘Aquatica Z’ Appearance Theme for Mac OS 9, so that even when working in Classic, it looks like you’re a fully paid-up member of the “Mac OS X or nothing” community. (Don’t let anyone get their copy-cat mitts on Aquatica, mind.)

Obey these simple rules, and your Mac screen cred will rise sky high. Next month, we’ll look at how you can explain away the almost total lack of work you’ve been able to crank-out recently, and why the ink-jet hasn’t needed any new paper since September.
Contents

121 Secrets
Protect children from workstation injury with this guide to kid-safe computing.

70 Mac OS X
Apple has released the long-awaited public beta of Mac OS X. Much has changed in this next-generation OS, so let Macworld’s team of experts guide you through its new features – from the Dock to multiprocessing. And, see how the beta compares to Mac OS 9 where it really matters – speed.

87 Mac doctor
An essential guide to troubleshooting – we’ve got a cure for what ails your Mac.

109 Create graphics
Get rid of unwanted colour cast on digital images using Adobe Photoshop.

93 FireWire HDs
FireWire hard drives have arrived, and we test and rate the best of them.

101 Inside XML
XML is set to change the Web forever – but what is it, and how will it help you?

Inside XML

Mac first aid
How to cure common ills

Ergonomics for kids
Safe computing for children

Photoshop colour tips

Mac OS X is here!
Your survival guide
New look, programs, and way of life

Macworld
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BUYER’S GUIDE

131 131-133 Buying a Mac. Macworld’s advice for readers buying a G4 Cube, new Power Mac G4, iMac new improved iBook or PowerBook. Includes UK’s only benchmark scores updated every month.

35 Wacom’s touchscreen tablet Irixcom’s NetStation: FileMaker moves to Palm OS Kodak’s digital duo Terran makes clean sweep; iyama’s FST warms up All-in-one HP printers Epson scanner assault; Nikon cameras zoom in HP ships wideboys Kodak camera boon

PRODUCT NEWS

10 Letters Readers write on the Paris Expo, Mac OS X, RAM requirements and BT’s missing ADSL drivers.

15 Cover CD Free 30-day demo of Flash 5, plus a 14-day trial of BBEdit

115 Create: Web Make remote-rollover buttons with Adobe’s LiveMotion.

125 Q&A/tips Mac OS 9 shortcuts; Photoshop hints; XPress guides and more.

EVERY MONTH

20 Apple’s Paris roll-outs Pro Keyboard cancellation Palettemedia on the offensive Quark wraps up 3D Expo favourites honoured in London and Paris FireWire vs USB 2.0 Apple brings US education strategy to Europe Motorola’s new G4 chip Applestore push with just one click Apple’s $8bn stock crash Adobe and Corel’s third-quarter results

118 Boycott for the future

123 Reader Offers Discounts on IDG Books and Mac merchandise

145 Career Moves Look for a new job, sign up with recruitment consultants and Mac-skill courses.

178 Jobs I’m looking for

46 Q&A Photo

46-47 iBook and iBook SE

49 Cubease VST/32 5.0

50 Portable MP3 players; DAP II MGC; Rio 600 Silver

51 Office 2001 for Mac

52 VR Worx 2.0 LiveSlideShow 1.0

55 Commotion 3.0 Lasio Studio 1.5 for Dreamweaver

56 Adobe Photoshop 5 Interactive Seminar Cordless Trackman Wheel

59 e-Picture 5.0 WebShocker 2.0 Robson

60 iMaxpower G4 Funnel Web 4 and Enterprise

62 Maps In Minutes: British Isles LaCie Blue Eye

68 Soundiam MP Plus 2.5.1 V600 Zoom

Contents

76

Macworld

September 2000

www.macworld.co.uk

November 2000
Users demand UK show

Franco-phobia

Apple intended its Paris show to be a pan-European event — drawing in crowds from other major markets, such as Germany, Italy, Spain and the UK. But many travelling visitors voiced their anger, as the vast majority of the show stands were manned by French-speaking staff only.

Microsoft, Adobe and Epson were just three of the big names to focus solely on the French-speaking public that made up over 95 per cent of show visitors.

Hewlett-Packard handed out promotional material only in French, and countless others regarded the show as purely a Gallic affair.

Bewley. “My hotel and travels in France, and countless others made up over 95 per cent of the French-speaking public that were just three of the big stands were manned by the vast majority of the show UK. But many travelling visitors cancelled over three years in a row. Many exhibitors came to the event, according to George Leptos, UK manager for three years), 10,450 visitors came to the event, according to finance another appearance at the two-day event, it claimed.

A French slant to Apple’s official Macworld European event in Paris next year.

And is planning to keep its OS X Beta blockers

Subject: OS X Beta blockers


The Macromedia and Computer software/hardware

Subject: OS X Beta blockers


Apple engineers first sketched out plans for a replacement for the already-ageing Mac OS in spring 1987. It was codenamed Pink. It was to be followed by equally doomed OS projects, including Taligent, Raptor and the notoriously, chaotic Copland.

Why? Because it’s now a whopping 13 years for voice – I get speeds in the high 40s. Why?

The reason BT are even bothering is because of FireWire, devices treated as second-class citizens.

But many travelling visitors felt that initial conversations in the aftermath of the successful event show that Adobe is likely to make an appearance at next year’s show. Epson, another exhibitor this year, is also likely to reconsider in time for next year’s show – to be held again at London’s Business Design Centre, November 22-24, 2001.

Exhibitors expressed satisfaction at the event. Trish Hawkins, UK distributor AM Micro, said: “It’s good to see a Mac show in London. We’ll be back again next year.”

Newer Technology’s president, John Nelson, had flown over from Newer’s Witchita HQ to attend The Expo. “It’s a nice show,” he observed. Neil Wright, head of marketing at Computer Warehouse Unlimited, said: “It’s been busy. It’s nice to see how much the UK community wants a Mac show here. Adobe should have been here, although I understand that they hadn’t budgeted for it.”

Alaidin said: “We are willing to do anything we can in order to get Apple here next year.”

London calling

Meanwhile, exhibitors and organizers hailed The Expo 2000 – held at London’s Business Design Centre two weeks after the Paris show – as a great success. Despite Apple bogging out the event (the only Mac-specific show in the UK for three years), 10,450 visitors came to the event, according to the organizers.

The Expo, 2000 was originally conceived by ISP AppleOnline’s executive director Farhad Alaidin, as a reaction to Apple’s decision last year to cancel its official UK show indefinitely. Apple had set up and then canceled UK Mac shows three years in a row. Many exhibitors signed up for the show at the 11th hour with considerable pressure from a French slant to Apple’s official European event last month.

Despite this, Alaidin said that initial conversations in the aftermath of the successful event show that Adobe is likely to make an appearance at next year’s show. Epson, another exhibitor this year, is also likely to reconsider in time for next year’s show – to be held again at London’s Business Design Centre, November 22-24, 2001.

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Alaidin said: “We are willing to do anything we can in order to get Apple here next year.”

UK show welcomed

Despite the absence of key players, such as Apple, Adobe and Epson, over 10,500 people attended the show at the London-based Expo 2000 at the end of September.

The Macromedia and Computer Warehouse stands (above, left) were busy all through the two-day event. However, Technology demand to Macromedia the following day separate our Austria-Micro’s stand pictured above, bottom. The US processor upgrade seen at Newer Technology’s stand in London — see page 27 for more details.

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Subject: Clash war
I purchased an Apple G4 Cube from the Applestore and found out from Apple support upon its delivery that the large Apple Cinema Display works only with the newer version. I also had a Pro Keyboard order cancelled because the new keyboard is incompatible with the rest of the Mac line! Because Apple doesn’t seem to be highlighting these ludicrous incompatibilities, I think I’d better warn other unsuspecting Macintosh users.

Subject: Tax on Macs
Congratulations to Dominique Fidèle on the article “At last online banking comes to the Mac” (October). It’s pleasing to see so many banks are now becoming Mac friendly. However, Dominique failed to mention the grandfather of online banking – the Bank of Scotland – whose superb online banking service, HOBS, has been available to the Mac as long as there have been Macs. Perhaps Dominique could turn her focus on highlighting how government departments, such as the Inland Revenue [IR], are Mac illiterate. Currently, one can only submit a Self Assessment form to the IR using a Windows machine. Mac fans are barred for “security reasons”.

Subject: Mac banker
Further to your article on Internet banking for the Mac (October 2000), HSBC provides Internet banking to Macintosh users for normal accounts, not only through First Direct. The service doesn’t rely on any platform-specific software, using Internet standards such as JavaScript instead. This means that Internet services can be accessed from any computer running a browser that supports the relevant standards. Surely this is the way all companies should provide Web services. If they did, then our worries about gaining access from our favourite operating system would be a thing of the past.

Dai Jones

Subject: OS X Beta user
I have been using Mac OS X Beta and unless Apple improves it dramatically I’ll be sticking with OS 9 with the Aqua theme installed. Or I may — for the first time ever — buy a Windows machine next time.

I think a Windows machine with full support for JPEG cards and a wealth of games to choose from is a good choice at the moment.

I have been using a Mac for graphic design for five years, and have always thought they were the best. Now I realise Mac and PCs are the same — except one gives you access to any software you want, and one has Steve Jobs at the helm.

Paul Markham

Subject: Chooser loser
Mark Allen asks what is so bad about the Chooser (Letters, October). Well, I tried to install a printer recently but couldn’t complete the process because it wouldn’t appear in the Chooser. After phoning a helpline I discovered that the Chooser can display only 32 items, and had to delete some items before my printer would appear. Being an inexpert user, I was worried that I’d lose something essential. Adding a printer ought to be a simple task, but this method was hardly intuitive in the way that Macs are famed for. Windows is ahead in this respect.

Good riddance Chooser! I say.

Tony Watson

Subject: Sticky situation
The big problem with the 22-inch Cinema Display (see image, left) is price. So, I’ve come up with a better alternative — a larger screen for £20 less. Just buy four of the smaller 15-inch displays, disassemble and reattach the screen components together (double-sided sticky tape should do the trick!). You now have a 30-inch traditional-ratio screen and can spend the extra on electrical insulation gloves.

David Jones

Subject: Not so easy PC
Six months ago I upgraded my G3 to Mac OS 9 — and I have a machine with the worst operating system in the world. It crashes repeatedly, takes all day to load a Web page, and frequently disconnects me in the middle of a download. There are hardware and software conflicts, missing and corrupt files, installations which disappear, and programs that refuse to run.

For the first time in my computing life I’ve had to use a helpline. Today it’s gone back for repairs. I haven’t had so much heartache and disappointment for years. But then, it is my first PC. As for my Mac running on OS 9. Well, that’s always run perfectly.

Colin Lindsay
Macromedia Flash 5 30-day tryout

Flash 5 fuses the precision and flexibility of vector graphics with bitmaps, audio, animation and advanced interactivity to create brilliant and effective Web experiences. Flash 5 easily integrates with existing Web production workflow, supporting direct import from Macromedia FreeHand and Fireworks. Flash 5 also provides powerful development tools for creating advanced sites and applications, including tight integration with Macromedia Generator.

New features include familiar tabbed docking panels and a new standard user interface; native pen and sub-selection tools for precise vector graphics; Movie Explorer for improved organization and structure navigation of documents; QuickTime and RealPlayer support; and much more.

Take the full package for a 30-day test drive.

BBEdit 6.0 trial

BBEdit is optimized for the editing, searching, transformation and manipulation of text. It provides an array of general-purpose features that are useful for many tasks, especially for software developers and HTML authors.

Version 6.0 incorporates a host of new and enhanced features, including support for HTML 4.01, XHTML 1.0 and WML 1.1, and contextual menu access to HTML markup.

Try the full package for 24 launches.

SoundJam MP Free 2.5.1

Version 2.5.1 has significant improvements to the MP3 encoder (including support for dual-processor G4s), and playlists have been revamped — a hierarchy of folders and sub-folders can be created much like in the Mac’s Finder. SoundJam now sports a stream tuner that automatically finds music over the Internet and even allows you to stream music from your computer using a re-broadcaster.

This is a 14-day, 30-encodings trial that then reverts to being a simple player.

Coda Finale 2001 demo

Coda Finale now includes a number of Web options such as Save As Web Page and Distribute on Net4Music. It also incorporates MicNotator for automatic notation and MIDIScan/SmartScore for the direct scanning of files. The new Find Parallel Motion plug-in analyses music for parallel fifths and octaves, and the guitar entry screen now has a fretboard editor.

The demo is save- and export-disabled, with a watermark on printouts.
Before you start working your way through the software on our CD, go to the System Utilities folder and make sure you install the following:

- **Acrobat Reader+Search 4**
  Install this version to be able to read many of the on-screen manuals.

- **StuffIt Expander & DropStuff**
  Versions 5.5, 5.1.2 and 4.5 are included.

- **System tools & ATM Lite**
  The CD also carries the latest version of InternetConfig, UniZip 5.32 and ATM Lite 4.6 (required for Suitcase 9).

- **QuickTime 4**
  Some programs require QuickTime 4. This can be downloaded from www.apple.com/quicktime/download.

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**INSIDE MACWORLD**

**ColorBlade**
Preview and create HiFi separations in Adobe Photoshop.

**iMalc 1.1.0**
Replace the standard Apple calculator with a fully featured one.

**Interarchy 3.8**
Powerful and flexible Internet interface formerly known as Anarchie.

**MusicMatch Jukebox**
MP3 software for recording, downloading, organizing and playing.

**Time Palette 4.0.3**
Calculates the current local time for any place in the world.

**Ultra Lingua FR-ENG**
Popular French-English dictionary — formerly Le Frangophile.

**USB Overdrive 1.3.7**
Universal USB driver for all USB peripherals including mice and joysticks.

**Plus...**
- Conflict Catcher 8.0.7 demo, File Buddy 5.8.3, Funnel Web 4.0 demos, Gauge PRO 1.0.2, Peek-a-Boo 1.5, Program Switcher 5.5.0, Snitch 2.6.5, Switcher-Master 1.3.0, Switcher-Setup CM 1.1.1, TattleTech 2.81, Ultra Recorder 2.4.3.

**IntelliNews 3.0**
A specialized Web browser that brings you all the headlines and news!

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**SERIOUS SOFTWARE**

- **Web Album Wizard 1.2**
  Web Album Wizard is an easy to use, step-by-step application that allows you to put your digital photographs (in JPEG, GIF or PNG image formats) on the Internet in neatly arranged thumbnail-gallery format with a minimum of fuss. It includes three different layout and captioning options and requires no knowledge of HTML to use. If you can upload a folder to your ISP or hosting service using your FTP software, then you have all of the knowledge you need to use Web Album Wizard.

  This demo version inserts a Demo thumbnail for every other image catalogued. Requires QuickTime 3 or a full installation of QuickTime 4.x.

- **Extensis Suitcase 9.01**
  Suitcase 9 provides speed, stability and compatibility with current operating systems. Systems run faster and crash less when fonts are managed and activated only when they are needed. Suitcase 9 also provides powerful font previews to help you make the right font selection. Adding or deleting large numbers of fonts to/from Suitcase 9.01 is now up to 6 times faster. You can view fonts by font suitcase or by font face. Additionally, the Suitcase Font Engine memory requirements have been reduced to 4.5MB, and the OS 9 problem that kept application font menus from being refreshed has been fixed. Try the full package for 30 days.

- **VSE File Pirate 3.1**
  Find the hidden multimedia library that lies within your files! VSE File Pirate extracts sounds, pictures, icons and text from your games, applications and documents. You already own tons of pictures, dozens of sounds and a huge number of icons — VSE File Pirate will unearth these hidden treasures for you.

  VSE File Pirate scans the resource fork of all Macintosh files and only finds data that is stored there. Find “easter eggs”, those amusing tidbits that programmers hide in their creations.

  Check the Summary file for issues concerning copyright. Demo is fully functional but marks all pirated items.
Krio 1.3 demo
Krio is a fast and fun puzzle/strategy game suitable for all the family. The object of Krio is to clear each level by breaking all the blocks – a Krio can break a block if it is the same colour, and if it bounces into a monster of the same colour it turns back into a Krio and if it bounces into a monster it turns back into a Krilo.

Krio requires quick reflexes and good strategy skills to complete each level, providing hours of clean, non-violent entertainment. Krilo also contains a level editor (not included in the demo), so players can design their own playfields.

Requirements are a Power Mac with thousands of colours on-screen and 9MB available RAM.

SkyFighters 1945
SkyFighters 1945 is a World War II era flight sim featuring realistic handling of historic aircraft. The focus is on dogfighting, both against the computer and other players, and destroying ground targets. This is a preview version that will give you a chance to get familiar with how the aircraft fly, take off and land, and shoot down the other non-aggressive aircraft.

The full version includes 30 missions to complete and an online feature that allows up to eight people to fly together.

Requirements are a Power Mac, RAVE or OpenGL (depending on which version you run), and a 3D hardware-accelerator. Any currently shipping Mac satisfies these requirements.

Our third demo for this month is Virtual Wings Pro 1.6 where you get to fly one of two commercial light-aircraft.

The Top 10 Shareware Games folder includes the latest versions of some favourites – David’s Backgammon 3.9, ManicMinefields 1.4.2, Peg Solitaire 1.11 and MemoryPict 7.1. Also up for grabs is C Chess 5.0 Lite, a full-featured version of the popular board game.

Additionally, this month you’ll find Breaker, an addictive little arcade game that is a cross between Centipede and Pac-Man, Mimic 1.1, a musical play on ‘Simon Says’, and Runestone. And if you play the National Lottery you’ll love Keno Buddies.

Finally, there’s The Oompas Game which defies explanation…
Apple used its first European Macintosh show to release the long-awaited Public Beta of Mac OS X, and revive its iBook line-up. Microsoft showed off its Internet Explorer, while Apple had promised to deliver the public beta of its next-generation operating system by “summer 2000.”

Mac OS X and new iBooks at Apple Expo Paris

A

Apple had promised to deliver the public beta of its next-generation operating system by “summer 2000.” During his keynote address to Apple Expo 2000, CEO Steve Jobs made the announcement while the sun still shines in Paris. “Mac OS X is the Future of the Macintosh,” Jobs told the French faithful. “The point of Mac OS X is to simplify work on Macs shipped before July 19, 2000.”

The Pro Keyboard (reviewed, September 2000) ships with Volume Down, Media Eject and Mute keys, and a super-modern kernel that makes the Mac super-robust.”

The OS X beta is available from the online Apple Store (www.apple.com/uk) for £23.23 (£24.95 inc. VAT). It is not a download, however; OS X is shipped on a CD with a 25-page printed installation guide.

Compatible systems include the iMac, iBook, all G3 and G4 Power Macs (including beige models), G4 Cube, and PowerBook introduced after September 1998. Apple recommends at least 128MB of memory, and Mac OS 9.0.4 is necessary to run today’s “Classic” applications.

An important goal for the first version of Mac OS X is for it to run existing Macintosh software well enough that the transition from Mac OS 9 is smooth. However today’s Mac apps — which run under OS X’s Classic simulation — won’t be capable of taking advantage of new OS X features, such as memory protection and pre-emptive multitasking.

To benefit from the more-modern features and the lush new look Aqua interface, applications must first be optimized for OS X, either through a coding process known as Carbonisation or by being rewritten in the new Cocoa language. OS X ships with a Carbonized Internet Explorer 5 from Microsoft, and StuffIt Expander from Aladdin Systems. Apple supplies native versions of Sherlock, and a bunch of new optimized programs such as TextEdit, Address Book and the Mail email client. Third-party software developers are working on optimized versions of most major Mac programs, but these may not surface until the final version release next year (see page 22).

For Macworld’s full Mac OS X survival guide, see our ten-page feature, starting on page 70.

iBook bonanza

Jobs also used his Paris speech to announce an updated iBook range. Apple’s FireWire port and 4V port to the iBook, and included iMovie 2 software to take simple, powerful video-editing functionality to the consumer portable for the first time.

The iBook Special Edition’s speed is boosted to 466MHz (SC4). The previous top-of-the-range iBook Graphite SE ran at 366MHz (SC1) — the new speed of the standard model. The new iBook SE (1,249 inc. VAT) now features a DVD drive, and is available in a new Key Lime colour and “refined” Graphite. The standard iBook (1,249 inc. VAT) is also available in the striking Key Lime, as well as a new deeper Indigo blue. The Key Lime iBooks are available only from the Apple Store. All the iBooks now come with a built-in ATI Rage Mobility 128 graphics accelerator. 64MB of RAM and a 1GB hard drive. See Reviews, page 46.

Radeon and on

Jobs also announced that ATI’s 32MB Radeon graphics accelerator upgrade will be available for Apple’s G4 Cube and G4 Power Mac as a £70 build-to-order option from the Apple Store.

All claims that the Radeon card is a “quantum step forward in 3D acceleration to support intense and immersive games and the most complex 3D modelling and rendering.” Its advanced features — such as hardware support for transformation, clipping, and lighting — mean the card can display “multiple objects, detailed objects, and lush environments at extremely high resolutions.”

The Radeon card comes with 32MB of DDR (Dual Data Rate) RAM — which provokes up to double the throughput of standard video SDRAM, according to ATI. With a peak bandwidth of 4.8 gigabytes per second, DDR RAM allows the card to handle large texture maps, making 3D games appear extremely realistic.

Simon Jary

News continues page 22

Apple cancels new Pro Keyboard for old Macs

Apple has confirmed that the Volume Up, Volume Down, Media Eject and White keys on its new 108-key, £39 Pro Keyboard will not work on Macs shipped before July 19, 2000. A late software fix, however, is not fit for public consumption, according to Apple.

The company says that support for the new keys on older USB Macs is not expected until early 2001. The remaining keys work fine on any USB-equipped Mac running Mac OS 9.0.4.

The Pro Keyboard (reviewed, Macworld, September 2000) ships as standard with all new desktop Macs, and was also available from the AppleStore, UK customers who pre-ordered the keyboard received an email explaining that their order was cancelled. The new optical Pro Mouse, released with the keyboard, is unaffected and is still on sale.

Disappointed buyers

Graphic designer, Julie Morton, told Macworld: “I’d been looking forward to at last getting a full-size Apple keyboard since I read the news from Macworld Expo, New York. I was really disappointed when the Apple Store just cancelled my order without even asking me whether I wanted those few functions that didn’t work.”

Apple has posted a pre-release version of a software fix (for developers only) that will enable the keys for use with older USB Macs, but the fix comes with warnings. It is “pre-release and not directly supported by Apple, nor it intended for end-users”. Apple says that “system software fix (for developers only) that will enable the Mac Pro Keyboard for old Macs. This keyboard is also available in the striking Key Lime, as well as a new, more powerful, Graphite-shade with one command. The Pro Keyboard (reviewed, September 2000) ships with Volume Down, Media Eject and Mute keys, and a super-modern kernel that makes the Mac super-robust.”

The OS X beta is available from the online AppleStore (www.apple.com/uk) for £23.23 (£24.95 inc. VAT). It is not a download, however; OS X is shipped on a CD with a 25-page printed installation guide.

Compatible systems include the iMac, iBook, all G3 and G4 Power Macs (including beige models), G4 Cube, and PowerBook introduced after September 1998. Apple recommends at least 128MB of memory, and Mac OS 9.0.4 is necessary to run today’s “Classic” applications.

An important goal for the first version of Mac OS X is for it to run existing Macintosh software well enough that the transition from Mac OS 9 is smooth. However today’s Mac apps — which run under OS X’s Classic simulation — won’t be capable of taking advantage of new OS X features, such as memory protection and pre-emptive multitasking.

To benefit from the more-modern features and the lush new look Aqua interface, applications must first be optimized for OS X, either through a coding process known as Carbonisation or by being rewritten in the new Cocoa language. OS X ships with a Carbonized Internet Explorer 5 from Microsoft, and StuffIt Expander from Aladdin Systems. Apple supplies native versions of Sherlock, and a bunch of new optimized programs such as TextEdit, Address Book and the Mail email client. Third-party software developers are working on optimized versions of most major Mac programs, but these may not surface until the final version release next year (see page 22).

For Macworld’s full Mac OS X survival guide, see our ten-page feature, starting on page 70.

iBook bonanza

Jobs also used his Paris speech to announce an updated iBook range. Apple’s FireWire port and 4V port to the iBook, and included iMovie 2 software to take simple, powerful video-editing functionality to the consumer portable for the first time.

The iBook Special Edition’s speed is boosted to 466MHz (SC4). The previous top-of-the-range iBook Graphite SE ran at 366MHz (SC1) — the new speed of the standard model. The new iBook SE (1,249 inc. VAT) now features a DVD drive, and is available in a new Key Lime colour and “refined” Graphite. The standard iBook (1,249 inc. VAT) is also available in the striking Key Lime, as well as a new, deeper Indigo blue. The Key Lime iBooks are available only from the Apple Store. All the iBooks now come with a built-in ATI Rage Mobility 128 graphics accelerator. 64MB of RAM and a 1GB hard drive. See Reviews, page 46.

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Simon Jary

News continues page 22
OS X: developers slow to Carbonize

With the release of the Mac OS X public beta (see page 20), software developers have begun revising applications for Mac OS X. Few hardware manufacturers, however, will be rewriting peripheral drivers for the beta — preferring to wait for the final, full release of OS X early next year.

Mac OS X offers three environments in which programs can run: Cocoa, Carbon and Classic. Classic exists for non-updated applications, and runs in emulation in OS X. Classic apps therefore operate more slowly than those optimized for the new Mac operating system. Optimized Cocoa and Carbon programs are faster and take advantage of OS X’s modern features, such as memory protection and multiprocessing support – as well as featuring the new look Aqua interface. Carbon is a transition environment that lets developers easily update current Mac applications to run natively on Mac OS X.

Macromedia has demonstrated development builds of its Fireworks Web-graphics tool and Dreamweaver Website editor running in Carbon, as well as demoing Flash Player running on Mac OS X. Macromedia will also support Mac OS X in FreeHand, Director and Shockwave Player.

Carbon waiter
Adobe, like most developers and software companies, has declined to comment as to when its applications will be Carbonized. Nearly all companies are working to release Carbonized versions of their software and drivers, but not for the public beta.

Quark representatives admit that version 5.0 of XPress, due in beta form shortly and expected to ship mid-next year in the UK, will not be Carbonized, though Carbon support will be available as the first upgrade patch to XPress 5.0.

Despite data backup being highly recommended prior to all OS X installations, Retrospect publisher Dantz says that although the company plans to fully support OS X and is making announcements in the future, no Mac OS X releases are imminent.

Driver skivers
Digital-tablet maker Wacom is unlikely to release drivers for the Mac OS X beta release, saying it lacks adequate information to support the level of functionality needed for a tablet driver to roll out for beta users. Hewlett-Packard is developing OS X drivers for the final release next year. Until then, you won’t be able to use HP ink-jet printers or other peripherals under Mac OS X, which cannot print to non-Postscript printers. Manufacturers, such as Epson and HP, are awaiting the final version of Mac OS X before offering drivers for their machines. The beta prints to network printers and USB PostScript devices. "Our position is we’re not going to officially support the public beta,” said Hugh Amick, HP’s Mac-connect program manager.

However, HP engineers are working on OS X drivers, he said. “We’re printing now under the public beta, but there’s a lot of work to be done in the areas of quality, speed and ease of use.”

Drivers for individual products could be posted on the Mac-connect section of HP’s Web site before OS X’s final release. “If our product group makes a driver, and Apple tells us that the operation of the driver won’t change under the final version of X, we may post it,” he said.

Mac OS X uses a framework called I/OKit to manage low-level access to printers and other peripheral devices. Apple says that I/OKit will ultimately make it easier to develop device drivers, but current Mac drivers won’t work with OS X.

Developers with native Mac OS X programs said they were disappointed by the lack of printer driver support in the public beta. “OS X has a wonderful new printing architecture, but it looks like the printer drivers aren’t there yet,” said Ken Case, director of engineering at the Omni Group. “It would be unfortunate if the printer manufacturers don’t put out drivers for the public beta.”

David Read, Joe LiPetri, Brett Larson and Mathew Honan

Playing it as cool as a Snow iMac, Apple has quietly increased the hard-drive capacity of all its PowerBook laptops and added iMovie 2 to the software bundle, without increasing the portables’ pricing. Apple made no announcement of the change at its Apple Expo Paris, and was unavailable for comment on its tactics. It is believed that the change was made to keep the pro laptops in line with the revamped consumer iBooks.

The PowerBook G3/400 MHz model will now have a 10GB Ultra ATA hard drive (in line with the new iBooks) rather than just 6GB. The PowerBook G3/500MHz models will have either 20GB or 30GB hard drives rather than 12GB or 18GB drives. No additional changes have been made to the basic configurations of either PowerBook model, which cost £1,699 (E1,999 inc. VAT) and £2,349 (£2,759 inc. VAT) respectively. Another 500MHz PowerBook model – with the 30GB drive – costs £2,737 (£3,215 inc. VAT), and includes an extra battery and AC adaptor.

The free iMovie 2 software allows for simple video-editing from digital video camcorders via the PowerBook’s FireWire port – see Macworld’s review, September 2000. Current FireWire-enabled PowerBook owners, can buy iMovie 2 from the AppleStore for £35 (£41 inc. VAT).

The new models are available immediately from the Apple Store.

More OS X coverage on page 20 & 70
Palette War: Macromedia on the offensive

Macromedia is squaring up to Adobe in the war of the tabbed palettes. Following Adobe’s legal action versus its graphics and Web rival (see News, Macworld, October 2000), Macromedia has filed a counterclaim against Adobe, alleging that Adobe has infringed three Macromedia-held patents.

The three patents include one (US Patent Number 5,467,445) related to changing blended elements and automatic re-blending of elements—a feature in FreeHand that Macromedia claims is infringed by Adobe’s rival vector-graphics program, Illustrator. The other patents ( Patent Numbers 5,151,998 and 5,204,969) relate to visually displaying and editing sound waveforms, which Macromedia claims are infringed by Adobe Premiere.

The company filed these claims in direct response to the suit that Adobe filed on August 10, in which it alleges that the tabbed, tear-off palettes in Flash, FreeHand and other Macromedia products infringes on two Adobe patents (US Patent Number 5,546,528 and 6,084,597).

Macromedia has demanded a trial before jury, and has also requested an order blocking Adobe’s alleged infringement of these three products and unspecified damages for what it calls “wilful” infringement.

Patent abuse

Macromedia noted that Adobe amended its complaint on September 18 to include an additional claim involving image-rendering features in Dreamweaver and Flash. Macromedia is resolute in its denial of Adobe’s claims, and has also provided a direct response to Adobe’s original charge. “Macromedia has no choice but to vigorously defend itself against the Adobe lawsuit,” said Kevin Lynch, president of Macromedia products.

Tabbed palettes are vital elements within the interfaces of both companies applications. They provide an easy-to-manage way to access and organize an application’s functions, and offer a means by which new features can be added without using too much screen real estate.

Macromedia contends that tabbed palettes existed before Adobe was granted the patent to them. The company also believes that the US Patent and Trademark Office should have denied the patent application when it was originally submitted by Adobe in August 1996.

In its defence, Macromedia claims that Adobe “concealed” Apple, Microsoft and Sun’s existing technology from the authorities when it applied for the palette patent.

When Adobe originally filed its suit against Macromedia, Adobe’s president, Bruce Chizen, said: “Adobe will not be the R&D department for our competitors. Our patent and user interface are central to the user experience. They are essential to differentiate our brand from others.”

Macromedia maintains that the legal battle will not affect its core business. “We have the leading products for Web publishing — over 80 per cent of the market use Dreamweaver,” claimed Macromedia’s CEO, Rob Burgess.

Neither Adobe nor Macromedia representatives were prepared to add further comments as we went to press, as all the litigation awaits judgement by the court.

Quark wraps up 3D

QuarkWrapture helps designers by fusing their packaging designs to a CAD (Computer Assisted Design) structure, so that it’s possible to develop and design packaging for consumer products more quickly and cheaply, according to developer Quark. Jurgen Kurz, director of product management at Quark, said: “QuarkWrapture cuts the costs involved in package production, speeding up every step of that process.”

“You don’t have to ship cut-out quote mock-ups to different locations for approval. It lets you create, distribute and view 3D proofs immediately.”

Wrapture’s guides run at any angle, rather than just horizontally and vertically. Creases as well as cuts can be marked-up. The new software generates 3D renderings of 2D package designs. Design changes are seen instantaneously, with electronic mock-ups exported in JPEG or QuickTime VR format. QuarkWrapture is available from www.quark.co.uk. It will also be included with Quark’s XPress DTP page-layout technology.

The design, typography, and output features are evolved versions of Quark’s existing XPress DTP page-layout technology, but the 3D rendering tool that allows designers and clients to review projects quickly on-screen is entirely new. QuarkWrapture will be available in the UK in November. Pricing has not yet been set.
Top new products on show in London and Paris

While not being as pan-European as Apple hoped, the Paris-based Apple Expo 2000 has certainly seen some significant announcements and first sightings of key Macintosh products – not least from Apple, which rarely announces new products outside of the US. Macworld scoured the show floor for these products that we saw as the ‘Best of Show’. Mac OS X Public Beta ‘Apple itself’ announced the release of the Mac OS X Public Beta. This working version of the next-generation of the Mac operating system is not the finished article – but those of us waiting for years for a more modern Mac OS will eagerly install the new look and re-architected OS X to get a feel for the future. Sadly, it’s not free (you’ll have to fork out £25 via the online AppleStore), but this won’t put off Mac enthusiasts and professionals alike. For more, see page 20, and the feature starting on page 70.

iBook Apple also upgraded its range of portable consumer Macs. All today’s iBooks now include a FireWire port, video output to TV through AV port and iPhoto 2 video-editing software. There’s two new colours as well – Indigo blue and a vivid, fluorescent Key Lime – and even the Graphite Special Edition has snow-white case elements. Standard PowerPC G3 speed is increased to 366MHz, while the SE now reaches 466MHz. For more, see Reviews, page 46.

Office 2001 Microsoft announced an October 15 release date for its totally revamped suite of business applications, Office 2001 (592½ inc. VAT). Word, Excel and PowerPoint are joined by a new personal-information manager, Entourage. It comes in a funky CD case as well. For more, see Reviews, page 52, and the feature in September’s Macworld. Photoshop 6.0 Adobe has been showing off the next version of its market-leading image editor, Photoshop 6.0, at a £399 (ex. VAT) price. It includes sketch, draw and write directly onto the surface of the 24-bit colour display. Even Apple’s optical mouse is irrelevant – with Wacom’s excellent pressure- and tilt-sensitive pen. For more, see page 35.

PL-500 Interactive Pen Display Wacom showed off the latest version of its innovative Interactive Pen Display, the 15.1-inch PL-500 (£2,190 ex. VAT). This fully integrated graphics tablet is also a sharp 1,024 x 768-pixel LCD monitor. Users can sketch, draw and write directly onto the surface of the display. Even Apple’s optical mouse is irrelevant – with Wacom’s excellent pressure- and tilt-sensitive pen. For more, see page 35.

Director’s Cut This processor upgrade takes any iMac up to the 333MHz 630/63 Monitors’ famous 15-in. (640 x 480) LCD panel was increased to 667MHz, while the SE now reaches 550MHz. For more, see Reviews, page 60.

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NOVEMBER 2000 27

The Expo 2000, London

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The Expo 2000, London

Although Apple boycotted the UK’s only Mac-specific show – held in London at the end of September – there were UK-first demos of the recently released public beta of Mac OS X, as well as iMovie 2 video-editing software. There was also a demo of Adobe’s forthcoming Photoshop 6.0 upgrade, despite Adobe’s decision to follow Apple to its French-based Apple Expo Europe in Paris. Microsoft exhibited in Paris – but employed only French-speaking staff on its stand there. The company also attended The Expo 2000 in London, showing off Office 2001.

QuarkXPress Best-known for its XPress DTP page-layout program, Quark is expanding its software portfolio with QuarkWrap – its attempt to help streamline the 3D package design workflow. For more, see page 34.

NetStation Xircom’s NetStation makes networking small, mobile workgroups as easy as pulling out the retractable cable and logging on. When your meeting is over, you can simply unplug your PowerBook and retract the cables to keep the room neat and tidy – you can forget messy cable spaghetti after users pack up and go home. A single ethernet connection is all that’s needed to network multiple users. For more, see page 35.

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Top new products on show in London and Paris
FireWire vs USB 2.0

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As FireWire and USB 2.0 in competition to become the primary protocol for connecting computer peripherals? “Absolutely,” according to analyst Robyn Bergeron of Cahners In-Stat Group, whose new report, *USB: Quest for a ‘Universal’ PC Connection*, predicts that USB 2.0 devices will far outnumber FireWire devices by 2004. However, a spokesman for the 1394 Trade Association, the group responsible for maintaining the FireWire standard, said that the numbers are distorted due to the large number of cheap USB input devices, and that USB 2.0—a higher-speed version of the current USB 1.1 spec—will be slower to catch on than its proponents believe.

In-Stat predicts that there will be 609 million USB peripherals, almost 39 per cent of which will use USB 2.0. FireWire—developed and heavily promoted by Apple—will be included in only 112 million peripherals by then, the report said. Bergeron said that USB 2.0 will benefit from the widespread adoption of USB 1.1 on PCs.

‘Skewed’ statistics

However, Dick Davies of the 1394 Trade Association says that the large number of low-end USB input devices, such as keyboards and mice, skews the statistics in USB’s favour. FireWire’s appeal is stronger for high-bandwidth peripheral products, such as DV cameras, storage and scanners. USB 1.1—used on Macs and many PCs—has max throughput of 1.5MB/sec; USB 2.0 claims a max throughput of 480MB/sec, and is backward-compatible with USB 1.1. The current FireWire version has a maximum throughput of 400MB/sec, but the second generation, 1394b, is expected to reach transfer speeds of 1000MB/sec.

Art Scotten, president of Orange Micro, expects to release a Mac-compatible USB 2.0 PCI board in October.

Scotten and Bergeron both expect USB 2.0-based devices to be available by the end of this year.

Davies believes that USB 2.0 will be slower to market than its proponents claim. “I think that USB 2.0 still has several problems—most notably that the hub technology and topology are not consumer friendly,” he said.

Unlike USB, FireWire does not require a CPU on one end of the connection. For example, you can theoretically connect a FireWire hard drive to a digital-video camera. FireWire devices are data- and power-compatible, whereas multiple USB devices require the use of hubs. And although USB 2.0 is backward-compatible with version 1.1, its speed enhancements are lost when you put a USB 1.1 device on a USB 2.0 controller, which must ramp down to USB 1.1 speeds.

“The 1394 Trade Association Board is not comfortable with being in a niche market,” said Davies. Users can now choose from FireWire camcorders, storage devices, scanners and network hardware. The next battleground, he says, will be printers.

David Read

... and then there’s Serial ATA

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aramount for ATA, the standard for connecting internal hard drives to Macs and PCs, is to give way to Serial ATA, a new version of the specification that offers increased throughput to enable future generations of spindler drives. With a maximum transfer rate of 1Gbyte per second, the protocol promises to double the top transfer rate of the ATA/66 protocol used in Apple’s current Power Macs, and exceeds the capabilities of ATA/100 solutions on currently available PCs.

Apple declined to comment on any plans to implement Serial ATA in future Macs, but is involved in the Serial ATA Working Group, which includes every major hard-drive manufacturer and most major PC makers. However, making the move would be simple, and the current ATA/66 interface can hook up any single drive currently in general production.

Serial ATA is not meant as a competitor to USB 2.0 or Apple’s FireWire (IEEE 1394). However, it’s interesting to note that Apple’s latest Power Mac G4 systems lack the internal FireWire connector that was included in previous models. Like FireWire and USB, Serial ATA devices are hot-pluggable, but other factors make it unsuitable for connecting external devices.

Drive development is relentless—mechanisms are exceeding ATA/133’s throughput capabilities and are beginning to tax ATA/100. Moving the standard to the next level ATA/133 would be a difficult and expensive proposition.

The Serial ATA Working Group is charged with creating a specification that will have a lifespan equivalent to parallel ATA’s of at least ten years. “Disk drive performance every two years, and Serial ATA is always expected to be superior,” said Kurt Grimmendorf, senior staff systems architect at Intel. He expects the first commercially available Serial ATA products in late 2001, with broad adoption in 2002.

Serial ATA will begin with a throughput of 100MB per second, but Grimmendorf said the next generation will double that to 200MB, followed by a 400MB implementation.

... and then there’s Serial ATA

The new spec uses a seven-pin connector that will look somewhat like a USB connector. One side-benefit of Serial ATA’s smaller form factor is improved airflow inside the computer, because it eliminates the wide ribbons of parallel ATA. Serial ATA controllers will first be implemented on PCI boards and then on the motherboards of new systems. The manufacturer will determine the number of devices that a host can support; the ATA/66 controller in Apple’s Mac systems supports up to four devices. David Read

<image>
**Motorola’s new G4 chip**

Motorola has announced the next version of the G4 processor, the MCF7410. The MCF7410, currently available in 30MHz and 40MHz, will be available in 50MHz versions as soon as the year-end. It is Motorola’s first processor to support the future PowerPC 7400 standard, with a 500MHz 7400, it offers performance similar to that of a 500MHz 7400, with a 512K, 1MB, 800K, 1.5MB, or 2MB cache. It is designed for embedded market, but it could easily be used in a desktop environment.

Motorola designed the 7410 for use in the embedded market, but it could easily be used in a desktop environment. It retains the connections necessary for symmetric multiprocessing (SMP) and supports 128K, 1MB, and 2MB L2 cache sizes. The 64-bit 7410 has a 128-bit 400MHz execution unit built into it. A 500MHz 7410 will offer performance similar to that of a 400MHz 7400, but with power consumption equivalent to that of a 400MHz G4.

Motorola has also revealed that the G4 will move to a 0.15 micron copper process in 2001, which will eventually integrate Silicon-On-Insulator (SOI) technology. This will allow processor speeds of up to 10GHz. David Root

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**Apple hits Euro teachers with US strategy**

Brendan O’Sullivan, Apple UK’s acting managing director, has become Apple’s new director for Education, Europe. Brit Mark Rogers, returning from Apple’s Asia-Pacific region, succeeds him. O’Sullivan will bring successful US Apple educational strategies to Europe and leverage the pulling power of iMacs, iBooks, iMovie, and even Mac OS X.

Education is a key market for Apple. In the US, the company is the sector’s number one supplier. But in the UK, it holds just 4.7 per cent of the market. Motorola met with O’Sullivan to discuss Apple’s newly focused strategy for education, and what the company can bring to it.

It’s a huge market. Apple’s research shows a staggering 50 million students across Europe. O’Sullivan believes this market is ripe for Apple’s new technologies. “We have fantastic technologies, from iMacs to multiprocessing Power Macs. We believe iBooks are fantastic for colleges.”

In the first quarter of 2000, Apple accounted for 26 per cent of the UK education market, with a 14 per cent worldwide. IDC’s Andy Brown reports that Apple has captured 6.7 per cent of Europe’s education market — seventh place overall.

**Business school**

“Agnostic bundling, pricing and good relationships with local authorities are crucial,” according to Brown. The products market is local, so players vary from country to country, and region to region," O’Sullivan said. "There are many differences within the education markets of Europe. It’s not merely a multiplicity of languages. Primary schools have different needs from secondary schools, and higher education has different needs again.

“In the UK, we have independent schools with different requirements from other schools. We have special needs schools, with different requirements. In the UK, an additional 250,000 pupils learn without attending school – key workers, on remand, or children of parents opting to teach their youngsters at home. There’s also a project running in the UK called notschool.com, where pupils can learn over the Web without attending school!”

“We are getting feedback from education groups in different countries, and already have a business plan for them. This is ready to roll.”

O’Sullivan has long had a history with Apple, and within the UK education market. “I’ve been with Apple for about 15 years. I was in Apple Ireland for many years. In 1996 I came over from Ireland to launch and become managing director of Apple’s 10 per cent owned company in the UK. I was with Acorn that concentrated on education.”

“We have been focusing this link, and have reached number two in the UK education market.”

In January 1999, Apple bought out Acorn’s share in Xenocode – and later wound the company back within the Apple fold.

“IFD’s Brown revealed that Apple stood in fourth position for sales in the UK education sector. It stands fifth in both Italy and France, and is eighth in Germany. The market was optimistic about Apple’s future. They are in a good position. They have great technologies – for example, no one else offers wireless network-ready machines, such as the Airport-capable iBook.”

Under O’Sullivan’s direction, Apple has developed its own TV, the iMac. It is small footprint, 600 PowerBooks, all on a wireless network, plus hundreds of iMacs for the kids. All the schools in the Isle of Man are now on a successful network," said O’Sullivan.

“I really believe that Apple is tremendously positioned with what it’s doing to provide a great service. We’ve never had a stronger story to tell,” O’Sullivan claims. Apple has dedicated resources and information for education at www.apple.com/uk/education. The company offers substantial discounts for sales into the educational sector.

Of his successor as new UK boss, Mark Rogers, O’Sullivan says: “He’s very strong, with excellent business acumen and sales experience. He’s fantastic and creative. I personally believe Apple UK will go from strength to strength with him. He really values people.”

Jon Evans

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**AppleStore push with just one mouse click**

Apple has licensed Amazon.com’s 1-Click technology for use by the company at its online AppleStore. Despite legal challenges surrounding Amazon’s patent for this technology, it is now a key part of Apple’s new sales strategy.

1-Click is an online shopping solution created by Amazon.com to make it easier for customers to use its online store. It lets customers returning to the online store complete a purchase with a single click. Credit-card and billing information should be stored during the first purchase only – when prospective customers are asked to fill out a secured customer profile.

On subsequent visits, customers can make use of the “Buy with 1-Click” button that appears on most product pages. These profiles can be changed at any time. When an order is placed, customers have 90 minutes to cancel or modify it before the order is processed.

Mitch Mandich, Apple’s senior vice president of worldwide sales, revealed that Apple’s online store accounts for 25 per cent of the company’s revenues. With the launch of Mac Linux (iBooks and the 500MHz Power Mac G4 Cube) (both available only from the AppleStore), Apple is looking to increase its revenues from its virtual storefront.

Click trick

Apple has already updated its UK AppleStore to feature the newly licensed technology, and made Movie 2 available immediately from there at £25. This is the first time an Apple Store solution has been used to enable an Internet-based download of a software product.

Steve Jobs said: “The AppleStore has been incredibly successful and now we’re taking it to the next level. Licensing Amazon.com’s 1-Click patent and trademark will allow us to offer our customers an even easier and faster online buying experience.”

Neither Apple nor Amazon would discuss the terms of the transaction, but a press release describes it as “part of an earn-out cross-licensing agreement.”

Amazon’s 1-Click patent has raised controversy among critics of the US patent system, who maintain that the company should not have received intellectual property protection for what Tim O’Reilly of O’Reilly & Associates calls a “completely trivial application of cookie.”

Announcing these criticisms, Amazon.com’s CEO Jeff Bezos wrote an open letter calling for changes to the patent laws. At the time he told Associated Press that Amazon would retain the patent, but would enforce it only “when there are important business reasons for doing so.”

Apple has won a preliminary injunction against Barnes and Noble in the US courts over its use of a very similar technology, which Amazon claims is copied from its own solution.

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**US strategy**

Apple recognizes that Linux is emerging, and the Power Mac G4 is a great Linux machine.

Another government initiative for IT in education is the managed services in schools program. This scheme recognized that many schools had the equipment, but lacked the expertise to use it. It set up a list of services that approved companies install, set-up, maintain and trouble-shoot computer systems, using their revenue for fixed period.

Apple was one of 12 companies selected as managed service providers.

Finally, O’Sullivan was asked about some of the initiatives the company is already involved in. “In Belgium, we are involved in the Cyber-ecole project. 10,000 Macs were bought for 3,000 schools. We have learned thousands of teachers. It’s run like managed services in the UK.”

Clower to home, in the Isle of Man, the education authority has recently engaged in a massive project. “The island recently purchased computers for all its teachers – 600 of them were wireless network, plus hundreds of iMacs for the kids. All the schools in the Isle of Man are now on a successful network,” said O’Sullivan.

“I really believe that Apple is tremendously positioned with what it’s doing to provide a great service. We’ve never had a stronger story to tell,” O’Sullivan claims. Apple has dedicated resources and information for education at www.apple.com/uk/education. The company offers substantial discounts for sales into the educational sector.

Of his successor as new UK boss, Mark Rogers, O’Sullivan says: “He’s very strong, with excellent business acumen and sales experience. He’s fantastic and creative. I personally believe Apple UK will go from strength to strength with him. He really values people.”
Apple’s $8bn stock crash, despite $110m profit

Adobe reports profits, as Corel loses loom

Business briefs

Microsoft has purchased 24 million shares (worth $135 million) in Corel. The partnership is designed to focus on Microsoft’s .NET initiative. Microsoft has gained no voting privileges in Corel.

Infowave Imaging has been purchased by Software 2000 to form Strydent Software, which will focus on PowerPoint, StyleScript and develop new Macintosh products.

The European Union has confirmed its receipt of revised proposals from AOL and Time Warner, designed to help the EU to grant permission for the merger to go-ahead. Concerns over the power the merged companies will have have left the deal in doubt.

AltaVista has laid off 25 per cent of its 900-strong workforce. The company is quitting the Internet-portal business in order to focus its efforts on its search-engine operations.

Microsoft has gained no voting privileges in Corel. Microsoft has purchased 24 million shares (worth $135 million) in Corel. The partnership is designed to focus on Microsoft’s .NET initiative. Microso
Networking on the go

Xircom's NetStation is a portable ethernet-hub for laptops. It features retractable ethernet cables housed in a lightweight unit. It's easy to set-up, and users can exchange files over a network in seconds, according to Xircom.

NetStation is available in four- and eight-port models – it's also possible to daisy-chain up to three NetStations, creating a mobile network for up to 24 users.

It can be switched automatically or manually between 10Mbps and 100Mbps. The NetStation won a Best of Show award at last month's Apple Expo, Paris.

Business projection

Techia has launched the TLP-52, a compact portable projector. It weighs 2.1kg, and uses the latest LCD technology to offer images with an HDG resolution of 1,024 x 768 pixels. It also offers compressed SAVGA display capabilities, and an initial brightness of 1,000 ANSI Lumens. Lamp life is up to 2,000 hours.

It can take input directly from a Mac or PC, can project DVD player and VCR signals and offers digital keystone correction, manual zoom and manual focus. It offers 16.7 million colours at a contrast ratio of 400:1. The TLP-52 is compatible with PAL, NTSC and SECAM video formats. It costs £3,700.

Toshiba has launched the TLP-B2, a compact portable projector. It weighs 2.6Kg, and uses the latest LCD technology to offer images with an XGA resolution of 1,024-x-768 pixels. It also offers digital keystone correction, manual zoom and manual focus. It offers 16.7 million colours at a contrast ratio of 400:1. The TLP-B2 is compatible with PAL, NTSC and SECAM video-formats. It costs £3,700.

Apple Expo, Paris.

Product News

Monitor-tablet Wacom combo

Wacom has launched the PL-500 interactive LCD monitor and graphic tablet. The PL-500 works through instructions being transmitted to the computer with pin-point accuracy by a wireless “pen” directly through the scratch resistant tablet – meaning there’s no need for a mouse.

It offers a 1,024 x 768 pixel VGA resolution with 24-bit colour depth (16.7 million colours) on a 15.1-inch, TFT active-matrix LCD-display.

The monitor has two output cables – one connects through a digital graphics-card with a DVI connection, and the other via a USB port. Both connections are required in order for the device to operate. The tablet comes bundled with Corel’s Painter Classic, which includes over 100 pressure-sensitive tools.

The pen is both pressure and tilt sensitive and boasts a built-in eraser tool, as well as two built-in side switches. These can be programmed to perform a variety of functions, and can also act as mouse buttons.

The minimum setup required by the PL-500 is a USB Mac with a digital graphics-card running Mac OS 8.5.1 or higher. Available now, Wacom’s PL-500 costs £2,190.

Computers Unlimited, 020 8358 5857

Digital sound

Logitech has released two speaker systems – the SoundMan S-20 and SoundMan S-4. The £99 S-20 is a three-piece digital-sound speaker system, featuring the SoundTouch remote control. The system is fully compatible with any portable music-player. For £197, the SoundMan S-4 offers stereo speakers and external volume control. The speakers come bundled with a CD of MP3 tracks.

Logitech, 020 957 898

Connection card

Evergreen has launched the FireLINE Combo card. It has one internal and three external FireWire connectors, plus two external USB connectors on one PCI card. It’s hot-swappable, and comes with a FireWire cable and software drivers. It costs £197.

Evergreen, 01793 601 300

Portable hub

Belkin has released the cross-platform USB Pocket Hub for laptops. It lets laptop users instantly connect USB devices to laptops, with no need to restart the computer. It has a built-in cable-management system, and can host up to four devices simultaneously. It’s lightweight, and has removable slates, so the device can match the colour of your Mac. The USB Pocket Hub costs £34. It’s available now.

Belkin, 01604 678 300

Global time keeper

Time Palette 4.0.3, the world-time tool, is available now. It displays the local time for any location in the world and can draw sun-shaded maps of the Earth. It’s designed to help international travellers and global business communications. It also supports zones in any time zone, and features GPS integration. A single-user licence is £25. An upgrade for users of version 4 costs £12.50.

Evergreen, 01793 601 300

See ‘Macworld’ – inside ‘Serious Software’ – on this month’s cover CD

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Evergreen, 01793 601 300

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**Apple updates**

Apple has released three major International English updates in recent weeks. The Mac OS 8.1 update offers more stability and better performance, and supports the International English version of AppleMail Plug-in Pack 2.

The USB Adapter Card Support Extension supports cards installed in the PC card or CardBus slots on older Macs. It supports only USB cards that comply with the Open Host Controller Interface (OHCI).

Finally, Apple has released Mac OS 9.0.3 update, which is recommendable on all Mac OS systems. It offers enhanced protection on the event-logging set-up and offers password protection on WebObjects users install. It supports only USB cards that can be installed in the PCI bus or CardBus slots on older Macs.

**Digital Performer 2.71**

Apple has released three major updates to Digital Performer 2.71, the new version of Apple’s music creation and recording production tool. It costs £699. The new update supports multiple tracks and enhanced scoring. It also includes an LCD screen, a histogram, and spatial information as well as other performance-enhancing features.

**FileMaker in Palm move**

Apple subsidiary FileMaker has launched FileMaker Mobile, which enables the exchange and synchronization of FileMaker 5 data between FileMaker Pro databases and Palm OS handhelds (right). FileMaker data is selected and loaded from the desktop to the Palm. The data can then be re-synched via Palm’s HotSync technology with the original database, so updated information can be returned to the database by the mobile unit. The FileMaker user can choose which files are transferred. No programming skills are required.

FileMaker has developed a completely new architecture for the app, and plans to extend this to provide a means of transferring FileMaker data to other handheld devices – which could include Pocket PC, Epoxy or Symbian handhelds. WAP support is also planned in future software solutions. FileMaker Mobile costs £79, and will be released this winter.

**Kodak’s digital duo**

Kodak has released the Professional RFS 360 35mm film scanner and the DCS Pro Back Camera. The portable RFS 360 Scanner has a resolution of 3,600dpi. It delivers digital scans from 35mm colour reversal slides, as well as colour and black-&-white negatives, and is capable of creating SDNR RGB images in under two minutes.

For a limited period, Adobe Photoshop 5.0, LightScribe CD-RW drive with the RFS 360 scanner, as do ten units of Kodak Professional Supra 400 colour-negative film. Other features include batch scanning for up to 26 frames.

The new Professional DCS Pro Back is a 15-megapixel medium format camera-back that creates 4MB image files. Available next year, it includes an LCD screen, a histogram, software and other performance-enhancing features. It can capture an image every two seconds and store up to eight.

The RFS 360 scanner costs £899. Prices for the DCS Pro Back will be available in 2001.

Kodak, 01442 843 753

**Canon BJC-55 infrared printer ‘truly portable’**

The Canon BJC-55 is a USB and IRDA-ready, portable colour-printer for PC and Macintosh users. It prints at up to five pages per minute (5ppm) mono and 2ppm colour. Fast IDa support allows data to be transferred via infrared, at speeds comparable to conventional Parallel cable links, according to the company. Available from November, the BJC-55 costs £269.

Canon, 01216 808 062

**Down to business**

Stone has unleashed its new image collection, OZ, featuring 1,600 images depicting lifestyle and business. More images from this collection can be viewed online. Stone is now a brand of Gettyimages. Pricing is individually assessed and per-image, per-use basis. Stone, www.stoneystone.co.uk

**Iliyama FST warms up**

Iliyama has announced a new 19-inch monitor, the FST-1989M. It is an FST monitor, with a maximum horizontal-scanning frequency of 1850Hz and a 200MHz bandwidth. It has a pixel pitch of 1.198 pixels. Prices range from £299 to £329.

It’s compatible with TCO-99 regulations and has an extensive user menu, including automatic and manual controls, to enhance straight edges and picture size.

Fitted with a 30MB80 FM diskette, the FST-1989M comes with a three-year on-site warranty as standard. Iliyama, 01438 745 482

**Terran Interactive in clean sweep**

Terran Interactive has announced Cleaner 5, its complete camera-to-Web streaming-media solution. Cleaner 5 lets designers embed interactive, multidimensional instructions directly into streaming-media content to help crease interactive Internet-video programs.

The software operates through four main steps: Capture, Author, Encode and Publish. This means filmmakers can capture an image, edit and encode it, and then publish direct to the Web. Cleaner 5 can import from any DV camcorder. The application integrates seamlessly with Media 100, Finish and Adobe Premiere and Apple’s Final Cut Pro.

The application makes use of EventStream technology, which lets designers create streaming-media content that can control the elements of a Web site.

Cleaner 5 supports all the major streaming formats, including RealSystem, Windows Media, QuickTime, MPEG-4, AVI, MPEG-1 and MPEG-2.

It can also publish finished content directly to a Web server from within the application. It costs £399.

Terran has also announced Cleaner MPEG-Charger and Cleaner MPEG-SuperCharger, which let Web designers produce DVD video content straight out of the box. Designed as plug-ins to Cleaner 5, the programs provide optimized media-encoding options for DVD Video CD, CD-ROM and digital broadcasting.

Charger (£399) is a software-based MPEG-encoding plug-in for Cleaner 5. It offers MPEG-2 control, and enhanced MPEG-1 support, including variable bit-rate encoding. It can also export directly from many popular video-editing systems.

SuperCharger (£499) is a hardware-accelerated APEM-encoding solution for Cleaner 5. It uses technology developed by another Media 100 subsidiary, Wired, for faster MPEG-2 recording. The product’s MPEG-encoding is accelerated by a bundled PCI board. SuperCharger offers all the facilities of Charger (see above).

Computers Unlimited, 0953 585 587

**Virus Definitions**

Nav 5.0/6.0 updates and Virex Unicorn’s MOTU audio system.

**Unicorn’s MOTU audio system**

Running Mac OS 8.1 spread sheet translation through when doing a certain type of MacLink Plus 12 fixes a crash DataViz’s update for current...
Epson delivers three new scanners Epsosn has launched two scanners – the Expression 1640XL and the GT-10000. The Expression 1640XL can capture 440 billion colours and can scan an A3 document in under a minute, according to Epson. The USB and SCSI Expression 1640XL has a resolution of 600 x 2,400dpi when used in conjunction with Epson’s Micro Step Drive. Adding an A3 transparency adapter enables users to scan 15mm and 4- x 5-inch frames.

Epson's GT-10000 is a high-speed A3 scanner offering a resolution of 600 x 2,400dpi. Features include advanced networking and connectivity through an optional FireWire interface. Both models ship with Epson Network Image Express, a hardware scanner server for connectivity and processing. This allows businesses to enjoy the benefits of a multi-user product without needing a host computer for the software.

The GT-10000 is priced £999, while the Expression 1640XL costs £1,699.

HP ships wideboobs Hewlett-Packard has launched a series of DesignJet large-format printers; the 5000, 5000PS, 500, 500PS, 800 and 800PS. All PS models use Adobe PostScript 3. The 5000 family is targeted at print providers or heavy-duty production printers. The 5000 and 5000PS can print at resolutions up to 2,400 x 4,800dpi.

Both models hold up to 256MB RAM and use a six-colour printing system. Print speeds reach up to 569 square-feet per hour, and the printers ship in 42- and 60-inch models. The 60-inch 5000 and 5000PS retal at £1,335 and £1,400 respectively, while the 42-inch 5000 and 5000PS are priced at £7,950 and £9,900.

Kodak camera boosen Kodak has released two digital cameras – the DC4100 and the DC8000, each capable of capturing 8- x 10-inch images.

Standard features include an optical viewfinder, image-quality settings, a flash and a ten-seesaw self-timer. Both ship with an 8MB Compact Flash card, capable of storing up to 16 images. Accessory includes Kodak’s Acrobat Photoproduction 2000 software – which transfers images from camera to computer – and a USB card reader, driven by Picture Card Reader software.

The USB DC4100 sports a 2x optical zoom and a 3x digital zoom. Other features include an auto-focus and red-eye reduction. The camera costs £339.

Kodak DC8000 (bottom, right) has a fixed 3.6mm lens, a 38mm preview display, auto focusing and a date and time stamp. Reaching resolution of 2.1 megapixels, the DC8000 costs £297 and has a 2x digital zoom. It also offers a burst mode of two frames per second for up to four bursts, as well as a flash. Kodak, 0870 243 0720
The Apple Masters programme is largely a name-dropping exercise in PR-puff

No more heroes...

As Apple continues to embrace success, I recently took the opportunity of examining a long-running Apple tradition: the Apple Masters programme. This has been running for years now, and celebrates high-profile users of Apple computers.

The title of Apple Master is bestowed on those who have promoted Apple, even through the hard times. Many consider it an honour. But is it, really?

A glance at the list of Apple Masters makes one wonder what the point of it is. It seems you don't have to be a die-hard Apple fan – all you need is a recognizable face and a Mac. If you're famous and use a Mac, I suggest you call Apple and see what it can do for you; perhaps a free flight to a US Macworld Expo, or a new Mac.

If a movie star says some nice things about Macs, Apple is quite happy to bestow upon them the Mac equivalent of a knighthood. But are the right people getting this award? Here are some examples.

Douglas Adams You know, the Hitchhikers Guide to the Galaxy guy and self-proclaimed “fantasist”. What has he ever done for the Mac community? He wrote some hilarious books once, but nothing for ten years. Did he write them on a Mac? Possibly, but so what? Do you call Apple and see what it can do for you; perhaps a free flight to a US Macworld Expo, or a new Mac.

Jonathan Ive Apple’s chief designer Ive and his team has changed the face of Macintosh computing. If a movie star says some nice things about Macs, Apple is quite happy to bestow upon them the Mac equivalent of a knighthood. But are the right people getting this award? Here are some examples.

Bill Gates He may seem an odd choice, being often thought of as the enemy. However, without support from Microsoft – and certainly without Microsoft Office – the Mac platform would remain largely incompatible with the most popular applications on the PC. Remember, we use Microsoft products by choice – PC users don’t always have that luxury.

Steve Jobs He didn’t have to come back to Apple. Pixar was and is doing fine. But he chose to save Apple because he loves it. If he hadn’t, the Mac may not now exist.

Damien Hurst He was developing an adventure game that initially appeared on PCs only. He was responsible for a lot of the Mac platform's original software, including HyperCard – the tools that started the multimedia revolution.

Simbad Not the rotund Brookside character, but the US comedian and movie star. A great guy, but I don’t understand what makes him a Mac master.

Lauren Bacall Okay, she’s a Hollywood idol, but what makes her important to Apple, us, or anyone?

Chris Bonnington Big-bearded mountain climber who has used a PowerBook and a mobile phone to transmit from snowy mountaintops. I wonder if this makes him a Mac Master, too.

Murray Gell-Mann Discovered the sub-atomic particle, the Quark. Maybe the XPress crew nominated him.

David Pogue Macworld’s columnist has performed great services to the Mac community. Apart from entertaining with his Mac musings, David has written a catalogue of Dummies books to make life easy for Mac converts. He has also given personal tuition to stars including Mia Farrow, Gary Oldman and Vanessa Redgrave. He’s responsible for more people catching the Mac bug than anyone outside of Apple.

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Suggest your own worthy Macworld Hall of Fame candidates. Email your lists of nominations to hallloffame@macworld.co.uk.

“...or a new Mac.”
Scents ability

The other night, I was told that ants have five noses. I don’t know if that improves their sense of smell, or simply provides exceptional opportunities for serious substance abuse. Smell is obviously one of our most important senses, and it even plays a key role in determining taste.

But, generally, smell isn’t something we associate with computers… unless we’re talking about the rotting-Reebok pong of a programmers’ office party. Smelly or not, digital technology is still populated with some sick and savage mind-sets, and, in the quest for more life-emulating applications, some sad spark has decided we need to upgrade our PCs and Macs with what can loosely be described as a sort of digital scratch-and-sniff card.

Somewhere out in Weirdsville, a company called DigiScents has recently acquired a rival scent-sensing technology, formerly owned by an Israeli company called SenseIT. DigiScents thinks it’s discovered the thing that will give computing a new lease on life – the ability to smell.

As I understand it, the intention is to bring to market a product that will make our software emit smells that reflect what is on the screen. DigiScents claims that just a few essential oils can be mixed and blended together to create scents that will be instantly identifiable by almost everybody. The technology is expected to appear on high-street shelves as early as Christmas, and be incorporated into shopping, advertising and video games.

As you’d expect, several computer-game developers have already signed-up to include the proposed technology in future software releases. The device itself will, in theory, have the ability to blend together 128 basic scents and produce an almost infinite number of scents. So now, instead of just having to set screen resolution and colour, you’ll have to adjust your scent tab as well.

The device DigiScents is producing follows on from research that is well over ten years old, and that unlocked and decoded the genes that control the sense of smell in humans. As a result, DigiScents has constructed a database that compares computer smell recordings with thousands of human-tested smells. By using a machine/human interface, the developers are able to communicate a vast range of smells and send them over an electronic network. The implications are hideous. OK, it might be appetizing to be able to smell a pepperoni pizza on-screen before you order it – or sample perfumes, aftershaves, or air-fresheners, before you place an order. Games could become savagely realistic, with smells of exotic locations and violent death. And, depending on your fetish, thriving porn sites could become even more appalling.

As rock diva Grace Slick once said, there’s only two things in the world that smell like tuna… and one of them is tuna. I mean, just think of what might happen if you didn’t set your smell palette correctly? Or what if your olfactory oil cartridge ran out of a key ingredient during a crucial download? And if you don’t have a proper ‘smell-check’ installed, your whole room could be flooded with an unpleasantly foul or embarrassingly inappropriate odour.

Then there’s the whole issue of compatibility. Will smells that run on Windows machines port over to the Mac? Will Microsoft smells have a more acrid tinge than their OS X counterparts? Or, for that matter, will Apple include smell technology, or will it be a third-party add-on?

Over the past few months, we’ve been told that Mac OS X will incorporate several new technologies that will not only make our Macs run faster and more reliably, but will also simplify and enhance computing. With the usual Apple cool, icons are supposed to be as sharply rendered as photographs, control buttons will throb in soft blue light, and windows won’t snap closed – they’ll simply fade away. But nowhere in any of the specs or descriptions can I find any indication that OS X will support smell.

The proposal to get this product to the end-consumer by the final part of the year may seem a little optimistic. Consumers already smelled a rat when this sort of technology failed miserably some years ago with scratch-and-sniff magazine adverts. Given current olfactory bandwidth issues, it may simply prove to be a short-lived novelty for those smelly geeks who collect gadgets and add-ons. But then again, who knows?

Perhaps in our treacherous quest for a hermetically sealed digital existence – in which we never need to stray far from the maddening glow of our screens – this electronic nose-candy will be seen as a pine-scented breath of fresh air among the otherwise noxious fumes of ozone and BO.

After all, as Shakespeare said: “That which we call a rose by any other word would smell as sweet.”
**New iBooks speed tested**

<table>
<thead>
<tr>
<th>Model</th>
<th>Speed (MBps)</th>
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<tbody>
<tr>
<td>PowerBook 320MHz</td>
<td>1600</td>
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<tr>
<td>PowerBook 400MHz</td>
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<td>iBook SE 400MHz</td>
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<td>iBook SE 500MHz</td>
<td>1452</td>
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<tr>
<td>iBook SE 566MHz</td>
<td>1371</td>
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</table>
| Speed tested with Multibook S.S. Full Mac benchmarks on page 132. iBook SE is bold review. Other iBooks are previous models.

**Macworld Rating**

- **9.0-9.9 = OUTSTANDING**
- **8.0-8.9 = VERY GOOD**
- **7.0-7.9 = GOOD**
- **6.0-6.9 = FLAWED**
- **5.0-5.9 = UNACCEPTABLE**

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**iBook Special Edition**

- **Price:** £1,399 (including VAT)
- **Colour:** Available in Graphite and Key Lime.
- **Star Rating:** **★★★★★

The iBook is one year old. Apple’s bright portable computer for consumers still looks like no other laptop on Earth. It’s not gunmetal grey or black shiny silver like most portable computers out there. The iBook is unashamedly unique, and Apple has successfully hoodwinked those people who want their computer to stand out in a crowd – the education market, in particular, has embraced the iBook. Until one of the big PC makers catches on to this trend – and Dell has only just started making beige computers – Apple has this market sewn up. The iBook has been the number one selling portable computer in the US retail market on and off since its launch last autumn. And it can be credited with some of Apple’s success in the education market: research-analyst IDC’s autumn report shows that Apple captured 26 per cent of the US education market and 14 per cent of the worldwide education market at the start of this year.

Apple isn’t sitting still, however. An iBook SE (Special Edition) iBook was announced at this September’s Apple Expo 2000 in Paris (see News). The iBook SE is a form radically retooled, but Apple has added FireWire connectivity, an AirPort and Movie 2 video editing software for digital movie making, as well as increasing chip speeds and hard disk capacities. Colours change, too – one nearly visibly.

Let’s take a long look at the new iBooks – give a sampling looks for the bright-green one. The standard iBook now comes in deep-blue Indigo and radiance-White Line (iBook SE is a fruit that makes a great pie). If you fancied the old Tangerine Blue, you’d be better hurry, as Apple has now discontinued this orange ‘Tangerine’ – was this part of the Good Friday agreement?

Apple reckons that the iBook will appeal to kids – although I always thought children hated gadgets… It’s more that it actually glows in the right lighting conditions.

Indigo iBook features a darker blue than the old Blueberry model, and is all the better-looking for it. Even the Graphite Special Edition (SE) iBook looks different to the old SE model – as all the books now feature white-stone-white Snow plastics around the colour elements. The SE iBook is also available in Key Lime, but not Indigo – which is a shame.

Another colour restriction is that you can now either of the Key Lime iBooks or the online Apple Store. You cannot walk into an AppleCentre and order one via mail-order. Maybe only Apple can handle the levels of brightness.

**Video star**

The best thing about the new iBooks, however, is the colour range – it’s the addition of digital-video functionality.

The new iBooks boast a 400MHz FireWire port for you to connect your digital camera and DVD player. All iPort has also been added, providing audio and composite-video output. This doesn’t offer quite the quality of the Powerbook’s superior 5-video output port, but it should be fine for showing your iMovie productions on a laptop. In fact, the Av Port – which will plug straight into most modern video recorders – is more likely to offer a direct route to your TV or video than the more specialised 5-video.

iBook SE (Special Edition) is in September’s Macworld is fantastic video-editing software – and it is now installed on every Mac except the entry-level £495 iBook. iBook SE is 2 inches thinner, 6 per cent faster and is packed full of professional effects. Just about everyone around a FireWire Mac, digital video and iMovie 2 can make movies that will stun your friends and family. Now that the iBook has embraced desktop video making, more people will be able to edit their movies on the way home from holiday, rather than having to wait for their return.

**Fire proof**

The addition of a FireWire port also means you can add supporting peripherals, such as speedy hard-disks (see page 93), respectable CD drives, and scanners. Unlike the other Power Macs, iMac and PowerBooks, however, there’s just one the FireWire port – so you won’t be able to transfer contentuary straight to an external FireWire hard drive. To make up for this, Apple has enlarged the internal hard drive from 6GB to 10GB.

Also boosted is the iBook’s processor. The standard-model iBook now features a 366MHz G3 processor – up from 300MHz. The Special Edition iBook gains flat-out at an impressive 400MHz.

In our tests on the new portables, these faster chips made less of a speed difference to iBook performance than the Intel ATi Rage Mobility 128 graphics card that replaces the ATi Rage Mobility graphics controller. This means that the consumer iBook now boasts the same graphics chip set as the professional PowerBook.

This new video controller makes gaming a bit more fun, too. It certainly makes a difference playing games – such as Quake III Arena – that rely on speedy graphics performance for ultimate fun. The SE iBook’s 128MB of 800-x-600-pixel resolution. Of course, the iBook ships with Office 2001 (reviewed page 51) for an Office XP feel. But if you’re really serious about making movies that will stun your friends and family, the SE iBook is the way to go.

And make sure you see the new colours before making your final choice – that luminous green really has to be seen to be believed…

Simon Jary
Cubase – probably the top-selling music software in the UK, with a user-base of around 30,000 people – has undergone a major revamp with the release of Cubase VST/32 5.0.

The user interface has been overhauled and a number of features added. For example, in the Arrange window there are columns to the left of the track-part display, which can be shown or hidden when you click and hold on any of the column headings. There’s also a pop-up list that lets you choose which column you want to work with.

Altering the width of a column once it’s been set is a problem in many apps. In Cubase VST/32 5.0 it couldn’t be simpler. Just point and click near the right-hand edge of any column in the Arrange window, and use the cursor to adjust its size. The same thing applies to the height of the rows of tracks.

Handling MIDI

Steinberg has also improved the way Cubase handles MIDI channels and outputs. Three columns are provided for this: Channel, to select the appropriate output; and Instrument, to select the instrument by name. In Cubase terms, an Instrument is a combination of a MIDI channel, an output, and a Patchname Source and Patchname Device. Having made the settings, you can then enter both a shorter and a longer name – which Cubase will display elsewhere as appropriate.

Access

Cubase’s Arrange can be set to any time you want, and you can keep a specified number of your most recently used files available in the File menu for quick access. Cubase now lets you select the number of divisions of a quarter note that will be displayed in the edit window – all the way from Cubase’s original 384 right up to 1,536 subdivisions.

The way in which the control knobs work can be changed between Circular, Relative Circular or Linear. Linear mode, lets you click on a knob and drag it up or down with the mouse to change values. In Circular mode, clicking anywhere on the knob’s edge changes the value immediately. This can be inconvenient, so a Relative Circular mode has been added preventing this.

In previous versions of Cubase VST, there was a Channel Mixer window and a Group Mixer window – both of which allowed you to view mixer channels and groups. The designer originally intended to put mixer channels in the first and groups in the second, but decided to put both in each window. Now, the windows are called simply Channel Mixer 1 and 2, and the purpose – to display different views of these in two smaller windows – is more obvious. There’s a pop-up menu for selecting what will be shown in the windows.

One of the best new developments in Cubase VST/32 is the VST Instruments – not to be confused with Instruments. These are actually softwaresimulations of synthssynthesizers and drum-machines to which you can route your MIDI tracks internally within Cubase VST/32. The audio outputs can then be routed directly into the VST Channel mixer for playback.

Another neat addition is the True Tape Input effect. This lets you simulate the effect of tape saturation when recording in VST/32’s 32-bit mode. Recording engineers working with real drums often take advantage of analogue tape’s saturation characteristics to make drums sound “fatter”, for example – which they will do when extra harmonics are added to the sound by the tape-saturation process. Now you can achieve a similar result using Cubase VST/32.

Macworld’s buying advice

While there’s still room for improvement, version 5.0 is undoubtedly the best so far. If you’re looking for a top-flight music sequencing, recording, and mixing system – and you don’t need compatibility with Digidesign Pro Tools TDM hardware – then Cubase VST/32 will do just fine. Mike Collins
The MP3 craze is transforming the way people buy, sell, steal, and play music – and more and more music lovers are not only playing MP3 tunes on their computers, but also taking their favorite tracks on the road with portable MP3 players.

Until recently, the selection of Mac-compatible MP3 portables has been sparse. Now, several portables are vying for your shirt pocket. We tested two: Creative Labs’ DAP II MG and S3’s Rio 600. Both have unique strengths, but the Rio 600 is the pick of the two.

Memory transfers
Both players rely on USB for transfers from the Mac to the player’s memory. But transfer speeds vary wildly. In our tests, the Rio 600 handled transfers three times faster than does the DAP II MG.

Pros:
- Mac OS 8.6;
- Minimum specs: 233MHz PowerPC; ATI Memory transfers
- Price: £39 including VAT

Cons:
- Mac OS 8.6;
- Minimum specs: 233MHz PowerPC; ATI Memory transfers
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**VR Worx 2.0**

**Publisher:** VR Toolbox  
**Distributor:** Digital Toolbox  
**Pros:** Built-in image editor with text titling and captions; fully AppleScriptable; Photoshop acquisition plug-ins; sound capabilities.  
**Cons:** Cannot use soundtracks seamlessly throughout an entire movie.  
**Min specs:** Macintosh Power PC; Mac OS 8.1 or later; QuickTime 3.0 or later; 20 MB RAM.  
**Price:** £219 excluding VAT  
**Star Rating:** ★★★★☆/7.9

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**Star Rating:** ★★★★☆/7.9

For too long, Apple's QuickTime VR Studio has been sitting comfortably on top of the world of panoramic/virtual reality imaging. With the release of VR Toolbox's latest QTVR tool, Apple finally is getting a run for its money.

This feature-crammed set-up is actually VR ObjectWorx, VR SceneWorx and VR PanoWorx bundled into one application.

VR Worx 2.0 lets users import QuickTime VR 1.0 movies and export panoramas and object movies in both 1.0 and 2.0 format. Unlike Apple's QuickTime VR Studio, VR Worx 2.0 is available on both Mac and PC.

**Pros:**
- Built-in image editor
- Min specs:
  - Macintosh Power PC; Mac OS 8.1 or later; QuickTime 3.0 or later; 20 MB RAM.
  - Price: £219 excluding VAT
  - Star Rating: ★★★★☆/7.9

**The Worx**

VR Worx allows the synchronization of one or more sound tracks with specific views of an object. But it’s limited, because sound can’t play seamlessly throughout.

While importing an image to create panoramas, VR Worx 2.0 surprises once again, with a neat built-in image editor, allowing for touch-ups and even text-titling and captions. Other features include a URL hot-spotter that allows hyperlink buttons to be created.

**Macworld’s buying advice**

If you’re looking for a complete QTVR authoring suite, VR Worx 2.0 is recommended. Not only does it surpass Apple’s QuickTime VR Studio in features, but it’s also user-friendly. VR Worx can quickly knock-up QTVR movies to send by email, and developers will appreciate its advanced features.

Johan Lopes

Say you have some digital-camera images you’d like to post on the Web, but want to go beyond a boring online photo-album. Check out Totally Hip Software’s LiveSlideShow 1.0. Based on Apple’s QuickTime, this program lets you create slide shows complete with transitions between images, text captions, sound effects, and interactive navigation buttons. Despite a few rough edges, it’s a fun and surprisingly powerful application.

If you’ve used Apple’s iMovie, LiveSlideShow will feel familiar: a shelf holds imported images and sounds, a timeline enables you to sequence images, and a preview area lets you see your work in progress.

With the Effects panel, you can add transitions between images. Adding effects is a cinch – drag the desired effect between two slides in the timeline, and they part to make room for it. LiveSlideShow uses QuickTime to generate effects as the slide show plays back, so they don’t bloat your file’s size – as they would if you were to create them in a video-editing program such as iMovie. You can also add text captions to each slide, complete with optional anti-aliasing, drop shadows, and a variety of mostly tacky – animation styles.

LiveSlideShow can import most QuickTime-supported audio-file formats, including AIFF and MP3, and you can record narration snippets directly within the program. Unfortunately, LiveSlideShow attaches sounds to individual slides – if a sound is five minutes long, the corresponding slide displays for five minutes as well.

LiveSlideShow’s interactivity features are rudimentary but useful. You can add buttons to individual slides – when clicked on, these buttons can take viewers to the next or previous slide, or to the slide show’s beginning or end.

**Making a slide show**

LiveSlideShow’s iMovie-like interface makes creating QuickTime slide shows easy.

**Macworld’s buying advice**

LiveSlideShow is easy to use, yet powerful enough to create interactive educational slide-shows, electronic brochures, or fun alternatives to online photo-albums. Its approach to sound limits your options, but one can’t complain too much given the price.

Jim Heid
Rotoscoping is the art and science of painting directly on individual frames of a piece of film or video to create special effects—and there’s no better tool for retouching on the Mac than Pinnacle Systems’ Commotion. Recently upgraded and completely rewritten, Commotion sports features that not only allow for new types of effects, but also greatly change the way the program fits into a production workflow.

As with previous versions, Commotion 3.0 lets you load QuickTime clips into RAM for full-screen, full-motion playback. But where previous versions opened and manipulated QuickTime movie, or into a composite of several frames of a piece of film or video, Commotion 3.0 includes a complete project-management interface that lets you edit non-destructively and take advantage of a full range of compositing tools. Adobe After Effects users will feel comfortable with Commotion’s Project and Composition windows, which support unlimited layers and provide full keyframe control over properties—such as position, scale, rotation, and opacity.

If you’re输出ting to a FireWire-based DV system, you can now preview your video on an NTSC monitor from within Commotion—you don’t need to move video into an editing package to watch it at full resolution.

Rendering
Commotion has always had excellent real-time painting tools, but version 3.0’s rewritten painting engine makes them even better. Its paintbrush tools offer improved sub-pixel rendering and a more comfortable feel. The 75 new effects filters include Pinnacle’s Primatte Keyer, Composite Wizard, and Image Lounge packages. The powerful cloning facilities now allow you to clone from one frame to another, and the automatic wire-removal brushes and natural-media effects tools remain excellent.

With the program’s new project-management tools comes a fresh approach to painting. You can now paint directly into an individual QuickTime movie, or into a composite of several movies. Also, a streamlined palette and set of controls make the Motion Tracking feature less cumbersome.

Macworld’s buying advice
Commotion’s new interface improves an already powerful product. In addition to facilitating smoother workflow, Commotion’s new compositing facilities mean less time spent moving between connection and a compositing or editing program. If you’re looking for powerful rotoscoping and compositing, then Commotion 3.0 is for you.

Ben Langy

Database-driven Web site creator
Lasso Studio 1.5 for Dreamweaver
Publisher: Blue World Communications
Price: $299 download
Pros: Easy-to-use, efficient, and user-friendly.
Cons: Requires considerable learning curve.

Lasso’s straightforward LDML (Lasso Dynamic Markup Language)tags work with the included server-side application—Lasso Web Data Engine—which controls data-flow between a Web server, database, and Web client. Lasso comes with a Lasso Web server, but works with all common Mac-server software.

After installation, you access Lasso commands from within Dreamweaver. Lasso’s straightforward LDML (Lasso Dynamic Markup Language) tags work with the included server-side application—Lasso Web Data Engine—which controls data-flow between a Web server, database, and Web client. Lasso comes with a Lasso Web server, but works with all common Mac-server software.

Lasso works elegantly. The upgraded Lasso Configuration Wizard identifies your database and its records and fields. To create a database search page, choose fields from the FormBuilder dialogue box, rather than hard-coding tags. Dreamweaver’s Object palette includes several Lasso programming icons for manipulating fields and records. The FormBuilder function is a mimic, though—you use Dreamweaver to build sites and Lasso’s templates to add search pages to them. Lasso requires considerably less database experience than other popular Web database solutions—such as Pervasive Software’s Tango 2000, or 4th Dimension’s 4D Server. Lasso also handles any ODBC-compliant database, but you can expect to do more work if you range beyond FileMaker and 4D. You can embed SQL queries into Lasso Web pages or use Lasso’s LDML-to-SQL translation.

Macworld’s buying advice
Lasso Studio offers Dreamweaver users a great way to put a business product catalogue on a Web site. Version 1.5 refines the code converters and Configuration Wizard of 1.0, but retains the simple Lasso graphical approach.

Charles Seltzer

NOVEMBER 2000 55

Macworld reviews

[Image -6x760 to 608x849]
[Image 36x193 to 170x366]
[Image 37x581 to 171x739]

Pros:
Publisher: Commotion 3.0
Price: $299 download

Min specs:
ODBC databases.

Minor interface flaws.

£1,385 excluding VAT

Pros:
Publisher: Lasso Studio 1.5
Price: $299 download

Cons:
Publisher: Dreamweaver 3.01
Price: $520 download

Star Rating: 4.5/5

Star Rating: 3.5/5

Star Rating: 3.5/5

Star Rating: 3.5/5

Star Rating: 4.5/5

Star Rating: 3.5/5

Star Rating: 3.5/5

Star Rating: 3.5/5

Star Rating: 3.5/5

Star Rating: 3.5/5
Adobe Photoshop 5 Interactive Seminar
Publisher: Eurosync Technologies
Press: Offers solid grounding in key Photoshop skills – well designed, no USE

Pros:
- The Adobe Photoshop 5 Interactive Seminar gives clear and simple lessons on many aspects of image manipulation – from colour correction to application preferences.
- In the tutorials, though, this approach adopts yet another level: the movies stall in Photoshop.
- This tutorial does what most courses failed in this because they try to cover too much ground.
- A Photoshop course I attended was topical: What I needed was to master basic colour-manipulation and path-creation – but ended up with a rag bag of skills that enabled me to quarter-complete 12 Photoshop functions, rather than master just a few. It was a waste of time and money.
- Eurosync Technology’s Photoshop 5 seminar, on the other hand, is a value-for-money package that will furnish you with key Photoshop skills for £1,500 of external training would struggle to deliver.

Cons:
- Many of the courses I’ve been on have failed in the because they try to cover too much ground.
- This seminar also steers clear of another common failing of many courses – the assumption of knowledge. It takes you from the most logical starting point: knowing which scanner to buy and what to do with it when you’ve parted with your cash.
- Before launching into Photoshop’s colour-correction functionality, it offers a sound grounding in colour and image theory, and an explanation of Photoshop preferences-setting for RGB and CMYK images.

Star Rating: £155

Min specs: Mac OS 8.6; 16MB of RAM; 200MB free disk space; CD-ROM drive; PowerPC/G3 processor; Mice: 2-button mouse, trackball.

Distributor: Wheel Trackman

Cordless input device
Manufacturer: Logitech
Distributor: AIM Micro
Press: No mouse-oriented buttons

Cords:
- The Trackman Wheel is a two-button trackball with a scrolling wheel. It comes with a USB receiver that allows it to communicate with your machine.
- Logitech makes great play of the Web Wheel function. This can be selected in the central panel that comes with the device. The Web Wheel pops up on-screen upon clicking the scrolling wheel. It’s a helpfully-crafted arrangement of Web options – including Forward, Backwards and Favourites – that normally appear in browser title bars. Like so many of these fancy wheels, it proved no handier than the orthodox method. Also, I couldn’t get the trackwheel to work for love nor money.

Macworld’s buying advice
- If you spend a fortune on software training then seriously consider investing in this and similar interactive seminars. For example, Eurosync Technologies also offers seminars on print preparation in QuarkXPress, the fundamentals of InDesign and Illustrator, and the compositing of images in Photoshop.
- Assuming these are of a comparable quality, then for just £155 per title (you pay no VAT, because these are educational titled), you can build-up a mini-training library that equips your staff with twice the skill that can be had from most courses – and for a fraction of the cost.

Sean Ashcroft
To avoid being overlooked in the unforgiving world of online advertising, a banner must spin, flash, or fly. Web animation tools make it easier to build eye-catching ad banners, but the leading tools – such as Adobe Photoshop 6.0 – cost upwards of £139, and may be overkill for simple animations.

Two less-expensive alternatives, Beatware’s e-Picture Pro 1.0 and RecoSoft’s WebShocker 2.0, prove you don’t have to spend your life savings to create effective Web banners.

Although e-Picture Pro and WebShocker focus on the same goal – quick, attention-grabbing animations – they differ at the most fundamental level. Like nearly every other Web-oriented graphics program, e-Picture Pro is vector-based while WebShocker, in contrast, produces bitmapped images whose pixels are applied permanently to the canvas. Even worse, the program doesn’t separate its elements into layers, so selecting, editing, or deleting text, photographs, and drawn objects is difficult. This is a serious design flaw in a program designed to create images that change over time.

In an improvement over its predecessor, e-Picture 1.0, the current version adds a tool for creating 3D text. You can define the colour, lighting, depth, and rotation of text, which remains editable, and you can animate text along a path.

The program’s animation tools are intuitive, if occasionally glitchy. Time-line and tweening tools let you specify an object’s initial and final attributes – e-Picture Pro interpolates the transitions between the two frames. The program also has a useful visual-tweening tool that displays the path an object will travel as you drag it into a new position. This makes fine-tuning the speed and direction of an animation’s movement easier.

You can view the animation at any time, by clicking on the Play button in e-Picture’s Animation palette. But, the playback is jerky and – because the program must render each frame on-the-fly – it bears no relation to the speed of the final output.

WebShocker adopts a different approach to animation. Instead of using a timeline, the program requires you to build animations one frame at a time. Since there’s no easy way to select objects and make minor adjustments from one frame to the next, this often requires starting from scratch each time. Fortunately, WebShocker’s onion-skinning feature helps you line-up elements in different frames. And, a library of transitions – the closest thing the program has to tweening – lets you add canned effects.

You can now import native Photoshop and Illustrator files to e-Picture Pro, preserving objects’ layers and editability, and distribute the layers as an animated sequence or as separate bitmaps. WebShocker also imports native Photoshop files, but it does a decidedly clumsy job of handling layers – which it separates and places randomly on individual frames. Additionally, the program can’t interpret vector information – including text – from Photoshop 5.0 or 5.5.

The most useful addition to e-Picture Pro comes into play when your exporting an animation. The Image Slicing tool lets you cut animations into pieces, which can then be optimized and exported separately for quicker downloads.

Macworld’s buying advice
Both beginners and advanced users will find WebShocker’s tools more frustrating than useful for all but the simplest animations. Though e-Picture Pro is more expensive and still a little glitchy, it offers a solid set of tools with enough flexibility and power to create relatively complex animations.

Kelly Lunsford

Robson brings the high-end telephony features of expensive switchboards into smaller offices – it's like a personal assistant for calls.

Robson has two sockets to connect to the outside world, and sockets for extensions or fax machines. When a call comes in, Robson will route any fax calls to the right line. Other calls are greeted and then passed onto the appropriate extension when the caller hits one of the keypad options. The caller ID is recorded, and Robson can announce the caller by name if it is on record, or by number as long as it’s not been withheld.

Setting the system up wasn’t that easy. The first problem was that my telephone line and computer are not close enough to each other. Next was the fact that the Mac connection Mac is Serial rather than USB, though I’m assured that there is a USB-to-serial adaptor available.

The software is about as straightforward as it can get, considering the complexity of the job. There’s a pre-recorded voice, though your own greetings can be added. It would’ve been nice if it had more flexibility – the only option is a male voice.

Robson Telecom says it can provide custom voices, and a foreign-language version is on its way. Unfortunately, a custom voice is an expensive option.

Macworld’s buying advice
For the money, you won’t find anything to match Robson. This kind of ability is usually found on big PBX switchboards costing thousands. There’s room for improvement, but there are no terrible flaws.

David Fanning

Inexpensive; transition effects.

Cons:

PBX; helps filter unwanted calls.

Pros:

A telephone line.

Mac serial connection.

Serial rather than USB, though I'm close enough to each other. Next, was the fact that the Mac connection Mac is Serial rather than USB, though I’m assured that there is a USB-to-serial adaptor available.

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David Fanning
 Macworld reviews

iMaxpowr G4
Publisher: Newer Technology
www.newertech.com
Distributor: AM Micro (01908 429 473)
Price: £249; Enterprise Edition
Min specs: Mac OS 7.6; 64MB RAM; PowerPC; 586MHz CPU
Price incl. VAT: £249 (excluding VAT)
Star Rating: 

Con: Expensive; installation problem with two of our test units.
Pros: Excellent range of features.

Price:

Min specs:

Mac speeds compared

iMac speed boost

The CPU may have the most influence on a computer’s overall performance, but this isn’t the only factor that determines how quickly a Mac runs. While a processor upgrade will certainly speed up a Mac, it won’t make your machine as fastly as a new Mac with a faster system bus and higher-performance video circuitry. Newer Technology’s 433MHz iMaxpowr G4 offers a case in point. This upgrade increases the overall performance of the Mac’s first four revisions and turns in Speedmark 2.3 scores nearly 50 per cent faster than those of a 233MHz iMac. Unfortunately, the iMaxpowr can’t match the overall performance of a 400MHz Power Mac G4 because of the bottlenecks inherent in the original Mac’s bus speed and poly video circuitry. Because Photoshop takes advantage of the Power Mac G4’s Velocity Engine technology, our iMaxpowr G4-equipped iMac performed better than the same iMac with its original 333MHz G3 processor. Yet the 400MHz Power Mac G4 performed better still, thanks to its faster bus speed and video card. This iMaxpowr’s extra 333MHz did pay off in our SoundJam encoding test, however – the iMaxpowr-equipped Mac bested the Power Mac G4 by seven seconds. And, as you would expect – since 3D gaming performance relies more on the graphics chips than on the processor – the iMaxpowr Mac produced a scant 2.6 frames per second (fps) in our Quake III test, compared with the Power Mac G4’s 34.5fps.

Macworld’s buying advice
Although the iMaxpowr upgrades offer noticeably better performance in everyday computing tasks, unless you’re running an application that benefits from Apple’s Velocity Engine technology, you won’t see a breathtaking difference. If you don’t depend on such enhanced applications, the iMaxpowr G4 is a better deal.

Christopher Brown

Upgrade card revs-up older Macs

<table>
<thead>
<tr>
<th>Mac speeds compared</th>
<th>Speedmark 2.3</th>
<th>Quake III Gaussian Blur</th>
<th>Quake III Unsharp Mask</th>
<th>Quake III RGB to CMYK</th>
<th>Lighting Effects</th>
<th>MP3 Encode</th>
</tr>
</thead>
<tbody>
<tr>
<td>iMaxpowr G4/433</td>
<td>19.3</td>
<td>21.5</td>
<td>30.1</td>
<td>35.5</td>
<td>27.2</td>
<td>48.7</td>
</tr>
<tr>
<td>Apple iMac/233</td>
<td>20.6</td>
<td>24</td>
<td>32.3</td>
<td>40.2</td>
<td>28.5</td>
<td>50.3</td>
</tr>
<tr>
<td>Apple Power Mac (G4)</td>
<td>20.3</td>
<td>25.2</td>
<td>34.5</td>
<td>48.7</td>
<td>31.1</td>
<td>72.9</td>
</tr>
</tbody>
</table>

Behind our tests

Speedmark 2.3 scores are relative to those of a 350MHz iMac, which is assigned a score of 100. Adobe Photoshop results are in seconds. SoundJam results are in minutes:seconds. Quake III results are in frames per second. We tested each system with Mac OS 8.1, 100MB of RAM, a default system font cache of 1MB, and default memory settings for all tests except SoundJam. We set display to 1024 x 768 pixels and 1MB video. We performed Photoshop tests with a 50MB file and Photoshop’s memory partition at 80MB and Processing History in Performance. We used MP3 encoding with an audio CD and that was 9 minutes and 25 seconds in length, and converted it using a default setting of 128Kbps in SoundJam 2.2. Speedmark is a suite of common tasks. Macworld Lab testing supervised by Jim Galbraith.

Web stats made easy
Funnel Web 4 and Enterprise
Publisher: Active Concepts
www.activeconcepts.com
Price: Fast, easy to get started; excellent range of features; file customization of graphs.
Min specs: PowerPC; Mac OS 8.5, 144MB RAM; eight-bit color.
Price: £185; Enterprise Edition: £220; both prices exclude VAT.
Star Rating: 

A nyone who’s ever developed a Web site for a client knows they are obsessed with the number of visitors to a site and which does are most popular.

Fortunately for developers, all Web servers produce copious log files detailing every request made to the server, and every element sent out. But these logs are gibberish to those not in the know, and can also get pretty expensive – uncompensed, a week’s worth of Macworld’sow logs is a 100MB text file.

While there is a number of freeware and shareware programs around, Funnel Web is one of the leading professional-analysis tools, and the only major cross-platform test. This makes it an obvious choice for anyone hosting sites on a Mac, for example using WebSite. But it’s also useful if you want to run your analysis on an OS X Mac, even if your site is hosted on a Unix or, dare I say it, Windows NT box.

You can start analysis simply by drag & dropping a log file onto Funnel Web – the application will automatically determine the log format. You can implement an AppleScript to automate the retrieval of files from a server (an FTP application is built in), passing files to Funnel Web, and exporting the reports.

The number of statistics Funnel Web can produce is extensive, and gives the sort of mind-boggling detail that only a statistician could love. But you can also produce DailyReports, which give just the core facts. Full reports also produce graphs that IT managers adore.

Post-processing options include uploading the reports back to the server – so that clients can see the results and email notification – and the saving of reports as PDFs or delimited text.

The Enterprise edition of Funnel Web adds a number of features, such as the tracking of advertising clickstreams. The Enterprise edition is the first major log-analysis tool to analyze streaming media, with special reports giving details of the most popular clips.

Macworld’s buying advice
While there are freeware analysis tools around, Funnel Web is a large step up in terms of sophistication and flexibility, and it produces more attractive reports. The Enterprise Edition offers little more in the way of functionality, but is still valuable if advertising analysis and streaming-media analysis are needed.

Martin Gittus
Maps In Minutes – British Isles
Publisher: RV Publications
Pros: Five products to suit all uses and pockets; incredible attention to detail; separate illustrating and Freehand formats.
Cons: Some licence restrictions.
Min specs: Available RAM: 12MB (Economy), 20MB (Classic), 24MB (De Luxe Vector), 48MB (De Luxe Full), 24MB (Terrain).
Price: Economy, £99; Classic, £199; De Luxe Vector, £450, De Luxe Full, £550, Terrain, £115. All prices exclude VAT.
Star Rating: ★★★★★/5

There are many reasons why you might need a digital map of the British Isles, or a part of it. Perhaps, you want to place a location map on your Web site, or use a road map in a publication. Whatever the reason, Maps In Minutes has the answer.

Maps are all custom-burnt to CD-ROM in either Adobe Illustrator or Macromedia FreeHand format. This last point highlights the attention to detail shown by the publisher, which is aware of the shortcomings of trying to convert from one format to the other. Map sources are about as good as they get, and include the AA, and the UK Hydrographic Office.

All five packages share certain traits. Vector overlays are presented in numerous layers making them easily editable, while terrain images are supplied in RGB TIFF format for opening in Photoshop or similar apps.

The differences are in terms of scale and detail. The most basic – Economy Edition – offers the whole of the British Isles in 1:5 million scale, plus inset maps of Guernsey, Jersey and the Scilly Isles. And, this sub-£100 product boasts over 70 layers, including two-coloured population levels, motorways, A roads, airports, longitude/latitude lines and naming of all major towns and features.

The mid-range Classic Edition offers far more: three scales (1:1/2/5 million), a dozen individual 1:1-million scale region maps, and increased mapping detail with almost 100 layers that include dual carriageways and road numbers, motorway junction numbers, service areas and ferry routes. A nice touch is the addition of a road mileage chart – in effect, almost everything a serious cartographer would need.

There’s quite a step-up to the Deluxe Vector Edition, both in terms of features and price. In addition to the Classic’s facilities, there are 13 regional maps in 1:750,000 scale that contain far more detail, including B roads and tourist information, plus separate maps of weather forecast areas and sea contours. A comprehensive set of items for map keys is also included.

The other two products feature digital terrain-data: the low-cost Terrain Edition offers 1:5 million-scale maps with over 20 different 300dpi backgrounds, but minimal overlay information. The top-of-the-range Deluxe Full Edition has all the 1:1/2/5 million scale maps, including individual regions at 1:1 million and 1:750,000 scales, plus dozens of backgrounds with height shadings and contoured colours for land and sea.

Macworld’s buying advice
The quality of mapping is extraordinary, and technical support is free. The licence is a little restrictive in areas – such as only 640-x-480 pixels on Web sites – and there is an annual update fee of half the collection’s cost, but that’s to be expected given the frequent minor amendments to maps. It’s worth checking the samples and licence on the Web site before buying.

If you need UK maps, from basic through to the most complex, Maps In Minutes offers an unrivalled collection of products.

Vic Lennard

LaCie Blue Eye
Publisher: LaCie
Pros: Easy to use; quick; USB link for some monitors; accurate results.
Cons: Not all monitors benefit; expensive for single-monitor use.
Min specs: New LaCie monitor recommended.
Price: £365 excluding VAT
Star Rating: ★★★★/5

Working with colour leaves many designers seeing red or feeling blue – especially when it comes to accurately matching final output colour to the tints you see on screen. What starts off as viewing a project through rose-tinted glasses can quickly put you into a black mood unless you break out the colour-calibration tools (Enough with the colour puns already – Ed).

Enter the LaCie Blue Eye version 2.0 hardware calibrator for monitors. New to the upgrade is not only the all-important USB cable, but lighting controls to boot.

The Blue Eye looks like a stethoscope with suckers. It clips onto the glass screen of the monitor where it measures colour levels. The collected data is then fed back into the colour-calibration software, and repeated until the colour levels are correct and a ColorSync profile is created for that monitor. It’s a much better, far more accurate system that the one usually deployed by designers – simply gazing at the screen and twiddling colour controls until the thing looks right. It also takes into account the different lighting conditions that users are working under, as colour looks different if your screen is viewed in sunlight or under fluorescent tube lighting.

Ambient lighting awareness is simply handled by pointing the Blue Eye away from the screen and hitting a software button. This lets both the Blue Eye and software compensate for locations with a lot of natural light, such as a monitor placed so it’s facing a window.

Users of the LaCie monitor range – the electron 18blu, electron2blue, and electron22blue – are in the pink with the Blue Eye, as it leverages the USB connector that forms part of the Blue Eye hardware, letting the monitors automatically correct themselves based on information provided by the Blue Eye. A handy manual-override is provided so you can choose your own calibration – although that kind of defeats the object.

However, you don’t need to be packing a LaCie monitor to use the Blue Eye – although it’s crippled somewhat, in that you can only use software calibration and not the USB cable. LaCie also further colours the water by only selling it to registered LaCie monitor owners, although if you have one in your studio, there’s nothing to prevent you calibrating the rest of the displays.

Macworld’s buying advice
The Blue Eye 2.0 puts monitor calibration sharply in focus, and every aspect of the device works a treat. However, the fact you can’t use it with other monitors and enjoy full functionality – and that goes for older LaCie monitors as well – is a minus point. It’s also expensive for a single monitor – those with multiple monitors in a studio will love it, though.

Daniel Underwood
**SoundJam MP Plus 2.5.1**

**Publisher:** Casady & Greene

**Pros:**
- Casady & Greene Publisher:
- MP Plus 2.5.1
- SoundJam

**Star Rating:**

**Price:**

**Min specs:**

**Cons:**
- broadcasting.

**Macworld** reviews

**Essential MP3 player**

F ew audio players have had the dramatic effect of MP3 – not even Sony's Minidisc. Perhaps it's because MP3 has no master as such (it's an ISO standard) and doesn't rely on any particular medium. It's as at home on a computer as it is on a small stand-alone player. But you need good software to encode MP3 files, play them and to offer a share of nice add-on facilities. Where MP3 is concerned, that piece of software is SoundJam.

SoundJam is the Microsoft Office of MP3 software. For starters, it's probably the easiest and best MP3 encoder available on the Mac. Pop a CD into the drive, watch SoundJam automatically connect to the CDDB online database to get album and track names, select the required tracks and hit "convert." Features include variable bit rate (VBR) encoding, where SoundJam decides the rate according to the quality you choose, plus smart high-end frequency reduction, and a file-size reducing filter for frequencies below 10Hz. You can even plug a cassette player into the Mac's mic socket and use the Recent-to-MP3 facility to transfer old recordings.

Improvements in the current version include support for the new Dual Processor Power Macs, the ability to encode at lower bit-rates (below 32Kbps) and sampling rates down to 88.2KHz, plus conversion to WAV files for better cross-platform compatibility.

SoundJam's player is also one of the best around, courtesy of almost bottomline drag-d-drop playlists and the ability to recognize and play any file, irrespective of the file creator. The built-in ten-band graphic EQ is pretty well standard – but the cut-down version of Arboretum Systems' Realizer, which works on a song's sonic characteristics, is a nice extra. It even has a Playlist Composer that uses existing playlists, or folders of MP3s, to create new playlists according to your criteria. Also, each song can have a custom start-time, a different level and an equalizer preset. The latest version sports an enhanced playlist with hierarchical folders – much like the Mac's Finder. The player also supports streaming MP3 from the Internet, including two new features: Internet Stream Tuner, that finds music over the Internet automatically; and Internet Broadcasting, for streaming music from your computer using a re-broadcaster – such as FlyCast, ShoutCast or IceCast. Powerful stuff.

For those who are lucky enough to own a stand-alone MP3 player, SoundJam can control most Rio and EMP machines, including the EMP Jukebox.

**Macworld’s buying advice**

It really is very difficult to fault SoundJam MP Plus. The open nature of its plug-ins means there are plenty of third-party skins and visual effects, aside from the standard ones. And all updates from version 1.0 have been free of charge – on a product that costs less than £35! More to the point, SoundJam MP Plus works well in all departments – apart from one, the karaoke feature. But that's the only negative point on a product that goes from strength to strength. There's a 14-day trial on SoundJam's cover CD this month.

Vic Leonard

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**V600 Zoom**

**Manufacturer:** Kodak

**Pros:**
- Cheap: easy to use.
- Handsome compared to more expensive models.

**Cons:**
- A video-out connection.

**Price:** £1,025 (excluding VAT)

**Star Rating:**

**Digital projector**

T he Kodak V600 Zoom is one of the cheapest projectors available. Low price usually means back-breaking weight - but not in this case. Even though it's double the size and weight of the smallest projectors, it still weighs only 3.4Kg (7.5lbs). This makes it small enough to take to meetings – and it comes with a handy carrying case.

The projector market used to be split between big, bright boardroom-projectors and smaller – but dumber – portables. This model bridges the gap.

Setting up the V600 is a child's play. Digital projectors often need tweaking – especially with text-heavy presentations. The analogue image from the computer needs to be converted to a digital picture. This doesn't always go smoothly, but the V600 handles this easily, even if you switch resolution mid-presentation. Just about any resolution can be displayed, though for optimum results a 800 x 600 pixel resolution is best. This is the maximum natural resolution available, but if you switch to 1,280 x 1,024 pixels it will interpret the image. This will affect text visibility, but it works fine on images. The V600 takes a couple of seconds to settle into a new resolution, but it's much quicker than doing it manually.

The technology used to display the image is LCD-based. Most of the other models in the Kodak range use DLP (Digital Light Processor) chips. The DLP chips make smaller models possible because LCD projectors need three coloured panels for the component colours. DLP-based projector are also less likely to fade in the corners, because the image is constructed by bouncing light off a chip. LCDs have a habit of fading over time, but the technology is getting better. Unfortunately, I haven't got a spare five years to test the V600.

**Macworld’s buying advice**

There are many high-end projectors that will out-perform this model – such as Epson's lightweight £2,295 EMP-500. However, people and companies who don't need to worry about money are few and far between. Smaller models with similar abilities cost £2,050, making the Kodak V600 Zoom a very attractive proposition indeed.

David Fanning
Apple’s next-generation operating system may not be finished yet, but it’s taken its first big step forward with the release of an early version of Mac OS X. This is a “public beta” (the final stage of development before a product’s release), meaning that Apple is letting us get our hands on a version of Mac OS that’s definitely not fully formed but which does give us the chance to learn roughly what the future holds for us all.

For years, Mac fans have beseeched Apple for a modern operating system: not just more spaghetti code piled on top of the ancient OS 8 foundation, but something state-of-the-art and rock-solid. We wanted the stability of Unix and the good looks of a Macintosh.

OS X is unlike any other operating system in Macintosh history, and in its current condition, it requires a great deal of tolerance from the Mac faithful.

Running a pre-release OS is like rafting down an uncharted river – there’s no telling what danger lurks around the next bend.

But running the OS X beta has its upsides, too – not the least of which is a sneak peek at an operating system that will soon radically reshape your Mac experience. In these articles and in future issues of Macworld, we’ll show you how to prepare for and install the beta to minimize your risk, and how to navigate the rapids and boulders as you explore. We’ve also speed-tested applications running under OS X, and compared them to OS 9 speeds.

The release of this OS X public beta offers tangible proof to us all that Apple is working toward a stable, modern operating system – with pre-emptive multitasking, protected memory, multiprocessing and multithreading. These advances may sound boring, but they’ll make your life a whole lot smoother and faster.

Perhaps most importantly, Apple also gets the Mac’s most-serious, hard-core users to put OS X to the test before it’s officially released. This beta should mean less bugs when the polished version of Mac OS X ships early next year. Remember that beta versions are buggy – expect incompatibilities, crashes and re-installations. But for those of us willing to put up with the pain, OS X offers a real hands-on experience with tomorrow’s Mac OS.

1. It’s a beta. Parts of it aren’t going to work right, some features aren’t working at all (eg. AirPort), and there’s always a chance it could do something to your data.
2. You have to pay £25 for software that’s unfinished and expires next May.
3. Classic mode allows you to run all your Mac OS 9 applications, but in practice it’s weird and a bit unstable. As a result, you’ll probably need to switch back to Mac OS 9 whenever you need to do a lot of heavy work in a classic application.
4. Not only are most applications not Mac OS X-native, most of the extensions and utilities you use to enhance and personalize your Mac aren’t there yet, either.
5. Got something other than an original G3 or G4 Mac? Got one of the original PowerBook G3s? Well, forget it. Mac OS X isn’t made to work with your system at all.

1. One day, all Macs will work this way. Like it or not, Mac OS X is the future of Macintosh. Refusing to upgrade will eventually lock you into old software and obsolete Macs. Don’t put off learning. Be ready for the real thing early next year.
2. You’ll get a chance to try out new features and complain to Apple about the ones you don’t like before they’re set in stone.
3. It’s easy to switch back and forth between OS 9 and Mac OS X, so if OS X isn’t working for you, you can always just ignore it.
4. You’ll get to try out a slew of new Mac OS X-native applications that will be in beta testing at the same time as Mac OS X.
5. PowerBook users will marvel at how quickly OS X wakes up from sleep – in only a few seconds.

Are you X-perienced?

The next-generation Mac operating system has landed… sort of…

1. Apple’s next-generation operating system may not be finished yet, but it’s taken its first big step forward with the release of an early version of Mac OS X. This is a “public beta” (the final stage of development before a product’s release), meaning that Apple is letting us get our hands on a version of Mac OS that’s definitely not fully formed but which does give us the chance to learn roughly what the future holds for us all.

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Mac OS X: The full story
Mac OS X: Beta survival guide
Mac OS X: Macworld Lab report
A

Apple knew it had to do something. The company knew that the Mac OS, built layer by layer atop the foundation laid with the release of the original Mac back in 1984, was running out of room to grow. The eighties Mac OS foundation couldn't provide modern features, such as pre-emptive multitasking and memory protection, that users were starting to demand (and that Microsoft was threatening to provide).

So, in the early nineties Apple set out on a quest to find a new operating system to replace the Mac OS. Here's the story of the end result of that quest: Mac OS X, which made its public debut at Apple Expo 2000 in Paris (see Nov. issue). Macworld

1. New operating system – from Aqua to pre-emptive multitasking

Here's a complete overview of Apple's new operating system – from Aqua to pre-emptive multitasking.

A revamped Finder

The Finder's window has a row of buttons at the top, reminiscent of Mac OS 9's Sherlock 2 interface. If you click on one of these buttons, you'll be taken to a specific location on your Mac:

1. The Computer button shows available drives and your network connection.

2. Home takes you to your home folder.

3. Favorites leads to a collection of commonly visited parts of your connection.

4. Apps leads you to the home of all your programs.

5. Docs is where you store your documents.

6. Users leads to the folders of all the people with whom you share your Mac.

Also on the window are three buttons, which let you switch among three different views of viewing the contents of a Finder window. The Icon and List views are mainly for viewing the contents of folders, while the Column view is useful when you want to view your files.

The Finder's Title Bar

When you move your cursor over a title bar, the Finder will display a preview of what's in that file. There's also a tiny arrow button next to the title bar that will minimize that window.

The Dock's Magnification Feature

The Dock's magnification feature lets you minimize clutter by reducing the size of items on your hard drive or on the Internet. Any document you drag to this line and drag it up or down to a new location will have its own icon, which can be a thumbnail view of the contents of that item. Dock icon can also be resized for better visibility.

The Dock's Magnification Feature

Perhaps the most radical addition to the Mac OS X Dock is the Dock's magnification feature. When you move your cursor over a part of the Dock, icons get bigger and push up the top edge of the Dock. When you move your cursor over a part of the Dock, icons get bigger and push up the top edge of the Dock. 4. Mac OS X comes with native versions of Sherlock (for finding items on your hard drive or on the Internet) and StuffIt Expander (for decompressing items you download off the Net).

It's easy to change the Dock's magnification feature by dragging it up or down. It's also easy to control various aspects of Mac OS's Dock.

Mac OS X's General Preferences

NEW LOOK! Mac OS X: General Preferences

The General preferences pane is a mixture of interface commands and system settings. You can turn on Appearance options so you can move from Aqua to Graphite, all the way to Classic.

1. By setting the Transparency level, you can control various aspects of Mac OS X's Dock.

2. Items to the left of this line are applications; items to the right aren't. You can also click on this line and drag it up or down to make the Dock larger or smaller.

3. Classic is an OS X application that runs Mac OS 9 inside it. Once Classic is running, you can run Mac OS 9 apps right inside Mac OS X.

4. Hickory-dickory Dock. Run your mouse up Apple's new Trash can. Drag items here if you want to trash them – or just hit *Del* in the Finder.

5. This icon represents a Web link; click on it and you'll be sent to a Web Page.

6. Any document you drag to this line and drag it up or down to a new location will have its own icon, which can be a thumbnail view of the contents of that item. Dock icon can also be resized for better visibility.

7. Items to the left of this line are applications; items to the right aren't. You can also click on this line and drag it up or down to make the Dock larger or smaller.

8. This icon represents a Web link; click on it and you'll be sent to a Web Page.

9. Any document you drag to this line and drag it up or down to a new location will have its own icon, which can be a thumbnail view of the contents of that item. Dock icon can also be resized for better visibility.

10. Mac OS X apps also show up in the Dock. That way, it's easy to see all programs that you've currently running, whether or not they're Mac OS X native.

11. Items to the left of this line are applications; items to the right aren't. You can also click on this line and drag it up or down to make the Dock larger or smaller.

12. This icon represents a Web link; click on it and you'll be sent to a Web Page.

13. Any document you drag to the Dock appears down here, as do any windows you minimize by clicking on the yellow button with the minus symbol in it.

14. This wire basket is the Mac's new Trash can. Drag items here if you want to trash them – or just hit *Del* in the Finder.
have a thick line drawn around them. Most longtime Macintosh users have figured this out, but it’s an interface convention lost on many novice users. In Mac OS X, you can’t miss the default button – it’s blue, and it throbs brighter and darker while waiting for your command. If the bright blue puts you off, or interferes with your delicate colour-management system, you can change it to a far more sober Graphite.

Every pull-down menu and dialogue box is partially transparent, showing a hint of what’s behind it. When you let go of your mouse, menus don’t simply disappear – they fade away. And all Mac OS X text is anti-aliased, featuring smooth edges that are much easier on the eye than the old-fashioned jaggy type. Just about everything you do with your mouse in OS X has an immediate response. If you drag a window around, the entire contents of that window move. Similarly, when you resize a window, you actually see the size change as you’re dragging.

**Major memory advance**

The most overdue operating system feature to be included in OS X is protected memory. In an operating system with protected memory, each application accesses only its own space in memory and doesn’t touch the memory being used by other running applications, or the OS itself.

Picture your Macintosh today. You’re working in Photoshop, when all of a sudden, everything grinds to a halt because your Web browser has crashed while trying to download a large file in the background. Even though Photoshop is not at fault, you are forced to reboot your Mac and pray that you saved your file recently.

In a system with protected memory, such as OS X, things are different. When an application crashes, it leaves all other applications up and running.

**Virtual memory**

While the current Mac OS offers virtual memory, it’s nothing like the modern virtual-memory system built into Mac OS X. If you’ve even had a Mac application quit on you because it doesn’t have enough RAM allocated to it, you know the joy of selecting an app in the Finder, choosing Get Info, and increasing its allocation.

With Mac OS X, that sort of trick is a thing of the past. You’ll be able to launch your applications as you normally would, and Mac OS X will intelligently allocate as much virtual memory as those apps need to run. You won’t even need to preconfigure how much hard-disk space to allocate for virtual memory – the operating system will do that itself, dynamically.

**Multithreading and multiprocessing**

When a program is multithreaded, essentially that means it can walk and chew gum at the same time. For example, a fully threaded version of Photoshop could theoretically operate a scanner to create a new image-file and run filter calculations on one or several open images simultaneously.

In Mac OS X, the Finder will be more fully threaded, so you’ll be able to do things like move a window containing a QuickTime movie while the movie continues to play. You’ll also be able to pull down menus and move icons while other applications continue to update their windows.

This new OS will also support multiprocessing in ways today’s Mac OS can’t. When Mac OS X arrives, today’s...
dual-processor G4s will really come into their own, because Mac OS X supports symmetrical multiprocessing. This means it treats the available processors equally, balancing the load of your system over the whole array. By virtue of its internal design, Mac OS X is inherently multiprocessor-aware, and all of its functions can run on multiple processors, unlike those of the classic Mac OS. In day-to-day use, multiprocessor machines running Mac OS X should feel snappier than single-processor machines. Applications specifically written to take advantage of multiprocessing will have complete access to the processors. The OS can assign each individual task these apps undertake to a different processor, balancing the load and using processor power as efficiently as possible. But even if a Mac OS X program wasn’t written with multiprocessing in mind, it will benefit. The operating system can still assign different programs to different processors, meaning that program A can run on one G4 while program B toils away on the other. In addition, programs don’t work in a vacuum — they’re working in conjunction with the operating system at all times. And since Mac OS X will be multiprocessor-savvy, it will balance all of its own work (like moving windows and scrolling) across processors. The programs you get

The Mac OS X beta comes with several new versions of familiar programs, as well as a few new entries. Several programs have been modified to take advantage of Carbon, a system that transforms old Mac programs into OS X-native applications. In addition to Microsoft Internet Explorer 5, Mac OS X also provides native versions of StuffIt Expander and QuickTime Player (see left). New apps include Mail, an Internet email-client application with support for styled mail, mail rules, multiple mailboxes, and more; Address Book, a personal information manager with support for finding people via the LDAP Internet protocol; and Music Player. Music Player is a combination CD and MP3 player. At this point, it’s not fully functional — playlist support is limited, it won’t look-up CD track information via the Internet’s CDDB database, and it doesn’t even recognize the ID3 system of embedding song info in MP3 files. These points should be addressed by the full release date. X marks new spot

But Mac OS X is much more than a fresh coat of paint on the Mac’s user interface and much more than a typical operating-system update. During the next year, both the new Aqua interface and the technology behind it will begin to change the ways we experience our Macs. It will take time for these changes to catch on, and only time will tell how favourably — or how quickly — the Mac community will respond. The journey has begun.

NEW LOOK! Mac OS X: System preferences

This new application, System Preferences, is the Mac OS X equivalent of the Control Panels folder. But these items are all Apple-supplied, and third parties don’t get to drop their own controls in this application. The strip at the top is for commonly-used items; you can drag any of the icons here; below onto the strip, and they’ll stay; drag them out and they’ll disappear from the strip.

NEW LOOK! Mac OS X: Login

Login is the equivalent of the Startup items folder under Mac OS 9. Drag items into this window from the Finder, and they’ll start up when you log in to the Mac OS X system. You can also choose whether the application auto-loads at startup, or is visible.

NEW LOOK! Mac OS X: QuickTime Player

The new QuickTime Player (top) looks a lot like the old QuickTime Player — which makes it all the more reassuring. There are some changes, however, that make it a lot easier. The Player’s volume wheel has thankfully become a slider, and there’s now a TV button rather than a drawer that slides out to present you with QuickTime TV channels.

The new-look Finder might not be everyone’s taste, but it does offer a very useful preview column. Amazingly, you can play these QuickTime-movie previews right here in the Finder.

NEW LOOK! Mac OS X: Calculator

The new Calculator may be written in Cocoa, but in terms of functionality it’s the same old stupid calculator. Apple’s been shipping with the Mac OS for years. Is it too much to ask Apple to ship a simple calculator with the Mac OS that doesn’t square roots and other lightweight scientific calculations?
Mac OS X: the beta survival guide

By Franklin Tessler, David Pogue, and Henry Bortman.

Explore the future safely with these tips for installing and using the new Mac OS.

Install with care

Think very different. From the Roman numeral in its name to the Aqua interface, that’s what Mac OS X is.

The right stuff

Before you reach for your credit card, make sure your hardware is up to the job. Here’s what you’ll need to run Mac OS X:

- A Mac or any Power Mac, PowerBook or iBook with a PowerPC G3 or G4 processor, except for the original PowerBook G3 (the limited-release model before Wallstreet). Apple hasn’t committed to supporting other PowerPC-based Macs, including those with third-party G3 or G4 processor cards. By the way, you can’t install the OS X beta on a FireWire drive, but you can store OS X files on it.
- Internal video or an audio-supplied video card from Silicon or ATi. If you have more than one monitor connected to your Mac, then make sure you disconnect the second monitor before installing.
- At least 64MB of memory to run OS X. And you’ll need even more memory — Apple recommends 128MB, if you also want to run OS 9 applications under X.
- 1.5GB of free disk space if you can spare the room. It’s a good idea to set aside another gigabyte or two for applications and documents.
- Firmware updates for your Mac and other hardware. Look for the latest International-English installers on Apple’s support site (http://aus.info.apple.com). Updates may cause their own problems, so give yourself time to recover before you go to the next step in the installation process.

Preflight checklist

Apple is taking a huge gamble by releasing Mac OS X before it’s done. If the beta’s a bug-ridden turkey, Apple could lose the confidence it has ridden turkey, Apple could lose the confidence it has in its OS X beta, and you can’t afford to be without. Even if you have backups of your applications and data, it can take hours to reformat and restore a hard drive.

- Back up your disk before you install, and then do it again frequently after that. Don’t assume your existing backups are intact — back them up to make sure the files weren’t corrupted during backup. If you use Dantz’s Retrospect (www.dantz.com), you can use the Verify function to check the integrity of your backups.
- Although you can install the OS X beta on the same volume as OS X 9, instead, shield your files by installing it on its own drive. (OS X beta can’t boot from an external FireWire drive, however.) That way, you’ll be less likely to lose valuable data if your computer goes south. If you don’t have an extra drive and must run the beta, use Apple’s Drive Setup to create a separate partition for OS X on your disk. Note that you can’t partition an active drive — you must reformat it.
- Keep your existing OS 9 system folders, preferably on a separate partition or volume, so you can still use your present apps in Classic mode and, when you want, use the System Disk control panel to switch back to Mac OS 9.

Ready for take-off

You’re backed up and prepared your hard drive, you’ve loaded the latest firmware updates, and you’re holding the OS X beta CD-ROM in your hand. It’s time to install. Either click the CD in your drive as it turns on and hold down the “C” key, or do the following:

1. Insert the OS X CD in your Mac and double-click on the Install Mac OS X beta icon.
2. Click on Continue. Your Mac will restart from the CD, and the installer will run automatically. (The spinning, colored CD cursor shows you that OS X is loading.)
3. Choose a destination volume or partition for OS X. You have the option of reformating the OS X disk in Mac OS Extended (HFS+) or Unix File System (UFS) format. The beta works with either one, but only Mac OS Extended drives show up on Mac OS X desktops. That’s the best option for most users.
4. When the installation finishes, the installer will restart your Mac.

Shipshape flight gear

The first thing you’ll notice when Mac OS X boots is the revamped Setup Assistant. Although it resembles its OS 9 counterpart, the OS X version lets you configure more settings, it offers mostly straightforward options but adds a few new wrinkles:

- Configure Your Network: a series of screens in the Setup Assistant lets you configure your Mac’s ethernet port to handle TCP/IP, enter a static IP address, or specify whether your computer will use a DHCP (Dynamic Host Configuration Protocol) or BootP (the default) server for internet access. (It might be a good idea to open your Mac OS 9 TCP/IP control panel before rebooting into Mac OS X and writing down all the settings therein, so you’ve got them handy when you get to the System Preferences on Desktop: click on Sharing and turn on FTP access for each item you want to share; then enable it using Share Inspector.)
- User Accounts: Unlike OS 9’s optional Multiple Users, Mac OS X requires that you specify at least one password-protected user account.

Mac OS X: Where’d everybody go?

Mac OS X is like coming home from college and finding out that your parents have converted your bedroom to an office. Here are some hints about where to find the features you once knew. Apple has moved or replaced some; the company may yet restore those labelled “Missing.” Features that are gone forever are labelled “Eliminated.”

Hi-drag to scroll window

Open the Grab application in the Applications: Utilities folder. 

-Missing.

Apple menu

Click on the Apple menu. Missing.

Preferences folder

Non-existent as we know it, but click on System Preferences in the Dock for some features.

Restart command

Present as a button in the login panel. Choose Quit from the File menu to log out, and the panel will appear.

Quit command

No longer in the File menu of your programs; now in the Application menu.

Shut down

On the Dock.

Eliminated.

Now called TextEdit, it’s in the Applications folder.

Now called TextEdit, it’s in the Applications folder.

Click on System Preferences on the Dock; click on Login; click on Add under the Login Items tab.

Click on System Preferences on the Dock; click on Network. Note that the AppleTalk default is inactive. Click on Show Sharing; turn on FTP access for each item you want to share; then enable it using Share Inspector.

The green dot in the upper-left corner of a window.
Once the Setup Assistant applies your settings and you restart, you’re ready to begin exploring the OS X beta.

Explore with care

Where is everything? The most disorienting aspect of the beta is its folder structure. What lies behind Mac OS X’s pretty face is Unix, plain and simple. Your Mac’s default name is localhost, and the System folder contains folders called Administration, Applications, Documentation, and Library. Filez play around, and you’ll find files with names like BSD.png and apache.conf.log.

For now, don’t knock yourself out trying to decipher the functions of these files and folders. Instead, get to know the new Go menu or the Finder toolbar, both of which give you direct access to the folders you really care about: Applications, where you’ll find most of your Mac’s programs; Documents, where Mac OS X programs deposit your work (unless you direct them to a different folder via the Save command). Both of these folders are buried deep in the nested mass of Unix folders, but you can summon them easily with the Go menu.

Window confusion

Finder windows don’t work quite like they used to. For example, double-clicking on a folder or disk doesn’t open a new window. Instead, you see one big window at all times; each disk or folder you double-click appears within this window, replacing its contents. Click on the Back button just below the title bar (or press ⌘-B) to return to the previous view. In other words, the Mac OS X Finder works like a Web browser for your hard drive. Unlike a browser, though, there’s no Forward button. If you need to open two windows at once (for example, to move or copy icons), use the File menu’s New Finder Window to create a second window or Option-double-click on a disk or folder to open it in an independent window. You can also use the Column view to alter the default behaviour so that every double-click on a folder opens a new window, choose Dock and Desktop Preferences from the Desktop menu, click on the Finder tab, and choose the “In a new window” radio button.

Back to Mac OS 9

You get the best Mac OS X experience by using programs written for Mac OS X (termed “Cocoa”) or adapted to it (called “Carbonized”). Only these programs offer features like the Aqua interface and memory protection, which ensures that if one application crashes or freezes, the rest of the Mac zooms merrily along. You don’t have to buy entirely new programs, however. Apple’s Classic application lets you run OS 9-compatible programs in their own memory bubble. They don’t offer the same stability and features, if one of these programs crashes, your entire Mac OS 9 bubble may crash. But even then, you don’t have to restart the machine: Mac OS X soldiers on.

To enter the Mac OS 9 world, just double-click on the icon of one of your older programs. (Most such icons look blotchy and ragged, since they weren’t designed with Mac OS X’s smooth-scaling graphics technology. However, some forward-thinking developers can create Classic applications that also have pretty OS X-style icons—you’ll know them when you see them.) Unfortunately, launching the Classic application is just like starting up a Mac OS 9 machine, complete with a long wait for extensions to load. And unless your Mac has 128MB of RAM or more, you’ll find launching older programs painfully slow. No matter how much RAM you have, mundane tasks like scrolling in graphic-heavy documents may be slow and jerky.

What to look forward to

If you’re willing to learn Mac OS X’s new terminology, new locations for familiar controls, and new technology concepts, and if you’re willing to bear with the bugs and glitches that enliven any beta-test experience, you may start seeing its potential. For example, you now have a keystroke (⌘-R) for hiding the action program and another (⌘-R) for collapsing a window to the Dock. The Network program lets you turn any Mac into not only a Web site, but also an FTP, Telnet, or email server—for free. And the Terminal program brings command-line power to the Mac.

Viewing the beta version of Mac OS X is like going at a hunk of hacked marble. Its solidity and heft make it inspiring, and the right artist can unleash a lot of beauty—but at the moment, it’s got a lot of ragged surfaces and sharp corners.

Classic confusion

If you’re planning to install Mac OS X beta for day-to-day use, expect a dose of disorientation. The whole reason you’re installing the beta is that you can’t wait to live in the Aquifed world of Mac OS X—right? It ain’t gonna happen. In fact, you’ll probably spend most of your time in the Classic environment, which behaves pretty much like Mac OS 9. At best you’ll get bounced back and forth a lot between Mac OS X proper and Classic. Few popular applications will be Carbonized—retinex to take advantage of X until well into the beta period. See www.versiontracker.com for a constantly updated list of Carbonized applications.

Basic look and feel

When you’re running a Mac OS X application, the menu bar looks Mac OS 9ish. No Apple menu on the left, no applications menu on the right, and so on. But when you’re running Classic applications, the menu bar has its old familiar OS 9 look. It makes it hard to get used to anything.

Classic, the application

When you start up the Classic environment, you’re actually running a Mac OS X application called Classic. If you click on the “9” in the Dock, you’ll find yourself inside this application, wandering where the heck you are. Although it’s called Classic, it has an OS X look and feel. Why is it there? It lets you Restart or Shut Down the Classic environment. There’s a similar application—called Classic Support—within the Classic environment so it has an OS X look and feel.

Networking

No matter how you have your network settings configured in Mac OS 9, when Classic starts up, Mac OS X will overload them with its own settings. Location Manager in OS 9 gets confused by this OS X override and displays cryptic messages when you shut down. So you might as well turn it off. Wireless AirPort isn’t supported in the Mac OS X beta, so you might as well turn that off, too.

Fonts Mac OS X and the Classic environment don’t share a common set of fonts. Your Classic apps will have access to all the fonts you had installed in Mac OS 9. But your Mac OS X fonts won’t, unless you also install them in the OS X Fonts folder within the System: Library folder.

Extensions and Control Panels

They’re not accessible in Mac OS X, and they don’t all work when you run a Classic application. In Classic, you’ll probably want to turn off some extensions until they’re taught how to behave properly under OS X.

Peripherals

Printers, scanners, mice, and other peripheral devices communicate with your computer through bits of software known as drivers. Well, guess what? Mac OS 9 drivers don’t work under Mac OS X. So peripherals need all-new drivers for X. Many of these won’t be ready right away. Apple will provide some generic basic-functionality drivers for laser printers, for example, and for plain-vanilla mice and keyboards. But you’ll probably have to write drivers before you can use all the features of all your peripherals with OS X. And printing to a USB printer from Classic simply doesn’t work in the beta.

Don’t be disheartened Just be aware that the Mac OS 9 to OS X transition is going to be a bit rocky. As long as you’re prepared for a bit of bizarre behaviour, you’ll do fine.

Mac OS X on the Web

VersionTracker.com www.versiontracker.com This site has the latest Mac software available for download, for OS X and beyond.

X Appeal.org www.xappeal.org This page features information on hardware compatibility with OS X, a user forum, and how-to for the new and strange operating system.

The X Files www.macspeedzone.com/4.x 

www.stepwise.com This site has the latest MacFixIt articles. Compatible games and links to other OS X developments.

MacFixIt www.macfixit.com MacFixIt is a familiar site to those of you who like to get in there and fix things yourself. Some areas of the forum section deal with OS X, and you can expect problems with the OS X to be posted on this site as they arise.

Stepwise www.stepwise.com Stepwise is a good overall Mac OS X site. It details the latest OS X developments and links to other informative sites.

A dozen basic Unix commands

BUSHHELL.com/sapcon commands.txt

OS X is the first Mac operating system to have a Unix command-line terminal that can control everything from printing to copying files to restarting your system. This site helps by giving you basic UNIX commands.

– Jason Cox
Macworld Lab tests show apps run slower under Classic; native apps faster in OS X

For the curious, OS X is like a birthday toy, promising hours of puzzle solving and fun. This beta is not fully optimized for performance, nor is it compatible with the full range of Macintosh peripherals; however, it does give us an indication of some of OS X’s potential. My goal was to find out how the public beta performed in terms of speed. Since there are very few Carbon or Cocoa applications currently available, I did most of my testing with Mac OS 9 applications running in Classic.

Classic itself runs in its own window, and behaves much like PC emulation packages, such as Virtual PC or SoftWindows. However, PC emulators must translate Intel instructions to PowerPC instructions, a slow and laborious process. Since OS 9 applications start out as PowerPC instructions, the applications should be almost as fast in Classic as they are in regular old OS 9. This was true for some tasks, such as encrypting a file in OS 9, and unstuffing a file with the Classic version of StuffIt Expander.

On a multiprocessing system, Classic gets to run on its own processor; however, Classic is not multithreaded. Currently, Mac OS 9 applications that are written to take advantage of the second processor are limited to one processor in Classic. But, Classic is separate from Mac OS X, so background applications in Mac OS X shouldn’t slow down Classic applications. Unfortunately, I wasn’t able to test this. My test machine, a Power Mac G4/1000 dual-processor, crashed repeatedly with iPhoto and other Classic applications. Also, performance appeared to be slower than on a single-processor Power Macintosh G4/1000.

Macworld Lab’s standard testing suite, Speedmark 2.1, includes 2D scrolling tests. I found 2D scrolling performance to be two to three times slower in Classic than in Mac OS 9. I checked scrolling in Adobe Acrobat, Microsoft Word, and Excel. Drawing windows in OS X was also noticeably slow. The problem may be that Mac OS X’s drivers for PC graphics cards are incomplete. I also found that if the Dock is open, scrolling performance gets even worse — set the Dock to auto-hide to get the best results.

After the slow 2D numbers, I was pleasantly surprised with the frame rates from the Quake III demo. 3D operations are clearly being accelerated in Classic, although the frame rates are still not as fast as native OS 9.

Adobe Photoshop is an industry standard for performance testing. I wanted to install 1GB of RAM and set Photoshop’s memory size to 900MB. However, I had problems setting Photoshop’s application size under OS X. I used the new version of Get Info, the Inspector, to change the application size. When I launched Photoshop in Classic, the setting appeared to be correct — but based on the performance numbers, the memory setting was still at its default. If I rebooted into OS 9, changed the application size via Get Info, and then re-booted into OS X, Photoshop would quit before it even got to the splash screen.

Classic apps can’t communicate directly with Mac hardware — they must go through OS X. This beta has support for most Apple hardware, and some USB and FireWire peripherals. However, OS 9 apps that are looking for specific hardware may not run. A VST FireWire drive and a USB Zip 250 worked fine. Even ones that didn’t mount were recognized on the bus — for instance, a USB Canon scanner, a Q55 FireWire CD-RW, and a USB Epson printer.

There were a couple of bright points. Under OS X, PowerBooks do wake up from sleep in just a few seconds. Also, I saw good performance with the Carbonized OS X preview version of Casady & Greene’s SoundJam MP.

Macworld Lab will continue to test Mac OS X and report on the details. Right now, Classic apps run slower under OS X emulation than they do natively in OS 9. When developers release Carbonized versions of their apps (see News, page 22), we should see OS X in its true colours.
Mac doctor

From hiccups to heart attacks, we've got the cure for what ails your Mac. By Ted Landau

In a perfect world, you'd be reading something else right now. Of course, in a perfect world, you'd not be seeing a Type 2 error message on your monitor as you try to start up your Mac — and frantically worrying whether you and your files will ever meet again. You'd go to the Web to look for the solution, but your computer's on the critical list, so you can't very well use it to get online. And calling tech support means hours of hold time and countless transfers — and maybe a big bill if your computer is no longer under warranty. You need help, and you need it fast.

That's where this guide comes in. Whether you're facing a computer crash, or any of an assortment of other ills, I'm here to tell you the probable cure — as well as those suggestions that may just waste your time.
Treating the symptoms

How do you deal with the computer symptom that causes more nightmares than any other—a Mac that fails to start up? If you’re in a worst-case scenario, you could lose all the data on your hard drive—a major disaster, especially if you don’t have a recent backup. Fortunately, the worst-case scenario is rare. When your files are intact and you just need to figure out how to get them to you. Here’s your road map:

1. What’s with the question mark? Your Mac shows a prominently flashing question-mark icon at startup.
   Solution: Try to start up from the Mac’s Install or Restore CD. If it succeeds, check your System Folder and make sure it still has the Mac OS icon on it. If it doesn’t, a critical file may be missing from the folder. For starters, just open and close the folder if the icon doesn’t return, make sure you have both a System and a Finder file in the folder. If these are missing and you’ve erased either from the System Folder, find it and drag it back, or install a new copy—using the installer on the aforementioned CDs.
   If everything seems in order with your System folder, check for disk damage. If all of this fails, reform the drive—typically using Apple’s Drive Setup utility. Aha! You’d glad you backed up your drive last night—you did, didn’t you?

2. Almost doesn’t count. Your Mac shows at least some signs of intelligent life. The Happy Mac icon and the “Welcome to Mac OS” screen both appear. Looks like you’re making progress—but then you get a crash.
   Solution: Make a first pass at checking for an extension conflict by starting up with Extensions off—hold down the escape key until the Happy Mac icon appears. If even this fails, you may be looking at a rare instance where only reformating the drive can get you back in business. Happily, updating to Mac OS 9.0.4 will prevent this crash from occurring in the first place. Otherwise, make sure you never enable this option—just to help out, Apple released a Sleep Memory extension that ignores the option so you can’t select it.

New hardware, new errors

Apple’s recent Macs feature a host of options not found on older models. Those include DVD drives and USB FireWire ports. Using these options can lead to never-before-seen error messages. Checking Apple’s Tech Info Library (http://ds.info.apple.com) is a good way to keep up with the latest trends in Apple error messages, or troubleshooting tips in general. For now, here’s a starter kit:

USB’s powerful needs. You get a “Not enough power” message when trying to use a specific USB device.
   Solution: Unlike some error messages that say one thing, but mean another, you can usually believe this one. While the Mac’s USB ports can give juice to USB devices that do not supply their own power, there is a limit to how much this ports can do. Surpass that limit, and you get the “Not enough power” error message. The solution is to make sure you’ve closed the program before telling your Mac to go to sleep. If you do get one of these freezes, use a force-quit the process rather than hang the whole system and return your Mac to life—although it’s still best to restart as soon as possible.

Apple recently identified an obscure Mac OS file called SystemResLib that, if present in the Extensions folder, might cause FireWire PowerBooks to crash on start-up. Updating to Mac OS 9.0.4 earlier this year has a revised version of this file—fixes the problem. If the symptom persists, even when you start up with Extensions off, the cause could be a peripheral device connected to your Mac. These days, USB devices are the most common culprits—the workaround is to disconnect the device before you start up.

If you’re making progress—but then you get a crash.
   Solution: Unlike some error messages that say one thing, but mean another, you can usually believe this one. While the Mac’s USB ports can give juice to USB devices that do not supply their own power, there is a limit to how much this ports can do. Surpass that limit, and you get the “Not enough power” error message. The solution is to make sure you’ve closed the program before telling your Mac to go to sleep. If you do get one of these freezes, use a force-quit the process rather than hang the whole system and return your Mac to life—although it’s still best to restart as soon as possible.

Disabling Apple’s input devices may also prevent some of these crashes. Since you need this extension for playing only certain games, you can have this extension permanently disabled if you’re not a game player.

Finally, some wake-up sleep crashes happen only if you have the Preserve Memory Contents On Sleep option enabled in the Energy Saver control panel of iBooks and FireWire PowerBooks. In this case, you can’t see the data on your hard drive, or the “Not enough power” error message. Apple’s Sleep Memory extension that ignores the option so you can’t select it.

Memory cap

You can zap the PRAM (see below) to start up, but TechTool can provide a more complete scan—or you can save your settings to resume afterward.

Check for hardware problems. If your Mac still needs resuscitation, you probably have a hardware problem. The most common one is a defective memory module. If you aren’t comfortable opening it up and swapping parts, now may be the time to take your Mac to an Apple Authorized Service Provider.

Do your Mac right after you install a CD ROM package with the device, or on the company’s Web site. In Mac OS 9, your computer will offer to search online for the needed device and download and install it. Very convenient—when it works.

Luckily, Apple has improved your odds of avoiding this error. Mac OS 9 includes a generic set of built-in USB drivers. For this reason, many USB devices will work without the addition of any further software—although you may sacrifice access to some specialized features of the device, such as scrolling on a third-party mouse.

Surprisingly, in a few cases, getting rid of the device-specific driver is the key to success. For example, the GameCube GamePad comes with a driver called InputSprocket Gravis USB. But don’t use this if you want to use the GamePad with Star Wars Episode III. The Game will only recognize the GamePad if you don’t have the extension installed.

Alessandro Levi Montalcini’s $20 shareware program, USB Overdrive (www.usboverdrive.com), offers another set of generic drivers. This software can often get a USB device to work, even when the device’s own driver fails. It has proven particularly effective in solving problems with non-Apple mice.

If none of this works, try some of the more generic solutions for an assortment of odd USB problems—unplug the device from its USB port and plug it back into another port—for example, switch from port 1 to port 2. A DVD hardware error?

A message about a hardware error appears when the Apple DVD Player launches.

Solution: Updating to a newer version of DVD Player should eradicate this error. For example, if you are running Mac OS 9.0.4, you should use Apple DVD Player 2.2 later just remember that the Apple DVD Player application requires extensions—DVODuntuMac, DVD Manager, DVD Navigation Manager, and DVD Player page 90
To solve 95 per cent of the problems you’re likely to face, you need just the basics of utilities covered in the main text, here are a few others that make my list—all are Mac OS software, shareware, or freeware.

Tools to use

**Seeing invisible files** Sometimes a troubleshooting technique requires you to look and decide with invisible files. Many utilities, including Apple’s Sherlock, can do this. The main difference is in the level of convenience they offer. My personal choice is in Disk Utility’s Info File Browser. It allows you to search quickly for just the file you want and then manipulate it including create, delete, copy, move, and so on.

**Changing type and creator codes** Every file on your desktop has a file type and creator code. These help the OS determine what file is an application, a document, a postcard extension, or another element, and — especially important for documents — what application created the file. To solve certain troubleshooting problems you want to change these codes. For my money, the easiest way to do this is with Nifty File Finder. It also updates the Finder’s Get Info windows. I especially like to use it to change the code of a read-only SimpleText document to one I can copy and paste. Otherwise, Apple’s free Preferences (http://au.isc.apple.com/newplates/sfart/artnum/n10964) can handle this and can do many more things, including check for damaged files.

**Checking hardware specs** Do you know what process is in your Mac or the BootCD version of your Mac’s firmware? If so, the Apple System Profiler — part of Mac OS 9 — is likely all you’ll need. If you find that it fails to provide the answer you seek, try Team T21, iTools, or T-TacFinder (www.users.unsw.net/~mholt/index.htm) or Neower Technology’s Free Close-Up Pro (www.research.com).

**Checking open processes** Solving memory-related problems often requires knowing exactly what programs you have open, how much memory they are using, where in the memory space they are located, and then quitting certain open programs. This can get tricky because often “accesses” programs you never run in the Application Menu. Here is a utility such as Clarkwood Software’s SD Push. It lists all open processes and programs — and allows you to quit any one you want.

AutoLaunch. If you copy the application without the extensions, you’ll get an error message when you try to open your Mac. It’s best to use DVD Player instead of the updating it.

Also, make sure you install the Apple CD/DVD Driver, Foreign File Access, ISO 9660 File, and UDF Volume Access extensions. These belong to Mac OS, and should already be on your Mac unless you disabled them — for example, by installing a third-party CD driver.

The first Macs to include DVD drives — some blue- & white Power Mac G3 models — came equipped with a hardware-based DVD decoder. These Macs should use Apple DVD Player 1.3. DVD Player 2.x is for Macs using software-assisted decoding — these include iLife-leading iMacs, G4 Power Macs, FireWire PowerBooks, and the new iBook.

**DVD-out-of-sync errors** When your Mac is playing DVD movies, the audio and video can fall out of sync, with the audio lagging behind what you’re seeing on the screen.

**Solution:** Once again, this requires you to use the latest software. In particular, update to Mac OS 9.5 or later, DVD Player 2.2 or later, and QuickTime 4.1 or later. Some problems persist, turn off virtual memory before playing a DVD.

**DVD “dirty” movies** When trying to mount a DVD disc, you get the error message “Disc may be dirty or scratched.”

**Solution:** While the disc may indeed be dirty or scratched, it’s more likely that you need to get your Mac to mount it as at least Apple’s version of ISO 9660’s UDF format. To do this, hold down ⌘option when inserting the disc. If the disc mounts, but still doesn’t play, try a different disc and select Mount As ISO 9660 from the contextual menu. Most DVDs will not need this fix. In any case, upgrading to Mac OS 9.5 should eliminate the problem altogether.

**Cures for the common cold** Some common troubleshooting techniques are equivalent to taking aspirin — no matter what is wrong with your Mac, someone will tell you to “take one of these” and hope for the best. Unfortunately, just as with aspirin, let’s consider whether these cure-alls really work or not.

**Solution:** Once again, this requires you to use the latest software. In particular, update to Mac OS 9.5 or later, DVD Player 2.2 or later, and QuickTime 4.1 or later.

**Check for extension conflicts** Does RealPlayer 7 crash every time you quit? You might need to update your copy of Kalidoscope to version 2.3.9 or later. Does Norton AntiVirus report alerts for no particular reason? If so, updating to FinderPop 1.8.9 may be the answer.

**Bottom Line** This is another keeper. In fact, should you find a conflict, all these utilities as a preventive measure, even if no sign of trouble appears on the horizon. The only dilemma is choosing a utility to do the job. Disk First Aid comes with Mac OS 9, so you can start with that. For those times when it fails to work, you should have at least one alternative ready to go. If you can afford all three, if you don’t mind spending the cash, there’s always a chance you’ll get a problem that only one of these utilities can fix.

**Solution:** If you’ve even had files lose their custom finder icons, or if you encountered documents that can’t locate the application needed to open them, it’s time to rebuild the desktop. To do so, hold down the ⌘option keys at start-up — until the message asking whether you want to rebuild the desktop appears — or use a utility such as Conflict Catcher or Micromat’s free TechTool. This one is a keeper. In fact, should you find a conflict, all these utilities as a preventive measure, even if no sign of trouble appears on the horizon. The only dilemma is choosing a utility to do the job. Disk First Aid comes with Mac OS 9, so you can start with that. For those times when it fails to work, you should have at least one alternative ready to go. If you can afford all three, if you don’t mind spending the cash, there’s always a chance you’ll get a problem that only one of these utilities can fix.

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**Check for virus** Have you ever had files lose their custom finder icons, or if you encountered documents that can’t locate the application needed to open them, it’s time to rebuild the desktop. To do so, hold down the ⌘option keys at start-up — until the message asking whether you want to rebuild the desktop appears — or use a utility such as Conflict Catcher or Micromat’s free TechTool.

**Bottom Line** This is one case where the maxim “Better safe than sorry” clearly applies. You can think of antivirus utilities as an umbrella that can keep a rain, and you may not need protection — but do you really want to take that risk?

If there’s a silver lining in this cloud of troubleshooting, it’s this: you can fix most Mac problems without having to open your Mac or haul it in for repair. Usually, all it takes is a few minutes at your keyboard, and your Mac will be humming smoothly again. Try that with a PC.

**Tools for multitasking** Do you need to know what process is in your Mac or the BootCD version of your Mac’s firmware? If so, the Apple System Profiler — part of Mac OS 9 — is likely all you’ll need. If you find that it fails to provide the answer you seek, try Team T21, iTools, or T-TacFinder (www.users.unsw.net/~mholt/index.htm) or Neower Technology’s Free Close-Up Pro (www.research.com).

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**Tools to use**

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**Solutions:** White, blue, and gray disks can help put things back in order. Through everyday use, your hard drive can become a mess, slowing you down. Utilities such as Speed Disk, a shareware offering from the authors of Kaleidoscope and FinderPop have provided.

**Bottom Line** This one is a keeper. There’s always a chance you’ll get a problem that only one of these utilities can fix.

**Tools for virus** If there’s a silver lining in this cloud of troubleshooting, it’s this: you can fix most Mac problems without having to open your Mac or haul it in for repair. Usually, all it takes is a few minutes at your keyboard, and your Mac will be humming smoothly again. Try that with a PC.
A couple of years ago, Steve Jobs announced that on all Macs, SCSI was out and FireWire was in. The shock that this caused those used to using SCSI was nothing to that felt by SCSI manufacturers. Jobs wowed his keynote audience with a demonstration in which he played video from a FireWire drive. He pulled the plug on the drive and the video paused, but when it was hot-plugged — something that is potentially catastrophic with SCSI — the video carried on as if nothing had happened. With the exception of the SCSI people, everyone cheered and whooped.

Yet FireWire has failed to live up to this early excitement. Although most Macs released in the past year come with FireWire as standard, this is aimed more at digital video than storage. But this is now changing, so Macworld put the new wave of FireWire storage products through their paces.

The drives we thought we'd get with the advent of FireWire are not the ones to have emerged. The plan was for FireWire to replace SCSI as a connection on the hard drives. However, what we have is a kind of halfway house: a FireWire connection to an external box and a IDE/ATA (Integrated Drive...
This is the most popular method of connecting to a hard drive. It is slightly more expensive than the original idea, but it does seem to work.

IDE-connected drives have historically been seen as the poor cousin of the more robust SCSI interface. Macs used to use SCSI, and PCs tended to use IDE. More recently, Macs have used IDE/ATA drives, which are a cheaper alternative to SCSI. Conversely, high-end PCs occasionally offer SCSI as a more expensive alternative to IDE. Conversely, high-end PCs occasionally offer SCSI as a more expensive alternative to IDE. More recently, Macs have used IDE/ATA drives, which are a cheaper alternative to SCSI. Conversely, high-end PCs occasionally offer SCSI as a more expensive alternative to IDE.

Fuzzy on SCSI
This tradition of SCSI for high-end IDE and low-end IDE, has given rise to some common misconceptions. One, is that high-speed storage is strictly the domain of SCSI. However, when Macs first appeared with IDE drives, they matched their SCSI equivalents, because interfaces aside, the drive mechanisms are identical. When IBM or Quantum make a hard drive, they try to turn out as many as a dozen variations, all with different interfaces – including the various SCSI flavours, IDE/ATA and even fibre Channel. Drive speeds remain constant – but the options on how to transfer data vary. Performance variations are minimal, but there are times when SCSI is best – when running a number of drives working either independently or as a RAID array, for example. This is because SCSI can handle drives simultaneously IDE/ATA is designed only for single drives – even though it can be pushed to handle up to two or three. So the fact that they use IDE/ATA behind the FireWire connection doesn’t impact on performance.

FireWire runs at 400 megabits per second (Mbps), which translates to around 50MB per second. This sounds slow compared with the 160MB per second quoted with Ultra60 SCSI. This figure refers to maximum available bandwidth, rather than actual single-drive performance. Even with a RAID array, 160MB per second remains only theoretically possible with Ultra60 SCSI. What, then, are the benefits of FireWire drives? First, new Macs don’t have SCSI. If you’re determined to own a SCSI drive, you’ll need to spend extra cash on a SCSI card. Drive speeds are generally lower than those of single drives – even though it can be pushed to handle up to two or three. So the fact that they use IDE/ATA behind the FireWire connection doesn’t impact on performance.

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It’s more expensive to build a FireWire drive than to build a SCSI drive. The key advantages of FireWire drives are that they are portable, and therefore useful for making backups on the road. One of the main reasons for needing extra 
Storage is to accommodate large files—typically digital video. A FireWire digital camcorder and iMovie make for a storage-hungry Mac. A five-minute iMovie can swamp smaller drives, and it won't be long before you're looking for bigger models.

But there remain questions about how suitable FireWire drives are for this purpose. In our tests, getting video to record to a FireWire hard drive from a DV video camera led to dropped frames—a disaster when video editing. We got better results by recording directly to the internal hard drive. The fault is likely to be the bridge between the FireWire and IDE/ATA, because FireWire can obviously handle the required 5MB per-second rate—the video is being carried to the IDE/ATA.

Macworld's buying advice This is cheap and fast drive, but the LaCie pips it with its extra features. Like the Vault, it isn't about to win any beauty competitions—but it is good value.

<table>
<thead>
<tr>
<th>Company</th>
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<th>Price per GB</th>
<th>Warranty</th>
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FireWire hard drives compared

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<td>VST Technologies</td>
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Behind our tests All drives were tested while connected to a standard 200MHz Power Macintosh-G3. Results are shown as MB per second—tests involved copying a 10MB Photoshop file to and from the drives. To simulate smaller Web files, we filled a folder with 20K files. This folder was used for the 10MB tests.
LaCie 45GB
Like its 20GB counterpart, the 45GB is stylish. But, unlike the 20GB model, the larger version has a longer five-year warranty – the best warranty offered by any of the manufacturers. This shows LaCie’s confidence in its products. The bigger capacity also gives one of the lowest costs per GB, at just over £7. This isn’t the lowest price per GB, but, together with its design and the five-year warranty, it adds up to a top choice.

Macworld’s buying advice
It may not be a winner on price or speed, but its balance of features make it the best all-round machine.

Micronet SANcube
The SANcube is a different kind of FireWire hard drive, designed to be shared between more than one user. The model we tested had a capacity of 135GB, and was set up for two users. The AccelWare software provided lets you share the data by switching access between users. It isn’t the most convenient way of working, but for big files it’s fantastic. For faster access, you can set the three internal disks up as a RAID array. This means that they work together as one fast drive.

Macworld’s buying advice
The SANcube won’t meet everybody’s needs, but it deals with humungous files in a time-saving way. If you need a huge storage option, this is the one to go for.

Micronet SANcube

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LaCie 45GB

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The drive via FireWire anyway, and the internal IDE/ATA drives found on DV-Macs can also handle data at that speed.

Alternatively, the problem could be because the two in-built FireWire ports are being used simultaneously – one for the camera and one for the drive.

All the tested drives are theoretically fast enough for video editing, but there are limitations on how you can use them. If you’re serious about video, it may be worth paying extra for SCSI-based storage. This is unfortunately, because FireWire has so much to offer – but even the occasional glitch can ruin what would otherwise be a great video. Video editing worked perfectly well from the external drives, though. If you have a big internal drive, you can capture to that and transfer the files to the FireWire drive without any problem. When it’s time to transfer the edited footage to tape, simply switch the final product to the internal drive again. This isn’t an ideal solution, but is better and cheaper than most other options.

Portability
If you frequently work on the road, it’s possible you’re armed with a PowerBook stacked with critical data. This is far riskier than storing information on a desktop machine, because laptops not only get dropped, but stolen. It’s possible to use Zip disks, or even portable CD-RWs – but there’s nothing so reassuring as having a complete hard-drive backup, ready to be transferred to a new or repaired machine.

A few of the drives tested are portables, including the Archos MiniHD and the VST. Just remember, keep your backup in a different bag to the PowerBook.

Only one of the drives tested – the SANcube – takes a novel approach to storage. The SANcube isn’t a simple storage add-on. The SAN stands for storage area network, which means it’s a hard drive accessible by more than one user via FireWire rather than any ethernet.

Essentially it’s a big box loaded with three hard drives. On its back are two or more FireWire ports. Unlike a normal FireWire drive, the ports are not for daisy-chaining peripherals, but for attaching to individual computers. This means each drive can be allocated a different user, with maybe one shared by all. The disappointing thing is that, in practice, the SANcube doesn’t allow multiple accessing of files from different machines. The solution is software called AccelWare. This allows access privileges to be swapped as and when the users need it.

It isn’t the most elegant solution, but if you’ve ever needed to transfer 10GB of data over a network you’ll know elegance isn’t the primary objective.

Macworld’s buying advice
Earmark the capacity you need and the price you’re willing to pay. Speed is largely standard across the field. If portability is a requirement, then this comes at a higher cost. Warranties are important and the LaCie models came out tops here. Remember, no matter how extensive the warranty, it will only ever cover repair or replacement – not data recovery. This means that backing up is just as essential as ever.

The LaCie 45GB got the Macworld Editors’ Choice award for the best mix of design, performance, price and warranty. The SANcube is a more specialized product, so it wins the Editors’ Choice for its handling of huge files without the use of a network.
Staying up-to-date on the latest tech talk is difficult — and keeping your business humming with the most-recent technology can seem nearly impossible. You must be able to publish in print and on the Web, and, pretty soon, you’ll also need the tools to deliver information to cell phones, Internet appliances, ebooks, and countless other gadgets.

The new wave of computer gizmos poses a significant challenge to creative professionals. How do you keep current and compatible with the ever-changing world of technology? Although the answer isn’t exactly simple, it’s easy to learn, easy to understand, and easy to use. Welcome to XML.

Few people know what XML is, and chances are, even fewer know that it stands for Extensible Markup Language. But don’t be afraid of what you don’t know. XML promises to make Web publishing as simple as a primary-school grammar lesson. And Macworld’s in-depth XML tutorial will show you what it’s all about.
To understand XML, you must go back to its roots and look at the parent languages – HTML and Standard Generalized Markup Language (SGML) – that spawned the new dialect. HTML possesses several attributes that make it the perfect enabler for creating an easily accessible, global network. It’s a non-centralized way of putting information into a file and guaranteeing readability across a wide variety of networks. The content is marked up with a series of tags that designate what kind of information is being read; for example, an article’s headline and contents would be marked up like this:

```
<b>headline</b>
```

XML and HTML compared

As mentioned earlier, HTML falls short in two critical areas: organizing information into categories or hierarchies is difficult; and controlling the appearance of items on your page is not straightforward either. When it comes to organizing information, HTML coders rely on a series of headings – headline sizes that can denote a hierarchy – through `<h1>` through `<h6>`. The heading problem is why you’re organizing a document according to a strict outline, but not all types of information fit really into this model. For example, if you’re trying to mark-up a document about swimming, you might have the following groups of information: types of swimming strokes, distances of different races, and composition of races by strokes.

In HTML, there’s no real way to indicate that these different groups of information are related, but not nested within each other. In XML, however, you can write a swimming markup language and set up elements such as:

```
<stroke></stroke>
```

You can also set up sub-categories within each to indicate different kinds of strokes and races. For example:

```
<body>
  <stroke>
    <butterfly></butterfly>
  </stroke>
</body>
```

This would indicate all the different strokes that make up the “IM” race. Organizing data like this in HTML would be very difficult – there would be no way for you to draw distinctions between the information.

A further drawback to HTML’s system of headings and lists is the lack of control you have over a site’s appearance. Although you can write stylesheets to specify how different HTML elements such as `<b>` or `<p>` look, you can’t easily attach a specific appearance to recurring data. For example, you might decide that all instances of a site’s name must appear in blue. In HTML, there’s no easy way to do this – you would have to search for the word AcmeCo, for example, and attach tags such as `<font color="blue">AcmeCo</font>` to each instance.

XML allows you to create a tag called `company` and use it to enclose every instance of AcmeCo. To change the appearance of AcmeCo, you simply write a stylesheet to control the appearance of whatever appears within `company`.

Behind the scenes

Before you try your hand at XML, you’ll need to familiarize yourself with its limbs. The way a browser interprets a mark-up language is similar to the way a person understands a spoken language. The browser has no idea what a tag like `<header>` means; it simply looks at the content within the tag and renders it in a predetermined way. If you want to create a specific appearance for a particular tag, you’ll need to write a stylesheet for it.

XML documents can be enhanced with recommendations that outline hyperlink behaviour. In other words, it tells the browser what it should do when it encounters a hyperlink in a document.

XML Extended Point notation (XPointer) if Xlink dictates how links behave. XPointer supplies a way to add highly specific information about the role particular links play relative to the rest of the content in a document. For example, links in a navigation bar can now specify which page they should point to, in addition to specific addresses. This means you can more easily track hyperlinks and change them across an entire site – instead of changing a specific hyperlink-address on several thousand pages, you can change it once, and the other links will all redirect based on the altered information.

Extensible StyleSheets (XSL) are XML-based languages devoted to specifying a visual style for the items in an XML document.
Want to take your XML knowledge to the next level? Start with these informative Web resources.

Find out more about XML

XML.com
www.xml.com

XML software
www.xmlsoftware.com

The XML cover pages
www.oasis-open.org/cover/sgmlnew.html

Anyone interested in staying up-to-date on the latest XML developments should save this url. Sporting everything from product news to beginners’ tutorials, this site also boasts columns and how-tos from XML gurus.

If you’re itching to try XML on your own, it helps to have browsers and tools that can render and convert it. Check out the complete collection of XML-centric applications.

For XML news – from tracking the progress of the latest XML-related W3C recommendations and newly launched XML sites – this site has it all.

page: XSL might determine a page’s appearance; XLink and XPointer determine what the links will do on the page. The page’s content will be organized and marked up using an XML DocumentType Definition (DTD).

The four protocols are the building blocks—what makes them all tick—is the DTD. If XML is like mark-up language grammar, the DTD acts as the mark-up language’s dictionary and style guide.

A DTD defines the terms of an XML-based document, the specific details each term has, and the relationships the terms have to one another. The DTD excerpt below identifies common elements in a mark-up language designed to format Shakespeare’s plays.

```xml
<!ELEMENT SPEECH (SPEAKER+, (LINE | STAGEDIR | GESTURE))>
<!ELEMENT LINE (#PCDATA | STAGEDIR)>
<!ELEMENT STAGEDIR (#PCDATA)>
```

The elements identified are: speech, to be used when a character is making a speech; speaker, to be used to identify characters with speaking roles; line, to designate each line in a speech; and stadigr, which dictates the directions that accompany the speech. These elements can be nested.

Although one of the biggest advantages to developing a site in XML is having the ability to set up your own logical data-structure via a customer-built DTD, another advantage is being able to use a different, standard DTD. These DTDs can be specific to industries—imagine a group of mark-up tags devised especially for accountants—or other, already established, means of organizing content. For example, Jon Bosak has written DTDs for Shakespeare plays, thus providing a grammar for denoting characters and their lines.

The DTD is crucial for providing the “rules” in an XML document, or on an XML site. Since we’re still in an HTML world, most Web documents have HTML DTDs—if they have DTDs at all—and a general syntax to organize mark-up tags. How, then, will you move the Web pages you have from one type of mark-up language to another?

The missing link

Changing a Web site’s mark-up language from HTML to the more advanced XML is an evolutionary step. Extended HTML (XHTML) mixes HTML’s limited vocabulary with XML’s data-organizing capabilities. To make the transition, you must follow a number of simple format rules:

- All markup must be rendered in lower-case tags.
- All attributes must be rendered within quotes.
- All elements must possess opening and closing tags.

All documents must have a DTD. XHTML authors can choose from three different XHTML DTDs, all of which are hosted on the W3C’s Web site ([www.w3.org](http://www.w3.org)).

To attach a DTD to your document, you need a statement at its beginning called a doctype declaration, which says what sort of DTD the document uses, and where the DTD lives.

For example, to include a strict doctype declaration—which assumes you’re using strict XHTML—in your document, put these lines at the very top:

```xml
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/strict.dtd">
```

The transitional doctype-declaration is the most flexible—you use it if you’re trying to ensure that people using non-CSS-enabled browsers can see your site. If you’re still using tables to lay out your Web site, you’ll want to use this one:

```xml
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/ transitional.dtd">
```

The frameset declaration is what you use if you’re writing a document with frames. Its syntax is:

```xml
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Frameset//EN"
"http://www.w3.org/TR/xhtml1/DTD/ frameset.dtd">
```

Once you’ve converted your site to XHTML, you can use an XML DTD to refine the way your site’s content is organized through defined mark-up tags. Nonice DTD writers can also check out [www.dtd.com](http://www.dtd.com) to find a well-sorted directory of DTDs—designed for everything from advertising, to ontology and travel. You can also check out a list of Web sites that have integrated XML into their content at [XMLTree](http://www.xmltree.com).

Although it’s tempting to begin plotting your site’s conversion from HTML to XHTML, it’s easy to get bogged down in practicalities. Developing a specific mark-up language is only part of the process—you must also figure out how to map your current HTML content to a more structured XML mark-up.

In addition, there will be a learning curve—many Web developers are quite familiar with HTML because they’ve been using it for a long time. Acquiring the same familiarity with XML—and the tools you can use to develop Web sites in it—will require practice.

Within a year, however, building XML-based Web sites based on different DTDs or XML-based mark-up languages should be simple. And in the end, getting your content out to all the people who want to see it will be that much easier.
Cast-out unwanted colour

Banish disfiguring colour-cast with Adobe Photoshop. By David Blatner

Although the human eye is capable of detecting thousands of different hues and tones in a single glance, we often end up seeing exactly what we expect to see. For example, take three pieces of white paper collected from different sources – a white napkin, a sheet of copier paper, and a catalogue page. Individually, each sample looks as though it’s neutral white. It’s not until you place them side by side that you see a colour cast – subtle tints of yellow, blue, or magenta.

Such colour casts commonly create problems in scanned photographs. An image may appear neutral on screen – and perhaps even in a printed proof – but when you place it next to other images, or on a bright-white sheet of paper, you discover a slight tint.

Clearly, some images should have a colour cast – for example, a photo taken at the beach just before sunset – but many others should not. Using Adobe Photoshop, I’ll show you how to strip away unwanted colour-casts simply by neutralizing the black, white, and grey pixels in your image.

David Blatner is a co-author of Real World Photoshop 5, and the author of The QuarkXPress 4 Book (both Peachpit Press, 1998)

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**Find the highlights** At first glance, the bird’s feathers in this photograph appear to be white, but closer inspection reveals a blue or cyan cast. By neutralizing the image’s white and black pixels, you can correct the entire image and return the eagle to its true shade.

To locate the image’s highlight and shadow pixels, use Photoshop’s Threshold command, which converts the photograph to a high-contrast black-&-white image. From the Image menu, open the Adjust submenu and select Threshold.

- Find the image’s highlights by moving the Threshold slider (A) to the right end of the histogram. This reveals the location of the lightest areas – at the eagle’s crest and below the eye (B).
- Move the slider in the opposite direction to find the image’s darkest areas – in this case, the feather tips in the lower left corner.
- Click on Cancel to leave the dialogue box and return to the colour image.
Create adjustment layers Once you’ve identified the highlights and shadows, use an adjustment layer to correct the image. These layers let you apply a tonal or colour adjustment – such as Curves or Hue/Saturation – as a layer rather than changing the actual image data.

- Adjustment layers have several advantages over applying changes directly to your document. First, you can always go back and change layers without adversely affecting the image itself. Adjustment layers also give you an easy way to judge results – just turn the layer on and off.

Create a new adjustment layer by ⌘-clicking on the New Layer button at the bottom of the Layers palette (A).

In the New Adjustment Layer dialogue box, specify what type of layer you want to use (B) and click on OK. In this case, I’ve chosen Levels. If you prefer, you can use Curves – you’d follow the same steps.

TIP: When you create the adjustment layer, Photoshop automatically opens a Levels dialogue box. Later, if you want to change your settings, simply double-click on the adjustment layer in the Layers palette to reopen it.

In the Levels dialogue box, double-click on the white-eyedropper tool (A) to display the Color Picker dialogue box.

The Color Picker dialogue box lets you specify the correct neutral colour for your highlights. To retain some ink in the lightest parts of your image, don’t use solid white for the highlight. Here I’ve set brightness to 92 per cent, which results in an eight-per cent-neutral colour (B).

By using the Brightness setting, you avoid the hassle of figuring out proper RGB and CMYK values for neutral colours. You might want to select a darker neutral, depending on the needs of your output device. Click on OK.

Adjust your highlights Next, you need to change your image’s highlight and shadow pixels – which currently have a colour cast – to the correct neutral colours. To do this, use the black-&-white eyedropper tools in the Levels dialogue box.

In the Levels dialogue box, double-click on the white-eyedropper tool (A) to display the Color Picker dialogue box.
Choose your pixel  You’re now ready to apply the new, colour-correct eyedropper colour. Take care though, picking a pixel outside the highlight area can drastically degrade the image quality. If that happens accidentally, just choose a different, more appropriate pixel.

- If you don’t see the Info palette, open it from the Windows menu. If the palette doesn’t already display RGB values, open Palette Options from the window’s pull-down menu (A) and change one of the Modes to RGB.

- With the adjustment layer’s white-eyedropper tool selected, press (⌘) plus (+) to zoom in on the area of the image containing the highlights you found in step one.

- Using the Info palette’s numbers as a guide (B), search the area for the pixel that best represents a neutral white – it should have approximately equal R, G, and B values.

- When you find the right pixel, click on it with the white eyedropper. Photoshop then forces that pixel to match the colour you set in the Color Picker. Once you select a pixel, the Info palette displays its values before and after the effect – separated by a slash. If you don’t like the change, use the first set of numbers to choose a different pixel.

Set your shadows  After you’ve set the highlight, it’s time to adjust the shadows. Repeat steps 3 and 4 using the black-eyedropper tool. Sometimes it’s difficult to find a true neutral black, so you may wish to target a slightly off-neutral colour.

- With the adjustment layer’s Level dialogue box still open, double-click on the black-eyedropper tool to reopen the Color Picker dialogue-box.

- Set the black eyedropper tool to a neutral, near-black colour. In this case, I didn’t want a completely black shadow because the feathers are actually brownish, so I added a tiny amount of red (A). Then click on OK.

- With the black-eyedropper tool selected, click on a pixel in the darkest area of your image. Thanks to step one, I know the darkest pixels appear in the lower left corner of the image. The pixels will then snap to the neutral – or off-neutral – colour you selected.

- You can see from the finished image that the eagle has finally lost its blue cast.

More info: www.macworld.co.uk
For more information, search Macworld Online for reviews, tips and tricks on how to get the most out of Adobe Photoshop.
Adobe LiveMotion is a great tool for Web enthusiasts and professional designers. It lets you create static and motion graphics easily, thanks to its familiar Adobe interface.

LiveMotion independently modifies individual images, so creating sophisticated effects, such as remote rollovers, is relatively simple. Unlike standard rollovers, which swap one graphic with another, remote rollovers allow one graphic to trigger the behaviour of another. For example, say a page on an animal lover’s site shows a Pat The Cat button on the left and a blank space on the right. When you mouse over the button, a picture of a contented cat appears in the space. As the mouse moves off the button – called mouse out – the cat disappears.

Remote rollovers add interactivity and a bit of fun to Web sites. I’ll show you how to create basic remote-rollovers and then export them in formats that almost all Web users can see. If you want to try before you buy, download a free 30-day trial from www.adobe.com/products/livemotion.

Molly Holzschlag is the author of Teach Yourself Adobe LiveMotion in 24 Hours (Sams, 2000).

To create a canvas, select New from the File menu and click on OK to accept the default composition settings. Make a trigger object in the program, or place a pre-made object. I used the type tool (A) to create a text trigger.

Next, produce standard rollovers for the trigger object. Select the object with the pointer tool (B). In the Rollovers palette (choose Window-Rollovers), click on the New Rollover State button (C). The Over state will appear in the palette.

Select the Over state and change the trigger object’s appearance. Because I wanted the object to change from black to brown when it was moused over, I selected the object and used the eyedropper tool (D) and the colour picker (choose Window-Color) to grab a different colour.

Click on the New Rollover State button again to create an Out state. I made my Out colour black, the same as my Normal colour.
Creating the remote object

The remote object – the one that appears when you mouse over the trigger object – can be simple or complex, and it can appear anywhere on the page. As you do for the trigger object, you create separate Normal, Over, and Out states for the remote object.

Connecting the trigger and the remote objects

Now you have rollovers for the trigger and remote objects, but the rollover states aren’t connected between objects. To make that connection, you’ll target the corresponding rollover state in the Rollovers palette.

1. Place the remote object (A) (File-Place). Select it, and in the Rollovers palette, you’ll see the Normal state.
2. Because I wanted my remote object to be invisible at first, I set its Normal-state opacity to 0 by moving the Object Layer Opacity slider (B) in the Opacity palette (Window-Opacity) to 0.
3. Click on the New Rollover State button. When the default Over state appears, choose Custom State from the pop-up menu. In the resulting dialogue box (C), name the state. I named mine image remote. For this state, I set the Object Layer Opacity slider to 100 per cent, because I wanted the remote object to appear when someone moused over it.
4. Click on the New Rollover State button again. Choose Out from the pop-up menu. Now you can control what the object looks like when the mouse leaves it. I set the Object Layer Opacity slider to 0, making it disappear on mouse out.
5. Select the trigger object. In the Rollovers palette, highlight the first state in which a rollover occurs. In my example, that’s the Over state. Drag the targeting button – to the immediate left of the Rollover thumbnail (A) – from the palette to the remote object. When the boundary box of the remote object appears (B), drop the target.
6. The remote object now appears in the Rollovers palette, underneath the Over state. From the pop-up menu (C) choose the corresponding rollover state for the remote object – here, Image Remote.
7. Connect the Out states in the same way.
8. To preview what you’ve done, click on the Preview button in the Tool palette (D), and then pass your mouse over the trigger object. If it triggers the remote event, you’re on the right track.
Prepare for export  You can save this remote rollover as a Flash file and embed it in an HTML page. However, if your audience isn’t likely to have the Flash plug-in, I recommend saving your rollover as HTML and JavaScript.

Exporting HTML and JavaScript  Exporting HTML and JavaScript Exporting is the last stage of creating a remote rollover. You can export the files as HTML, GIF, JPEG, or Flash files.

First, name your images. Select the trigger object. Open the Web palette (Window-Web). If you don’t see a File Name field, choose Detail View by clicking on the arrow in the upper right of the palette (A). In the File Name field (B), enter a name for the trigger image. I named mine text_over. Click on the remote object and name it using the same method.

Next, choose Edit-Composition Settings. When the dialogue box appears, choose AutoLayout from the Export pop-up menu (C). Select the Make HTML option. Click on OK.

Open the Export palette (File-Export Settings). Choose GIF or JPEG from the pop-up menu (D). If you’re not sure which format to use, click on the Preview check box (E) and test your design using different settings. Use the Web Adaptive option (F) to limit the number of colours in the composition – this makes the size of the graphic files smaller.

More Info:  www.macworld.co.uk
For reviews and features on Adobe LiveMotion, go to Macworld Online. Or check out  www.webcreate.co.uk, the Web site for digital creatives.
Today’s kids spend hours in front of computers every day. If you think that’s good news, you’re not alone—parents and teachers everywhere are clamouring for increased funding for computers in the classroom. And after school comes even more computer time, as kids play games, chat, and do homework.

In the rush to plant a computer on every child’s desktop, potential risks to children’s health have gone largely unnoticed. Although researchers disagree on the scope of the problem, kids are beginning to suffer from the same repetitive-stress injuries, headaches, and other illnesses that have plagued adults for years.

No matter how old a child is, preventing computer-related disorders is much easier than treating them after they strike. You can design children’s work areas with ergonomics in mind, and teach kids good habits that will stick with them.

To help you get started, we’ve compiled tips to help set up kid-safe work areas. To make monitoring their computing habits easier, you may want to locate the family Mac in a room where an adult will spend a lot of time.

For more information check out www.ergonomics.org.uk or www.office-ergo.com or see “Help and advice” on page 120.

Franklin Tessler, MD, has been writing about computer ergonomics since 1991.

All ages

While different body sizes require different ergonomic adjustments, certain basics apply to all children. Kids like to squirm, so getting them to avoid stressful postures is a challenge. Rather than telling children what to do, sit down and show them how to use pointing devices and keyboards without twisting, reaching, or stretching.

Glare is hard on even young eyes. Ambient and task lighting should illuminate the keyboard and work area without overwhelming the screen (A). Glare shields cut down on reflection, but they also reduce the monitor’s effective brightness.

The best way to limit glare is to reorient the entire workstation. An adjustable keyboard tray (B) helps keep hands and wrists in a neutral position. The Dashboard (below) from Proformix (online from, www.proformix.com) costs $228.

Dangling legs put extra stress on the thighs. If necessary, use a small stool, an old telephone-book, or a knapsack as a footrest (C).

Dashing

Proformix’s Dashboard will help stop kids getting RSI.
Ages 5 to 10

You wouldn’t expect a five-year-old to wear your clothes. Full-size furniture and computer hardware don’t fit small kids any better than adult clothes do.

Keep the top of the monitor at, or below, eye level (A), so the child doesn’t have to look up to read the screen. Hands and wrists should be straight (B), and elbows and knees should be open to more than 90 degrees (C).

Small hands may find a trackball easier than a conventional mouse. If your child prefers a mouse, try Macally’s £19 (www.macally.com) (all prices exclude VAT) USB iMouse Jr. (Mac Accessories Centre, 0191 296 1500) (D). DataDesk Technologies’ (www.datadesktex.com) £69 Little Fingers (Granada Learning, 0161 827 2927) (E) sports smaller keys, and is also available with an integrated trackball.

A firm pillow, or rolled-up towel (F), keeps backs straight and allows a child to reach the mouse and keyboard without stretching.

Ages 10 to 15

If older kids are big enough, they can use standard computer equipment, desks, and chairs with only minor modifications.

Some sources say that wristpads are fine for resting, but they shouldn’t be used when the child is typing (A).

Some children may benefit from Contour Design’s Perfit Mouse (B) (prices start at £69; Mygate, 0800 018 1424; www.contouredesign.com), which comes in a range of sizes for left- and right-handed users. If your child is left-handed, put the pointing device to the left of the keyboard.

An adjustable chair (C) supports a child’s back and legs. As with smaller kids, feet should lie comfortably on the floor or on a footrest (D).

TIP: Encourage brief breaks every 15 or 20 minutes.

Advice for parents

The Parents Information Network (PIN, www.pin.org.uk) has published some simple, common-sense advice as part of its Superhighway Safety pack.

The report recommends that children have their “arms roughly horizontal when using a keyboard”. It also advises that kids be made “aware of the alternatives to a traditional keyboard and mouse – ergonomic keyboards, voice-recognition systems, trackballs, handwriting-recognition pads and finger pads.”

Help and advice

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Dawn of a new Mac OS

This is a historic moment. For the first time, Macintosh users have a chance to try an entirely new Macintosh operating system. More than a facelift, update, or collection of enhancements, Mac OS X is the future. It represents the best Apple has to offer—the latest thing in stability, performance, and human interface. And history teaches us that we will be living with this new Mac OS for a long, long time.

And we have as much responsibility in helping to ensure Mac OS X’s greatness as Apple does. This is a call to action. It is the duty of all of us who care, really care, about the future of the Mac to get a copy of the Mac OS X beta, load it onto a computer, and pound the hell out of it. Write everything down—what works, what doesn’t work, and what could work better. Then post your comments to the feedback site Apple has set up especially to gather input on the beta test program.

Macworld will help you understand and ultimately exploit what will be the single most important advancement ever to hit the Macintosh.

Hear and now

Apple doesn’t always have the best track record when it comes to listening to its users. Take the introduction of the original iMac mouse. While reaction to the round mouse was almost universally negative, it took Apple two years to redesign its standard input device. But it wasn’t really that big a deal. An operating system is forever. Whatever we ultimately get at the end of this beta process, we will have to live with, every minute of every day, for a long time to come. We need to make sure it’s what we want and need.

OS X test track

The operating system is what the Mac is all about. Sure, cool industrial design makes your Mac distinctive and might even make it a bit more useful, but the OS is it. If you can’t get your work done using Mac OS X, you’re not going to be using it for long, no matter how cool your Mac looks sitting on your desk. And while I don’t for a minute think Apple would ship an OS that didn’t work, the devil is in the details. It’s up to us to communicate how Mac OS X could work better for us.

It’s really a bit like getting the keys to a new experimental racing car and being told, “Sure, take it for a few laps around the track. Knock yourself out and let us know where it tops out.”

You, Macworld’s readers, are the best test drivers Apple could ever hope to have. Macintosh users are in large part the reason the Mac has always embodied a better way for people to use computers. It’s true, we’re very loyal—but we’re also very demanding of our computing platform. It’s time to put our critical natures to work, no holds barred, and help Apple build the best possible Mac OS it can.

Mac OS X is the riskiest move Apple has made since Steve Jobs came back to run the company. But, as with most bold and risk-filled ventures, the payoffs are enormous.

If Apple succeeds, it will have delivered what others have only talked about—a fully modern operating system that can be used by anyone from kindergartners to rocket scientists. Not even Microsoft has managed to achieve this goal, and not for lack of trying.

Apple knows that with your help, it stands a much better chance of achieving this goal.

And I, for one, want the company to achieve it—because I want to use that operating system: an operating system built by the most innovative computer company in the world—and hundreds of thousands of the world’s most demanding, nitpicky, and loyal computer users.

Andrew Gore
Q&A/tips

Handy Mac tips and readers’ questions answered. By Christopher Breen

Digital audio on digital video

Q How can I use QuickTime Pro to record a couple of minutes of digital audio with my iMac DV’s built-in microphone?
Lawrence Carleton

A

If you open SimpleSound and click on the Add button in the Alerts Sounds window, the program limits you to five seconds of recording time. But, instead if you choose New from SimpleSound’s File menu, you can record as much audio as will fit on the volume where SimpleSound resides. To gain the maximum recording time, move SimpleSound to your largest hard drive or partition. You can also gain more time by recording at a lower quality – switching from CD to Music quality, for example, gives you four times as much recording time. If you’d like a more capable sound-recording application – one that more clearly defines recording parameters, such as resolution and bit depth, for example – I’d give EJ Campbell’s (http://members.aol.com/EJC3/) $20 shareware application, Ultra Recorder, a try. Ultra Recorder doesn’t edit audio – meaning you can’t use it to divide the audio file into smaller pieces or lop-off pieces you don’t care for. But, once you’ve recorded your audio with either SimpleSound or Ultra Recorder, you can use QuickTime Pro as a simple sound editor – using the Cut and Clear commands to remove selected bits of audio and the Cut and Paste commands to assemble a group of sound clips into a single file.

Retaking shortcuts

TIP One of the Windows features worth stealing is the keyboard shortcut that allows you to cycle through running applications (called keyboard cycling). Apple did steal it – and then assigned it the ⌘-tab shortcut and plunked it into Mac OS, beginning with version 8.5. Unfortunately, some mourn the fact that the new ⌘-tab shortcut supplants the same helpful key-combination in programs such as FileMaker and QuarkXPress.

You can disable keyboard cycling in several ways. If you’re a do-it-yourselfer, just open Apple’s Script Editor and enter this simple AppleScript:

tell application “Application Switcher”
set keyboard cycling active to false
end tell

Use this one to turn cycling back on:

tell application “Application Switcher”
set keyboard cycling active to true
end tell

You can also disable ⌘-tab with a shareware or freeware utility. My personal favourite – because it’s free and doesn’t involve a control panel – is Mitch Crane’s SwitcherSetup CM (www.macdownload.com). It lets you use contextual menus to switch off keyboard cycling or assign it a different key combination.

Catalunya Disseny Informatic’s $5 SwitcherMaster (www.cattisd.com/realcode/) provides similar services via a control panel. Although Michael Kamprath’s $10 shareware control panel, Program Switcher (www.programswitcher.com), doesn’t specifically let you turn off keyboard cycling, it comes with an AppleScript that lets you turn keyboard cycling on and off with a single script.

Working in Word

TIP If you hit F10 when working in Microsoft Word, lines will appear under letters in the drop-down menu headings – for instance, underneath the F in File. If you then press that letter on the keyboard, the drop-down menu will appear. You can use the arrow keys to navigate the menu and the enter key to carry out an action.

Mac OS 9 shortcuts

TIP With the Beta launch of Mac OS X at Apple Expo in Paris, OS 9’s days are now numbered – but many of us are likely to be using OS 9 until well into next year. With this in mind, here are some useful navigation tips and shortcuts that I discovered recently, and which I’ve found useful.

■ When looking to increase the memory allocation for an application, or to change its sharing options, simply control-click on its alias on
Macworld’s deputy editor David Fanning and contributing editor Christopher Breen answer readers’ questions and select reader-submitted tips for this column. Send your question or tip (include your address and phone number) to David Fanning, Q&A, Macworld, 99 Gray’s Inn Road, London WC1X 8UT. You can also send email, marked Q&A in the subject line, to qanda@macworld.co.uk. We pay £25 for each tip published here. We cannot make personal replies, so please do not include a stamped-addressed envelope.

Working with XPress layers

**TIP** Enabling users to keep track of objects when there is a mass of page furniture has never been a strength of QuarkXPress. The Send to Back (shift+F5) and Bring to Front (F5) commands are, at best, crude tools when there are stacks of objects to be placed and repeatedly accessed. However, holding down ⌘-control-shift while clicking enables the user to scroll through and select layers from top to bottom. This is especially useful when working with multi-layered charts or tables.

Another object-position keyboard trick can be used when looking to insert an object at an exact point in a stack of other page elements. First, bring the object to the front and position it as required. Keep it highlighted and hit option-shift-F5. Each hit of these keys will move the object down one place in the stack of page elements until it is in the right order. Option-F5 will bring the object forward one layer.

Photoshop file names

**TIP** From Photoshop 4.0 and 5.0 there’s a handy keyboard shortcut for file naming. In the Save dialogue window, hold down the option key when selecting file types (hold down the Control key in version 5.5). This automatically adds the appropriate suffix to your file name. For TIFFs it will add .TIF, for JPEGs, .JPG and for GIFs, .GIF – meaning you can keep track of file types with no extra effort.

Passwords remembered

**TIP** Many of us are overloaded with passwords, user names, and serial numbers – for email accounts, access to Web sites, access to tip servers and others. Although you can use Apple’s Keychain to store some of this information, a more comprehensive solution is Alco Blom’s Web Confidential. This $20 shareware utility allows you to organize, store, and encrypt not only common electronic data such as passwords, but also PIN and cash machine numbers.

Add a little light

**TIP** If parts of an image are too dull, use Adobe Photoshop to brighten them up. First select a new Color Dodge layer – on the drop down menu of the layers palette. Then, working on the new layer, use a low-pressure – about five per cent – white airbrush to paint over the area you want to lighten. This method is especially good for enhancing light sources – particularly in RGB images.

LocalTalk troubles

**TIP** If you have a LocalTalk printer attached to your ethernet network via some variety of LocalTalk-to-ethernet adaptor – Farallon’s iPrintLT, for example – and the printer suddenly fails to appear in the Chooser, try this: Unplug the power connector to the adaptor to reset the adaptor. On rare occasions, these adaptors can become confused, and will refuse to establish a viable connection between your network and the printer. Resetting the adaptor by turning it off for a short time often clears this connection.

Equation quandary

**TIP** If you’ve attempted to use the equation editor found in AppleWorks 5 and 6, and are presented with an error that tells you the installed Symbol font is not the correct one, there is a way to put things right. Remove the Symbol font from the Fonts folder inside your System Folder and perform a custom installation of the AppleWorks installer. You need to install the Equation Editor – which contains a compatible version of the Symbol font – which is part of the Writing Tools.

Photoshop speed-up

**TIP** Applying a filter to an image in Photoshop can be a memory-intensive task, especially if the file is a large one. The process can be quickened by applying the desired filter to each channel individually. Also, setting the monitor colour-depth to 256 rather than thousands or millions means Photoshop will be far less memory-hungry, helping speed it up.

A guide through XPress

**TIP** Ever had trouble moving guides in QuarkXPress when they’re behind text or picture boxes? The answer is simple: just hold down ⌘ before you click on the guide, and XPress will ignore any items in front of it.

Mac OS X Beta installation

**TIP** When installing Mac OS X Beta on a Mac that has two IDE drives set up in a Master/Slave configuration, install OS X on the master drive. If OS X Beta is installed on a slave drive, the Mac will stop responding.
Thanks to email, we have instant communication with family and friends, easy business collaboration, and endless opportunities for workplace humour. The downside is unsolicited commercial email, or spam – and workplace humour. As soon as you open an email account, you start receiving unwanted offers for fake business opportunities and steamy-hot pornography. This load of spam is on top of your legitimate mail, which, however welcome, adds up quickly.

Controlling this deluge of mail can be a challenge if you don’t have a top-notch email program such as Microsoft’s Outlook Express (OE) 5, which has an arsenal of weapons for filtering spam.

If you don’t already have this latest version of OE – it ships with Mac OS 9 – there’s a free copy on our cover CD. Because OE will share most of its email interface and features with Entourage – the email client in Microsoft Office 2001 for the Mac – learning how to create Mail Rules with OE now will give you a leg-up later.

Tom Negrino

Use Microsoft Outlook Express 5 to control your email

1. Junk Mail Filter To prevent being traced, spammers often put false information in their email’s From field. This filter scans every incoming message for signs of forgery.

Open the Junk Mail Filter dialogue box from the Tools menu. Make sure the Enable Junk Mail Filter check box (A) is selected.

Next, set the Sensitivity slider (B) according to your needs. The slider determines how vigilant Outlook Express is at classifying spam. The Average setting will satisfy most people, but you should experiment with it. If too much junk is getting through, adjust the Sensitivity setting until you’re pleased with the results.

The filter sometimes errs on the side of junkiness, classifying mail that’s from unfamiliar correspondents as spam. To protect future messages from legitimate, but infrequent writers, add their addresses to the Address Book. You can also instruct Junk Mail Filter to ignore all messages from a specific legitimate domain – such as macworld.co.uk – by entering the address in the Domain window (C).

To be able to spot junk in your mail folders at a glance, select Set Color (D) and choose a colour swatch.

2. Organize messages Junk Mail Filter only flags messages as potential spam. Use Mail Rules to automatically file messages into folders, forward email to colleagues, or send automated replies.

Because Junk Mail Filter isn’t perfect, you’ll want to create a rule that automatically sends all junk mail into a folder called Possible Junk, so you can decide if individual messages need to be deleted or have been unfairly maligned.

Choose Rules from the Tools menu and click New. Name the new rule (A) and make sure that Enabled is selected (B).

The If section of the window determines which criteria messages must meet for the rule to apply. Click on the pop-up menu (C) and choose Is Junk Mail from the list of options. The Then section specifies which action the program should take. Choose Move Message from the pop-up menu (D). A new pop-up menu will appear to the right, choose the folder in which you want the junk mail to appear (E).

Tip: Mail Rules applies rules in order. If it appears that a rule you created isn’t working, another, higher rule may be interfering.

3. Manage your lists A special type of bulk email comes from mailing lists. There are mailing lists on every subject you can name, from skiing to your favourite music. OE 5’s Mailing List Manager helps you efficiently manage mailing lists.

It’s a good idea to file list mail in folders separate from your personal or business mail. First, select a mail message that came from the mailing list, and choose Mailing List Manager from the Tools menu. Click on New. You’ll usually want one rule for each list.

Outlook Express uses the list’s address as its default name, but you may want to change it to something a bit more descriptive (A). Choose the destination folder for the list mail from the File Messages In Folder pop-up menu (B).

You can apply regular Mail Rules to list messages, but most people need file list messages only somewhere they’re easily found. In this case, leave the Do Not Apply Rules To List Messages option selected (C).

Tip: When you first subscribe to a mailing list, you usually get instructions on how to unsubscribe – you can copy and paste these instructions into the Notes field for future reference (D).
Bully for you, Jobs

The other day, I heard an Apple programmer griping about Steve Jobs. It was the usual complaint: Steve wasn’t taking opinions, conducting focus groups, or performing usability testing. He wanted things done Steve’s way. For years, these stories have upset me. I’m a firm believer that if something is worth doing, it’s worth doing politely. There’s no CEO on earth who couldn’t benefit from weighing opinions, considering all options, and occasionally doing out a little praise. Yeah, OK, Steve saved Apple in a big, glorious, sustainable way; introduced some brash, bold, brilliant ideas to the technology world; and changed the course of computer design forever. But jez – does he have to be such a bully?

Well, yes. I came to this startling realization when I read On the Firing Line, Gil Amelio’s book about his 500 days as Apple’s CEO. What’s most intriguing about the book is the “damn frustrating” inertia and paralysis Amelio says he found at Apple. He’d schedule a meeting: “People who were specifically invited didn’t even bother to show up.” He’d outline the company’s strategy to department VPs: “They listened politely but did nothing.” He’d make a decision: “Every time, an internal campaign would be mounted to reverse the decision.” He’d try to focus the company’s efforts (which included “the Newton, publishing, media authoring, servers, Pippin, imaging, consumer, K-12, the PowerBook, Copland, OpenDoc, and the Internet”): “No one would listen. Nobody would agree to give anything up.”

Reviewers have already pointed out that Amelio’s entire book is just a 300-page “Don’t blame me!” statement, and that he’s fishing for sympathy when he’s the one who failed to save the company. But even if what he says is only half true – for example, that “everything at Apple felt like bench-pressing 500 pounds” – it tells you something: by 1997, Apple’s employees had become the boys on the 500 pounds “– it tells you something: by 1997, Apple’s employees had become the boys on the 500 pounds island. The pirate-flag-waving atmosphere that Jobs had created in the ’80s had grown wildly out of control, and the ship’s rudder was completely disconnected.

Yes, Jobs had ideas; yes, he’s charismatic; and yes, he had power and influence in Silicon Valley. But those traits don’t fully explain how he turned Apple’s image around. And they certainly don’t explain how he made the company profitable – an astonishing feat for a guy who never went to college, let alone business school. How was Jobs able to make Apple profitable where a string of experienced corporate veterans (and even “turnaround artists” such as Amelio) had failed?

By being a force of nature. By cutting like a knife through the politics, infighting, and dissention of the 1997 Apple. And yes, by firing people who didn’t get with the programme. By moving quickly – too fast for studies, consensus, or focus groups – and making decisions on instinct and experience.

He’s not alone, either. Behind some of the greatest commercial success stories, you’ll find single-minded entrepreneurs who knew exactly what they wanted and tolerated no argument. Titanic, the most profitable movie ever made, was the obsession of James Cameron, who wrote and directed it. Jeff Hawkins had to ram his Palm Pilot idea past legions of doubting venture capitalists, parts suppliers, and Microsoft-worshipping reporters. Linux, Survivor, Mrs. Fields’ cookies, Federal Express, America Online – same story.

In Inc. magazine, Harvard psychologist Steve Berglas recently called for Jobs’s resignation, predicting that a desperate Apple may have tolerated Jobs, but a robust Apple won’t: “When crises threaten to overwhelm an organization, the usefulness of an egomaniacal leader is unparalleled. The rules change radically, however, once a business is established… No one can play the role of enfant terrible indefinitely.”

In Apple’s case, I’m not so sure about that. It’s been a year since Berglas’s article, and Jobs has somehow continued to dream-up more Titans and Palm Pilots, sometimes over the objections of his engineers. As it turns out, plenty of people at Apple thought that offering a choice of iMac colours was a stupid idea. The iMac, the iBook, the G4 Cube, and Mac OS X never would have seen the light of day in a kinder, more consensus-driven Apple.

No, I wouldn’t want to work for Steve Jobs. And I certainly wouldn’t want to be Steve Jobs; he’s driven by demons that Wes Craven doesn’t even dream about.”

David Pogue