Super Mac

500MHz G4
so powerful, it’s a weapon!

USB extras
Essential add-ons for your iMac and Power Mac

Net providers
Time to change ISP?

Remote access
Everything you need to work away from the office

Photoshop 5.5
Expert Guide
16  APPLE’S NEW POWER MAC G4 GOES LIKE A ROCKET – THE 500MHZ G4 IS THREE TIMES FASTER THAN A 600MHZ PENTIUM III PC, AND INCLUDES A SOME VERY NEAT NEW FEATURES. IT LOOKS COOL, TOO.

October 1999
Find out how you can get hold of either MetaCreation's Painter 4.0 or Kai's Photo Soap FREE when you subscribe to Macworld – see pages 110-111.

FREE! With this issue...

The Macworld Digital Publishing Special Report. - the world’s first commercial publication produced entirely using Adobe InDesign 1.0, and printed using the latest filmless technology.

It’s time to wave goodbye to PostScript, film and colour guesswork, and welcome PDF, directly-to-plate printing and ColorSync-enabled colour management.

Macworld, in association with Adobe and Apple, brings you the ultimate reference guide and news on Tomorrow’s Publishing Today.
October’s Macworld CD features an exclusive pre-release version of avenue.quark, plus the latest trials, demos, shareware, games and updaters. Vic Lennard works through the folders and files...

**Macworld**

**Macworld OCTOBER 1999 11**

**avenue.quark.**

The intelligent way to reuse your QuarkXPress content.

avenue.quark lets you extract the content of QuarkXPress documents and store that content in XML (Extensible Markup Language) format — articles, photographs, interviews and diagrams. You can then reuse these easily in a variety of ways, including in print, on CD-ROM or on the Web. You need only adjust the presentation for each setting — headers, footers and the like. This pre-release software includes the Quark XTension and necessary preference file along with a comprehensive tutorial and PDF-format guide. You’ll need to be running a PPC version of QuarkXPress 4.04 or QuarkXPress Passport 4.04 and can use the pre-release until 31 March 2000 at which point it will timeout. See pages 21 and 131 for more details.

**Macromedia Director 7**

Director 7 delivers higher quality animations, stunning playback and richer experiences — optimized event processing, faster projector startup, increased stability and greater control. Objects come to life with 360° rotation, horizontal/vertical flipping and scalable skewing while new alpha channels elegantly control object transparency, edges and blending. Super-compressed shocked fonts give great looking text. Easily create intelligent navigation with new built-in support for multimedia hyperlinks and hypertext. For the first time, import HTML text right into Director while maintaining full control of all link references. Integrate existing content with HTML, HTTP, HTTPS and XML. Create extremely small, high-quality shapes with built-in vector drawing tools and import Flash 3 files to use Flash animation, shape morphing, masking, and transparency. This limited version of Director allows you to save, export, and create executables for 30 days after installation. It does not include studio components such as sound editors, behaviours, Macromedia Fireworks or the Shockwave Multiuser Server.

**Install Me**

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:

- **QuickTime 3.0.2**
  Many of the demos need this installed. It gives you new versions of QuickTime and the MPEG, VR, Musical Instruments and PowerPlug add-ons.

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

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

- **Also included**
  A number of useful utilities such as Apple Game Sprockets 1.1.4, InternetConfig 2.0 and Apple Appearance plus essential items such as Apple Disk Copy and Drive Setup.
Serious Software

Extensis PhotoFrame 2

Extensis PhotoFrame 2.0 is a Photoshop plug-in that helps you create professional-quality image frames and border effects. Instantly create an unlimited variety of beautifully rendered effects from high-quality frames designed by professional artists.

There are now more frames – the three combined volumes included with version 2.0 give you over 1,000 total frame files. The new Instant Frames system lets you create edge effects from scratch. Choose from and customize several different shapes such as circles, rectangles, polygons, stars, arrows and hearts – and apply and combine multiple edge distortions to either frame files or Instant Frames.

Yours to try out for 30 days.

Vicomsoft v6.5 software

Vicomsoft Internet Gateway is an integrated suite of extended Internet connectivity modules. They incorporate over 15 extended functions including: NAT (Network Address Translation) for Internet connection sharing; industrial strength TCP/IP router; Web caching server for accelerated throughput; DHCP server for ease of administration; DNS caching for faster access; local DNS server; Remote Access Server; firewall security and multi-hosting to run multiple virtual web sites. New features include an optional Remote Administration function, Webheaders, a TCP server locator and Timed Access Controls.

SoftRouter Plus offers the same set of features aside from the Timed Access Controls and CyberNOT filter. Try either of these for 7 days.

Opcode Vision DSP 4.5

Vision DSP is a complete software system for recording, editing, effecting and playback of MIDI and digital audio. Even if you have no specific MIDI hardware, Vision DSP will work with your Mac’s QuickTime Musical Instruments extension.

New features in version 4.5 include support for ReWire-compatible softsynths, movement automation (record, playback and edit) of parameters for VST plug-ins and EQ, increased number of Console Strips, improvements in file management, the addition of Mute and Solo buttons in the plug-in and EQ edit window, the ability to lock all events in the designated track to their SMPTE positions and an improved Strip Silence command.

Try the full package for 30 days.

Don’t miss...

- Cool Extras
  - Digital Randomizer 1.5.0 – the simple way to make a choice
  - Mac August 1999 – latest issue of the UK-based Mac ezine
  - Kaleidoscope 2.2 – updated version of the user interface enhancer
  - Abel Internet’s free Internet access offer

- Mac ISP

Also on the CD

APPLE (in the System Utilities folder) including:
- G3 CD Update 2.0
- iMac CD Update 2.0
- USB Card Support 1.2

COMMS & INTERNET
- Over 20 applications including:
  - TextTo™ 2.0
  - HTML Markup 3.0.1
  - VSE Be Found 1.2

GRAPHICS
- Nine items including:
  - Fractal Domains 1.3.5
  - iView Multimedia 3.7
  - Rainbow Painter 1.3.0
  - Tracer 3.1.3

ICONS
- Over 40 new desktop backgrounds, plus over 400 additional icons courtesy of IconFactory.

INFO
- Six items including:
  - IWM QLX Issue 2.4
  - About This Particular Mac 5.08
  - Apple Wizards – August 1999
  - GURU 2.18
  - My Mac Magazine #52
  - plus six items for developers

OTHER DEMOS include:

Animation Stand
Papyrus 8.0.6
Dragon Web 5.0
PitStop 4.0.2
Intellihance 4.0.3
Suitcase 8.0.3
MacTicker
Imposter 2.0.
MarkzScout 1.1
XPress MS Word 6-7/8 Filter
Mask Pro 2.0.2
Other demos

Shareware
Many programs on this CD are shareware, which means that if you keep them and use them for more than the allowed time (usually up to 30 days) then you must pay for them. Treat shareware as budget-priced commercial programs – support shareware authors so that they continue to provide high-quality programs for the Mac.
Caesar III

Caesar III casts you as a trainee governor at the very start of the ancient Roman Empire. Your success will lead to promotion and personal financial gains, and could help expand the Empire itself. Ultimately, your goal is to rise all the way to becoming Caesar, Emperor of Rome. This demo version has only two training missions and contains only a fraction of the features available in the full game, but it will give you a good feel for what the game is like.

Each assignment has specific goals toward governing a city within a province of the fledgling Empire. You should allocate areas for housing, and then provide for the basic needs of the people who come to live in your settlement.

Caesar III is a lot more intuitive than its predecessor – follow the messages and briefings on screen.

Games World

This month’s Top 10 shareware games will have you glued to your Mac for hours on end. Top pick has to be Goofy Golf, the follow up to GopherGolf (the latest version of which is also included) – play nine holes of the craziest golf you’ve ever seen! Then there’s Pork Barrel – as President of the US of A, can you keep you pre-election promises and survive to full term? Action addicts will enjoy playing Mac Invaders and Meteor Storm, two classic arcaders, while the more cerebral among you can fire up Blobs 3.0, Connect4, Fortune Puzzles and David’s BackGammon. And there’s always Unicycle! 2.0…

Updaters include Age of Empires 1.2 and Bugdom 1.0.1.

Macworld CD catalogue

Courtesy of Mark Pirri’s superb DiskTracker program, Macworld brings you a searchable catalogue of all our CDs from 1997 and ‘99 – almost 125,000 files! This will grow month by month to allow you to find any file you want, without wearing out your CD-ROM drive. The latest version of DiskTracker (1.1.4) is also included – don’t forget to register if you find our library useful.

Faulty cover CD-ROM?

If your cover CD doesn’t seem to work as it should please check you have read all the instructions on the cover disc pages carefully first. If it still doesn’t work then please email Gillian Robertson at gillian_robertson@macworld.co.uk

If your cover disc is broken and you want a replacement CD, please call Emiliegh Borrett on 0171 831 9252 or send an email to: emiliegh_borrett@macworld.co.uk
Apple unveiled its latest series of Power Macs at the huge Seybold Seminars publishing show in San Francisco. Running on the incredibly fast PowerPC G4 processor, the new “Graphite” Power Macs are so speedy that the US government has classed them as “dangerous weapons” – a fact lauded upon by the Apple CEO. Steve Jobs also showed off a matching set of monitors, including a 22-inch flat-panel Cinema Display (see page 18).

“The Power Mac G4 is not only the fastest Mac ever, it’s the fastest personal computer ever,” said Jobs. He went on to describe it as the “ultimate Photoshop machine.”

He proudly stated that the Power Mac G4 is so fast that it is officially a “supercomputer”, capable of performing over one trillion floating-point operations per second (gigaflops). It incorporates a new execution unit named the Velocity Engine. “the heart of a supercomputer miniaturized onto a silver of silicon,” according to chip architects Apple, IBM and Motorola. This new architecture was known previously as AltiVec. Applications that tap the power of the Velocity Engine, such as Adobe Photoshop, run over twice as fast on the latest Pentium III PCs. In a set of Intel’s own Signal Processing Library Tests (www.intel.com), the Power Mac G4 was 2.94 times as fast as the 600MHz PIII. The new G4 chip initially ships in 400-, 450- and 500-MHz systems, all including 1MB of Level-2 backside cache. It comes in the same striking casing as the current G3 machines, but dressed instead in a stunning, translucent clear, silver and graphite enclosure.

The £1,099 entry-level model sports a 400MHz PowerMac G4 processor; and is based on the same basic motherboard as its predecessor, the Power Mac G3. It comes with 64MB of RAM (on all systems upgradable to 1.5GB), a 1GB hard disk, 32x CD-ROM drive, and built-in USB and FireWire. Aside from the new colour scheme, the only other major change is the adoption of the old-style mice, keyboards and other add-ons.

Sawtooth bites
By contrast, the forthcoming 450- and 500-MHz Power Mac G4 configurations mark the debut of the long-rumoured motherboard redesign code-named Sawtooth. Sawtooth provides three times the memory bandwidth of the Power Mac G3 line (average 16MB per second – twice the PCI bus throughput), according to Apple. Software DVD decoding is also present only in the two higher-end G4s, which also feature a 2x AGP port filled with an ATI Rage 128 video card with both analogue and digital outputs – the latter for Apple’s Cinema Display.

As a result, these models are the only Macs that can drive the Cinema Display (see page 18) without an extra video card. In addition to its two external FireWire ports, Sawtooth also has a third port located internally – indicating that Apple is moving towards FireWire for high-performance storage.

The Sawtooth models will accommodate AirPort, the wireless networking option first unveiled alongside the iBook at July’s Macworld Expo/New York. During his Seybold keynote address, Jobs suggested that AirPort-ended desktops could serve as bases for a local wireless network, obviating the need for an AirPort base station. Software allows the new Power Macs to act as an AirPort hub, negating the need to buy the £199 AirPort Base Station. (For more details on AirPort, see Macworld, September 1999)

The 450-MHz model will ship in the UK at the beginning of October with 128MB of RAM, a 2GB hard drive and DVD-ROM for £1,699. The 500MHz model with 256MB of RAM, 27GB hard drive and DVD-RAM, is due in late October for £2,295. The systems will ship with a Photoshop plug-in to optimize G4 performance when using the image-editing software.

Velocity va-voom
The G4 processor features a new multimedia addition: the Velocity Engine, previously dubbed AltiVec. On the hardware side, it includes a vendor-independent processor integrated into the G4 via a 128-bit bus; software comprises 626 new operator instruction extensions.

The Velocity Engine provides for highly parallel operations, allowing for the simultaneous execution of up to 16 operations in a single clock cycle. Motorola claims this allows some multimedia operations to benefit from a speed increase of 2 to 30 times over current PC processor. Power Mac product manager Stan Ng said the spec translates into dramatic speed boosts for applications that have been optimized for the Velocity Engine. Demos of enabled applications such as Adobe Photoshop and SETI@Home showed a three to seven-fold improvement. When some of these same demos were run without optimizations, speed increases over comparable G3s were evident but significantly smaller.

This shift in PowerPC technology is so great, says Motorola, that the infancy definition of processors will be expanded with its introduction. A spokesperson for the AltiVec pioneer hinted that G4 will eventually make the move to Apple’s consumer line: “While the initial PowerPC microprocessor utilizing AltiVec technology will target very high-performance applications in networking and computing applications, subsequent AltiVec processors could address markets in which performance must be balanced with power, price and portability integration.”

In addition, Apple announced that two new Macintosh Server G4s and a new Server G4 with Mac OS X Server will be available in November. Multiprocessing G4 Power Macs are a distinct possibility when Mac OS X ship early next year. Report by Daniel Drew Tumes, Matthew Rothenberg, John Buttridge, and Ben Wilson

Power Mac G4 is up to three times faster than Pentium III – according to new tests!

Apple has picked another company to sue for allegedly ripping off its iMac design – filing suit against eMachines Inc over its new eOne computer.

Apple is seeking unspecified actual and punitive damages from eMachines.

“There is an unlimited number of original designs that eMachines could have created for their computers, but instead they chose to copy Apple’s designs,” said Apple iCEO Steve Jobs, in a statement.

“We’ve invested a lot of money and effort to create and market our award-winning computer designs, and we intend to protect them under the law,” eMachines claimed that it designed its translucent, blue PC (right) independently of Apple. “Design concepts in the IT industry have been open in most areas,” said Trigem Computer (the company that owns a 51 percent in eMachines).

“We have seriously reviewed the design of Apple’s iMac before launching eOne PCs and also conducted a legal review before the launch,” it said.

Trigem said that it intends to “smoothly resolve” the issue with Apple. Whether this would include some type of settlement is yet to be revealed.

The eOne is significantly cheaper than the £779 iMac, as low as £259 after rebate.

The iMac has been among the top-selling desktop PCs since its debut a year ago, and its popularity stems mainly from its colourful all-in-one design.

Apple has already sued Future Power and Daewoo (see News, August 1999) for making computers it claims are iMac knock-offs, and there was much speculation the company also would go after eMachines.

eMachines was not immediately available for comment.

– Lisa Bowman
XML streets ahead with avenue.quark

As it seeks an edge in its showdown with Adobe and its “Quark killer” InDesign (see page 46), Quark is directing publishers’ attention Webward. At the Seybold “21st Century Publishing” show, Quark unveiled the first component of its suite of “ground-breaking” Internet tools. Avenue.quark is a QuarkXTension that enables customers to easily tag their QuarkXPress content and extract that content in Extensible Markup Language (XML) format. Using Web editors, developers can quickly apply styles to XML data or design templates that integrate with dynamic publishing solutions. The full XTension ships next spring; a beta version will appear in the fourth quarter of this year. A Pre-Release version is included on this month’s CD.

Unlike current third-party products such as Gluon’s WebXPress and BeyondPress from Extensis, avenue.quark will not convert XPress pages to Web pages, complete with HTML and layout. Instead, Avenue is designed to get content into large-scale publishing systems as XML. This content can then be integrated into databases for archiving or processed through Vignette’s Story Server or Allaire’s ColdFusion into HTML. Unlike HTML, XML allows the document to compensate for the shortcomings of HTML.

The World Wide Web Consortium created XML to compensate for the shortcomings of HTML. HTML, a derivative of Standard Generalized Markup Language (SGML), employs a rigid set of rules that optimizes browser-display document viewing. XML, judiciously pruned from SGML, retains SGML’s power while reducing complexity.

Unlike HTML, XML allows the document developer to create tags that describe the data, and optionally create a set of rules called Document Type Definitions (DTDs). Any standard XML parser can read, decode, and validate this text-based, self-describing document, extracting the data elements in a platform-independent way. Version 5.0 of Microsoft’s and Netscape’s Web browsers understand XML, and Sun has made the standard the portable data language for Java.

Momentum is clearly with XML as a portable data mechanism. The immediate benefit of XML—text-based, self-describing document, extracting XML parser can read, decode, and validate this text-based, self-describing document, extracting the data elements in a platform-independent way—is that it will allow new and smaller businesses to participate; it’s an easy sell, with its promise of simple implementation, wide availability, and lower costs.

At a Quark-Vignette press conference at Seybold, the companies said the product should be priced very aggressively—somewhere in the £99-199 range in the UK. Quark’s corporate communications manager Glen Turpin said that Avenue represents “piece one in a line of Internet tools” to move XPress content to the Web. Already in development: an application to design Web templates using the familiar XPress interface. Turpin promised that QuarkXPress 4.1 will include many “HTML import-export capabilities”.

Read our avenue.quark guide on page 131.

Prepare for 100-fold ethernet speed increase

After ethernet (10BaseT), Fast Ethernet (100BaseT), and the most-recently completed Gigabit Ethernet (1,000BaseT), the industry is already starting to look ahead to the super-speedy 10-Gigabit Ethernet — that’s 10,000BaseT. Apple’s current systems—from consumer Mac to professional Power Mac—come with built-in automatically switching 10/100BaseT ethernet. And this just weeks after Team ASA — manufacturers of high-performance pre-press and digital-media networking products — announced a Mac OS X driver for its Stallion-GE-II family of gigabit ethernet PCI Network Interface Cards adaptors.

The Institute of Electrical and Electronics Engineers (IEEE) is already hard at work designing the future standard’s parameters—such as media support and distance limitations—for a 10-Gigabit Ethernet standard.

Although currently bogged down in the technical nuts and bolts, it is hoped that a proper project authorization request can be submitted to the IEEE this autumn so development can begin in earnest.

10-Gigabit Ethernet will be aimed at service providers. Previously, the technology has been primarily aimed at local area network (LAN) systems. But now providers are latching onto Gigabit Ethernet as a less-expensive and simpler alternative to Asynchronous transfer mode (ATM) in metropolitan-area networks (MAN).

So what’s next? You guessed it. “Before we’re done with our work on 10-Gigabit, we’ll have to start looking at 100-Gigabit Ethernet,” says Dan Dove, principal engineer of LAN physical-layer technologies at Hewlett-Packard. – Jeff Caruso

For the information as it happens visit Macworld Online Daily News (www.macworld.co.uk) updated five times a week
news

iBook & AirPort: ‘wait til October’

A jubilant Apple announced at Seybold that iBook advance sales had reached 140,000, and that’s not including the portable-crazy Japanese computer market.

“We are thrilled by the customer response to iBook, and we’re working hard to ensure that we can meet the demand”, Steve Jobs said during his keynote speech. He claimed that the AirPort Base Station (due to ship in the UK in October) is capable of supporting up to 50 users – up from the 10 announced at Macworld Expo/New York.

A spokesperson for AppleCentre Micro Anvika told Macworld: “One out of every four iBook buyers is also buying AirPort”. A spokesperson for retailer Mygate confirmed this, but complained that sales could be “diluted by Apple’s lack of a definite release date”.

The iBook is available in two colours (similar to the iMac’s Tangerine or Blueberry, but darker due to the co-moulded rubber), and is set to retail in the UK for £1,059 (ex VAT). Confirmed AirPort prices were unavailable at press time; but expect the Base Station to cost £139, and the AirPort Card, £69. Sources report that the iBook should begin UK shipping on 25th September. Micro Anvika expect it to be another week after that general release date until iBook becomes widely “available”.

For more details, see Macworld, September 1999. To keep posted on iBook developments, visit Macworld Online, www.macworld.co.uk.

Mac OS 9: ‘your Internet co-pilot’

While the G4 Power Macs stole most of the thunder from the Seybold keynote address (see page 16), Apple also used the publishing event to provide some new details of Mac OS 9, the next release of the Macintosh operating system due out this October.

The public got its first look at Mac OS 9 during July’s Macworld Expo in New York, and while some features were familiar to Expo showgoers, there were plenty of surprises as well.

Steve Jobs calls Mac OS 9 “Your Internet Co-Pilot” and suggests that the new operating system will provide unparalleled Internet connectivity and interactivity. Packed with over 50 new features, the OS is expected to cost £59. Jobs discussed nine Internet “Power Tools” built into Mac OS 9, as well.

Search me

The most hyped feature of the new operating system is Sherlock 2, the next-generation search engine first introduced with Mac OS 8.5 (see screen, right). New features of Sherlock 2 include the ability to search Internet name databases to find people and to search news as well. E-commerce capabilities have also been integrated.

Mac OS 9 also features the ability to maintain multiple user accounts; users of the same Macintosh can maintain separate preferences files with unique access to files and interface customizations.

Voice print passwording is also included in Mac OS 9; using the feature, users can lock out unauthorized access to their systems by recording a unique voice identification.

The new OS also maintains a database of commonly used passwords in a “keychain” feature; once the system is unlocked utilizing the user’s voice print (or more conventional password-protection), all passwords are unlocked as well – freeing users from the tyranny of having to keep track of different passwords for different servers, Internet accounts, and so on.

Users can configure the Mac OS 9 to auto-update itself every time a new release of any major component is available from Apple.

State of the art encryption technology is also included in Mac OS 9. Now, users with high security needs can encrypt and decrypt their files on the fly using built-in system tools.

File sharing in Mac OS 9 has now been extended to the Internet. Much like the Web page-sharing capabilities that Mac OS 8.x users have been able to use to easily distribute information on the Web, Mac OS 9 users will now be able to use the Mac’s easy-to-setup file-sharing capabilities to distribute files to other Internet users.

Jobs also mentioned the inclusion of a network browser in Mac OS 9; Jobs indicates that the new technology will simplify the act of finding network servers dramatically.

The feature which interested the Seybold crowd most dramatically was Mac OS 9’s ability to incorporate TCP/IP into AppleScript. Phil Schiller, Apple’s vice president of worldwide marketing, demonstrated this capability by showing a setup of two computers connected over the Internet. The two Macs ran a variety of software including FileMaker Pro, Adobe InDesign and Adobe Photoshop. Utilizing a series of AppleScripts, the two machines exchanged data and imagery to produce a completely automated catalogue.

– Peter Cohen
IBM opens PowerPC design to Apple rivals

A
pple enjoys a unique position among major computer manufacturers as the only one to use the PowerPC chips on its motherboard. But all that’s about to change.

IBM engineers attending August’s LinuxWorld Conference & Expo in San Jose, California, said manufacturers are now welcome to use its motherboard design to build their own PowerPC-based hardware. That means you may soon be able to buy a computer with a PowerPC version of the Linux operating system pre-installed without buying hardware from Apple.

PC Data’s Mark Bates said that IBM’s decision could be “an opening for potential competition [to Apple] if a hardware manufacturer were to offer software support” for a PowerPC version of Linux installed on the machine.

CHRP—y cheap

“The novel thing about our approach is it’s open — we are giving away the schematics, material, even the artwork for the circuit boards,” said Steve Faure, an IBM advisory PowerPC engineer.

Back in the days of Mac clones, the Common Hardware Reference Platform (CHRP) was the great hope of cheap and powerful PowerPC systems. The plan was to take a page from the Wintel world and define a basic set of standard motherboard features for PowerPC-based systems, cutting prices. In those days, Windows NT was also going to be available for PowerPC, not just the Mac. But Microsoft pulled the plug on NT for PowerPC. This leaves Linux, which is booming. “The design is based on a very mature CHRP design, not a new design. If I were an OEM I’d want to move quickly, given how hot Linux is now,” said Faure.

Software options are opening up for anyone wanting to run PowerPC versions of the Linux OS.

At the LinuxWorld Conference & Expo, several companies announced plans to release new products. Hales Corner, in addition to prepping a new version of its Linux OS for PowerPC users, has also been talking to IBM about ways to get its software pre-installed on OEM-produced computers (see above).

Meanwhile, the company is readying LinuxPPC 1999 Q3, the name of its latest Linux package for PowerPC hardware. Another company working with IBM on a Linux project is TerraSoft, distributing Yellow Dog Linux for Mac G3, PowerPC and RS/6000 systems. Terra Soft’s Kevin Staats said Champion Server will soon fully support high-end RS/6000 machines from IBM that use a chip from the PowerPC family.

However, Terra Soft’s core focus continues to be the G3/G4, Staats said, and its primary goal is working with Apple. Macintosh users will be able to buy the company’s Yellow Dog Linux package pre-installed on G3 hardware from Apple-authorized VARs by early October, Staats said. “That puts Apple in the lead again. Right now you can’t go to a store and get a PC with Linux installed,” Staats said.

At the show, TurboLinux Inc. showed a PowerPC version of its workstation software, TurboLinux 3.6, running on a Blueberry iMac. Next month, the company also plans to ship a Mac emulator that runs on older SCSI hardware.

What is Linux?

While we prefer to applaud only the Mac, we relish another operating system — one that could turn your Mac into a far more powerful computer. Unix is the operating system that keeps the Internet up and running, and poses a far-greater threat to Microsoft’s monopoly than the Mac. Unix is certainly a more complicated system than the friendly Mac OS, but new versions could turn Macs into screamingly fast Internet servers.

Unix is not just a simple product from one developer. It’s more of a specification for an operating system — there are countless clones and variants, including one of the most popular ones around, Linux (www.linux.org). And Apple is hard at work on the upcoming Mac OS X, making the power of Unix more friendly and appealing to the average Macintosh user.

Linux is a free version that is developed by a group of volunteer programmers on the Internet and has taken the software world by storm — mostly because its free. It’s stable, and it doesn’t come from Microsoft. Unix is far more efficient than the Mac OS in the way it manages processing horsepower (pre-emptive multi-tasking) and protects memory. As a result, even the slowest Power Mac can be dazzlingly fast and stable when it’s running Linux. And that means you can keep older Macs long after they would’ve otherwise been written off as useless. — Stephan Somogyi

PC makers plan Linux OS on G3

First to take IBM up on its offer is Prophet Systems, which will deliver PowerPC G3 and G4 desktop systems in the first quarter of 2000.

High-end low-end models — code-named Ultra and Zima — will feature an integrated chip set that includes 64-bit PCI, Gigabit Ethernet, advanced infra-red connectivity and PC-133 standard memory. They will also offer a modular card-bus slot, a built-in DSL modem, and options for six FireWire ports and seven USB ports.

Mac OS 9, the forthcoming OS scheduled to ship in October, reportedly requires no boot ROM sources said, but may include essential code that works only with Apple motherboards — thereby blocking any compatibility with computers using motherboards designed by IBM.

— Wendy Mattson & Stephan Somogyi
Motorola buys main Mac tools

Motorola is to buy-out Metrowerks – developer of CodeWarrior and other programming tools – for $95 million. The deal brings together two of the largest players in the Macintosh market.

Motorola Semiconductor is one of two suppliers of PowerPC G3 and G4 chips to Apple (the other is IBM). Metrowerks is a major supplier of Mac-developer tools, most notably its CodeWarrior line of application-development software, as well as tools for producing Palm and Java code. The company also recently debuted tools for Apple’s Carbon libraries, which will be introduced with Mac OS X.

Motorola plans to operate Metrowerks as a stand-alone subsidiary – retaining its current name and management team. “Metrowerks has an exceptional team, and its CodeWarrior software development products are among the industry’s best for desktop and embedded systems programming,” said Hector de J. Ruiz, president of Motorola Semiconductor Products Sector.

Motorola Semiconductor CEO Jean Belanger and Billy Edwards, Motorola’s director of strategic planning, said the acquisition will bolster Motorola’s efforts to expand in the embedded chip market. But both executives said the decision to focus on the embedded market doesn’t mean that Motorola will lose interest in PowerPC development for Macs.

Belanger said “we’ve been told that whatever resources we need will become available.” This added resources will also help Metrowerks compete with other tool developers, including Microsoft and, ironically, Apple.

Belanger said “we’ve been using our tools for years, but not every developer does,” Belanger said. “Some use tools from Apple.”

Motorola Semiconductor products

Strange days for AIM PowerPC partners

The news from Apple’s PowerPC partners just gets curiouser and curiouser. While IBM’s and Motorola’s recent moves seem to bode well for the RISC architecture the three companies founded back in 1991, is the news equally good for Apple and the Mac OS?

Big Blue and Moto have certainly kept busy over the past month. First, IBM showed off a free reference motherboard design based on the hitherto dormant cross-platform CHRP standard (see page 25). Its stated motive: to encourage a new wave of third-party boxes that will use the PowerPC processor to run distributions of the open-source Linux OS.

Now, Motorola Semiconductor has announced plans to acquire Metrowerks, the developer of programming tools that have been central to the creation of third-party Power Mac applications. Long-time Apple watchers will remember that it was Metrowerks’ quick thinking that pulled Apple’s proverbial chestnuts out of the fire in 1993.

The Mac maker made the hardware switch to PowerPC but had yet to develop a coherent suite of programming tools for it, and CodeWarrior was the defining software that let developers migrate to the new standard.
3D: Mac renaissance

After years of lagging behind Windows NT, the Mac is fighting back in the third dimension: Stephen Beale reports from Siggraph 99

Los Angeles: Siggraph can be a frustrating place if you’re a Macintosh user. You walk the aisles, surrounded by the coolest graphics technologies – 3D scanners, motion-capture hardware, virtual-reality systems – and almost none of it runs on a Mac. From the looks of things, Windows NT has thoroughly comprehended the high-end graphics arena embodied by August’s Siggraph 99 convention, stealing thunder – and market share – from Unix vendors and Apple.

But with Apple’s resurgence, its adoption of OpenGL, and the prospect for wickedly fast Mac systems running Altivec-based PowerPC G4 chips, some developers are taking another look at the Mac as a high-end graphics platform. Apple’s embrace of OpenFX, a standard set of 3D graphics routines – is a boon for developers because they already use it in their NT products.

While NT dominated, plenty of Mac products were nevertheless on display. MetaCreations unveiled Painter 6, an upgrade of the popular natural-media painting software that features new brush controls, new 3D painting features and a new text-on-a-curve function (see page 35).

LightWork Design announced a licensing deal with Apple to include the former’s Kazon3D rendering technology in future Adobe products. Until now, the Kazon technology has been available only in Windows software. The technology, which LightWork licenses to other software developers, allows users to manipulate and paint 3D models in real time.

Linker Systems announced that it will offer a version of its Animation Stand software – Animation Stand Personal Edition – for free download. The company also announced that Animation Stand 4.1 will include features that take advantage of the advanced capabilities in the Altivec chip. Linker will delay releasing its software until the first Mac systems with Altivec processors ship.

Web 3D

When it comes to viewing 3D graphics on the Web, the Macintosh has long been the poor cousin of the computer industry. The reigning 3D Web standard, Virtual Reality Modeling Language (VRML), requires a browser plug-in, and the only such software available for the Mac – Cosmo Player – is buggy and works only with older versions of Netscape Navigator.

However, at Siggraph, the Mac took some important steps toward Web 3D parity. The biggest news came from a little-known organization called Zap Technologies, which has developed a compact VRML/HTML browser called Twisp. Zap, which describes itself as “a pro bono software developer,” is making the browser available on an open-source basis, and Zap founder Frederick Shaul demonstrated the browser during the Web3D Roundup.

Other VRML browsers for the Mac could be in the works. Blaxxon Interactive is making its VRML browser available under an open-source arrangement, meaning that other developers are free to create their own versions of the software. The significance of blaxxon3D is that high-quality 3D can be integrated into all kinds of applications without requiring a plug-in.

Several other companies have developed 3D Web technologies that work well with Windows. The best-known is MetaCreations’ MetaStream, which allows Web site developers to stream 3D content created in Bryce, Poser and other MetaCreations programs. The company has now released the long-awaited MetaStream plug-in for Mac; the PC version has been available for more than a year.

Cult3D, from Cycore Computers, includes a Mac browser plug-in – but with Windows-based authoring tools. Hypercosm has developed a 3D graphics programming language called OMAR (Object-oriented Modeling and Rendering) along with the Hypercosm 3DPlayer, available in Mac and Windows versions, for viewing content created with OMAR.

The company says that its technology has an advantage over MetaStream and Cult3D because the language allows you to define the function of objects as well as their geometry. Another company, Web developer Pulse Entertainment, has created a Web 3D technology for its own projects. Pulse offers a 200K browser plug-in for the Mac and Windows.

Some developers are using Sun’s Java language to generate 3D content for the Web. For example, Shoot Interactive has developed a Java 3D render器 that runs on any Java-capable computer. Working in the wings is X3D, the successor to VRML. Essentially a hybrid of VRML and XML, X3D will be backward-compatible with VRML, meaning you’ll be able to view VRML content with X3D-enabled browsers. The Web3D Consortium, which is developing the standard, expects the first X3D applications to ship in the first half of next year.

A chorus of celestial voices beckons you to a darkened entrance bathed in green light. Thin, transparent filament hang from a giant overhead disk; if you pull on one, new voices – actually MIDI sequences – begin singing. You go inside, surrounded by video images of landscapes, and walk past a full-size 1950s-style Chevy that’s partly reduced to wireframe. Then you see a dude in a strange mask pushing a cart…

You’ve just checked into the Millennium Motel, an exhibition of emerging graphic technologies at Siggraph 99. Siggraph, being a nonprofit venture, is more than just a trade show. It has a major academic component, as college professors deliver papers on graphics technology. Then there are the Siggraph galleries, curated exhibitions that showcase the outer limits of computer graphics and interactive technologies.

Siggraph 99 features two such galleries: The Millennium Motel and TechnOasis. The Millennium Motel consists almost entirely of interactive projects. Curator Kathryn Saunders describes it as “a place where digital and human quests reconcile, rework and reinterpret life in alternative future formats.”

The man in the HyperMask is an actor pushing a cart that contains a CGI workstation. The computer projects an image of a face onto the mask, while tracking the man’s head movements to keep the image in place. Controls on the cart allow the actor to control the face’s expressions. Developed at Sony Computer Science Laboratories, the system is designed as a metaphor for life. From MIT comes the metaField Maze, a 3D video maze, complete with a little ball; that’s projected onto the floor. Players stand in various positions to tilt the maze, thus moving the ball toward its destination.

The smaller TechnOasis consists mostly of printed artwork, but there are interactive installations as well. Some combine projected computer images with real-world objects. In one room, visitors play games with projected lights as minimalist music blares.

You can walk into MIT’s Luminous Room, in which computer images are projected on a variety of surfaces. Here’s how the creators describe it: “The CRT breaks open and the pixels inside leak out to stain everything.”

It’s a metaphor that could be applied to much of Siggraph 99 as the boundaries that separate the real and digital worlds fade away. Using a motion-tracking system, you can be a virtual puppeteer, controlling the actions of a 3D character in an animated environment. Using a 3D scanner, you can create a digital model of yourself, then turn that model into a statue, a solid object printer. Don a virtual reality rig and you can enter a host of digital environments, and perhaps meet your own avatars (digital reincarnations of yourself).

These technologies are largely the domain of Unix and Windows NT. But as we also saw at Siggraph 99, the Mac is in a good position to catch up. Apple’s adoption of OpenGL will make it much easier for developers to port Windows NT applications to the Mac, and make it much easier for developers to port Windows NT applications to the Mac, and this includes the software that drives some of the most interesting new 3D hardware.

Apple’s resurgence – and the prospect of speedy Mac systems with Altivec processors – also sweetens the pot for developers. As graphics technology moves into a new millennium, it appears now more than ever that Macintosh users won’t be left behind.
Apple's back

Apple CEO Steve Jobs kicked off his Seybold keynote presentation with a brief review of Apple's recent financial performance, touting the company's seventh profitable quarter in a row.

"Apple now has more than $3 billion in cash with very little debt," Jobs said. Moreover, the company ended last quarter with less than one day's worth of inventory ("15 hours, to be precise"), which Jobs said far outstripped competitors such as Compaq and Dell.

Apple's share price – just $12 only 20 months ago – hit an all-time high $75 as we went to press.

Jobs said the company has sold two million iMacs in the year since its introduction.

Jobs next introduced the publishing pros to the iBook, the forthcoming consumer portable unveiled at the New York Expo. "This computer is faster than the fastest Mac available last year at any price," he said. According to Jobs, the company has already taken 140,000 iBook pre-orders (see page 23).

DVD & FireWire

iMac ‘on the way’

A pple is expected to unveil an updated iMac consumer Mac (code-named Kihei) either during September's Apple Expo in Paris, or at November's QuickTime Live! Conference in Los Angeles. Both dates offer Apple the chance to penetrate the lucrative Christmas market with its revised consumer Macintosh.

Features are likely to include DVD, fast FireWire (IEEE 1394) connectivity and AirPort wireless technology. A speed bump to between 366 and 400MHz is also probable. The new iMac is likely to ship with Mac OS 9 (see page 23), though an earlier release date would lead to the first batch of the new machines running OS 8.6.1 – a partial upgrade that Apple's software engineers are reported to be working on.

Kihei expectations

The new iMac may pack up to 64MB of RAM, double the current rather limited memory allocation. USB, of course, continues to be supported, but PCI cards are not expected in this or any 1999 iMac revision.

A sixth member of the colourful iMac family is anticipated by many.

The 'Graphite' colour scheme, introduced by the G4 Power Macs (see page 16), would complement the new high-end systems.

Finally, the bundled software package should remain the same, with the optional addition of a stripped-down version of Apple's Final Cut Pro (See Reviews, Macworld, August 1999), opening the doors to home video-editing experiments.

A Lite version of Final Cut would tie in with the expected addition of FireWire ports – high-speed connections built into many modern DV camcorders, such as the Sony model pictured above. Sony's IEEE 1394 variant – called iLink – is fully compatible with FireWire.

Visit Macworld Online (www.macworld.co.uk) for the latest iMac news. – Jonny Evans

G4 on the cards

Simultaneous with Apple's introduction of its new G4 range of high-powered “super computers” (see page 16), upgrade specialists Interex, Newer Technology, and Sonnet unveiled their G4 upgrade-card plans.

Interex Europe (www.xlr8.com) released the XLR8 MACH Carrier G4. This upgrade offers an upgrade path for all Apple's beige systems from the Power Mac 7300 through to the G3, and even some clones. The package is enhanced with custom G4 and Velocity Engine utilities, in addition to performance enhancements for Adobe Photoshop. MACH Carrier is easily installed via its ZIF (Zero Insertion Force) daughtercard.

Newer Technology (www.newertech.co.uk; IMC, 01344 871 329; AM Micro, 01392 426 473) offers the MAXpower G4 upgrade for upgradeable Power Macs (7300 and up). The card boasts up to 2MB of backside cache – G3 chips are limited to 1MB.

Neither Interex nor Newer specified the speeds at which their G4 upgrades would run. Sonnet Technologies, however, announced G4 upgrades in speeds of 400, 450, and 500MHz.

The Sonnet G4 upgrade cards will begin shipping in Q4 1999, starting with the 400MHz cards. Pricing has not yet been set. Sonnet (CU, 0181 358 5857) also promises to introduce ever-higher speed G3 upgrades as the processors become available.

Despite the announcements, many owners of blue-&-white G3 Power Macs expressed worry about upgrade prospects for their machines. Some experts believe that the Apple G3 Firmware Update – released in mid-May for the Power Mac G3 line – locks out the possibility of booting from a G4. Blue-&-white machines that have not had their ROM updated should support a G4 upgrade.

Although technical and political issues remain unresolved, sources said the current barriers are temporary; they assured Macworld that an upgrade path will soon be blazed, either by Apple or a third party. More on G4 upgrades next issue. – Jonny Evans
Wraps off ShinkWrap

Aladdin Systems is shipping ShrinkItUp 3.5, an enhanced version of its disk-imaging utility. ShrinkItUp is useful for storing, accessing and sharing songs, games and other files. Disk images are created by dragging & dropping the item onto the application. The new version now supports HFS +, and Apple's segmented disk-images can be created, read, written and mounted without using scripting software.

ShrinkWrap is available directly from Aladdin Systems for $24.95, upgrades cost $14.95.

PowerPrinter muscles in

A high-resolution CD-R printer has been announced by Trace Services. The PowerPrinter prints directly onto the CD's surface at resolutions of up to 1,440-x-720dpi, producing photo-realistic results.

With an input stack of 50 CDs, the unit enables continuous, unsupervised printing, and has an output-rate of 72 CDs per hour at 720dpi on a 25 per cent coverage. The £4,995 PowerPrinter is aimed at jobs too large for manual printing, or too small for silk-screening.

Canon on Mac trail

Canon's latest range of bubble-jet printer will be Mac-compatible, thanks to its new USB/parallel adaptor cable. The £59 adaptor comes with CD-ROM set-up software and a user guide.

Verity CD-R enters fray

Verity Systems has launched the VS6000 automatic CD-R duplicator. The stand-alone device can make up to 140 copies of a CD, unattended in four hours. It has an internal 4GB hard disk and upgradable firmware; the £2,280 VS6000 is targeted at music studios and for in-house company use.

Computers Unlimited, 0181 358 5857

MetaCreations has unveiled Painter 6 – a new version of its “natural-media” software for creating, composing and enhancing images. Aimed at graphic designers, artists and Web-content creators, Painter recreates traditional artists’ mediums – such as oils, acrylics, airbrushes, charcoal and felt pens.

The new version features brush loading, allowing for multiple-colour painting with each brush stroke. It also offers speed improvements, new brush-engine technology and a revamped interface.

Among the new offerings are the impasto brushes that paint with depth – either building up from the canvas, or cutting through layers of paint – and an Image Hose that sprays images with rotation and scaling based on the bearing, tilt and pressure of the user's hand. Hundreds of Image Hose nozzles are included in Painter. Other new brushes have been added, for painting with neon, patterns, gradients, or tubes of patterns, and Painter 6 includes multi-stroke spoolling, motion damping and cubic interpolation, to ensure fast, smooth painting.

Brush-size and shape-curases provide instant feedback for each painting tool.

Painter’s Dynamic Text has been improved, so that users can now run text on a curve, and reshape the baseline by moving bezir-curve handles. Words can be inserted, edited, tilted, rotated, stretched and scaled directly on a curve, with automatic, configurable drop-shadows.

Also new is the responsive palette-knife that picks up, curves and moves paint, while responding to stylus bearing, tilt and pressure. It also uses the new brush-loading feature.

A revamped memory-architecture improves performance and an updated plug-in host means plug-ins, like Kai's Power Tools, can be added. CMYK TIFF-support allows easy and fast opening and saving of such images, without the use of additional software. Industry-standard extensive layers are now also supported.

Other features include support for Wacom's Intuos tablet, pen and airbrush; an improved interface, with expandable palettes and intuitive environment.

Computers Unlimited, 0181 358 5857

Super furry animal

Painter's new interface helped Matt Dineen create the above work, "Caterpillar".
Kodak develops digital camera trio

Kodak has unveiled three digital cameras – the DC230, the DC215 and the professional DCS 330. The higher-end DCS 330 incorporates Kodak’s new Indium Tin Oxide (ITO) sensor technology, which improves colour accuracy and reduces image-moiré by increasing the camera’s spectral response. The camera is based on the Nikon Promera 64 body, and costs £5,995.

Other features include 3-million pixel resolution; an LCD with on-board histogram; a burst-rate of one image per second; Kodak’s anti-aliasing filter; 9MB file size; an open Application Programming Interface – allowing third-party developers to create their own software applications; and an external flash sync connector.

The £495 USB-equipped DC280 (below) has a 2.5-megapixel CCD sensor, and can capture images at a resolution of 1,760 x 1,168 pixels.

A 20MB(compact flash) card can store 245 low-resolution images, or 32 high-resolution images. It has a 2x wide-angle optical zoom that can be extended digitally to 6x.

The £289 DC215 (below) is Kodak’s most compact megapixel camera to date. The 115-x-143, 47-x-61mm model features a 2x wide-angle zoom and focuses 0.2 to 7.2m.

Both cameras now cost £2,895 cheaper, at £3,895. Both printers cost £629 and include manual exposure, exposure compensation, spot metering and divided brightness-metering, manual shutter speed, focus and white-balance adjustment, quick-mode, continuous-shot mode and focus lock.

Epson at full tilt

Epson continues its roll-out of new products this month, with eight new models hitting the marketplace. They include Epson’s two combination products – the Stylus Scan 2500 and 2000 – that were tested by Steve Jobs at Macworld Expo in New York as July as classic USB offerings.

The Stylus Scan 2500 incorporates PhotoReal printing, multi-page stand-alone coping, scanning, faxing and emailing in one device. Based on the Stylus Color 740 printer and flatbed GT7000, the product features an LCD panel allowing selection of functions such as number of copies, quality setting, reducing and enlarging, and brightness. Aimed at the SoHo and SME markets, the Stylus Scan 2500 is priced at £288.

The other combination model, the Stylus Scan 2000 (right) is a ‘printer plus’ product, again providing printing, copying, faxing, scanning and emailing, and featuring a one-button operation. This £237 model is designed in ‘cool white’ and has interchangeable lids in all five Mac colours. Both combination products offer a 1,440-dpi, six-picolitre printheads with variable-sized droplets.

The company is also shipping three new inkjet printers and a brace of digital cameras. Epson’s digital camera range now embraces the PhotoPC 650, an entry-level USB-equipped model priced at £203. The camera has a 1.09-megapixel CCD sensor, that captures pictures at 1,152 x 864 pixels. The camera has a 1.8-inch LCD monitor and features a built-in auto-focus and a five-element, aspherical glass lens with four aperture settings. It ships with an 8MB CompactFlash card.

The company’s other digital camera release is the PhotoPC 850Z, a three-megapixel model aimed at business and professional users. Its highest spec digital camera to date, the 850Z costs £629 and includes manual exposure, exposure compensation, spot metering and divided brightness-metering, manual shutter speed, focus and white-balance adjustment, quick-mode, continuous-shot mode and focus lock.

New to Epson’s inkjet printer range is the Stylus Photo 750 Millennium Edition, with a “futuristic” black and silver design. The £220 printer incorporates Epson’s ultra Micro Dot technology and has USB and serial interfaces. Print speeds are 6ppm mono and 5.5 black and colour text, and the resolution is 1,440 dpi.

The company extended its A3+ business inkjet printer range with the Stylus Color 1160, aimed at the SoHo and SME markets and entry-level design houses. The £505 printer offers speeds of up to 9ppm and 8ppm colour, and 1,440 dpi resolution.

Also in the inkjet range is the £152 Stylus Color 760. The 1,440 dpi MicroPhoto four-colour printhead and print speeds of up to 7ppm mono and 6.7ppm colour. Epson, 0800 220 546

Lac Cie’s CD network-solution

Lac Cie is shipping its new NetCD range of network CD solutions, and has announced a new 6x 4x16 CD-RW (below). The La Cie NetBox and NetRover are Network Attached Storage (NAS) devices. The £105 CD-RW drive is a 168GB hard disk. The £95 CD-R drive and recorders costs £269 and records data to any CD-RW or CD-R drive. The CD-RW drive, the CRDW-6416, costs £269 and records data to any CD-RW or CD-R drive. The CD-RW drive, the CRDW-6416, costs £269 and records data to any CD-RW or CD-R drive. The CD-RW drive, the CRDW-6416, costs £269 and records data to any CD-RW or CD-R drive.
product news

**BBEdit upgrade ready**
The new update for the free text editor for Mac OS, BBEdit Lite 4.6 is ready for download. Among the improvements are an enhanced Find-and-Replace command, the ability to assign key equivalents to all of BBEdit's 13 menu commands via the Set Menu Keys option, and support for extended Unix-style search characters. BBEdit Lite 4.6 also benefits from numerous interface and performance tweaks. A number of useful plug-ins that automate common text conversion tasks are included with the freeware package.

Bare Bones, www.barebones.com

**Mac-to-phone data move**
Users of PowerBooks, iMacs, and G3 Power Macs can now send and receive data via a GSM phone, following the launch by TDK of a range of GSM data communications PC cards. TDK's £139 Series 6100 cards support GSM handsets from leading manufacturers, including Nokia, Motorola, Panasonic and Siemens. The card is supplied with STF-fax Mac software.

TDK Systems, 0118 921 6230

**Alps at peak of powers**
Alps Electric has announced the UK launch of its MD-5000 printer. The 2,400 dpi photo-quality printer retails at £583 and options include a USB kit for the iMac, and Adobe PostScript 3 with Pantone colour matching. There is also an option for a dye-sublimation upgrade kit. The printer uses Alps' patented micro-dry printer technology, incorporating fade-proof, waterproof-pigment dry ink.

Alps, 01344 880 400

**Flat-panel is sheer Brilliance**
Philips has announced the 18-inch Brilliance 181 AF – its largest flat-panel monitor to-date. The company claims that it has the smallest footprint in the world for a monitor of its size, taking up far less space than a traditional CRT monitor. The Brilliance 181 AF incorporates wide-viewing-angle technology – 160 degrees horizontal and 115 degrees vertical. It carries the latest TOC 99 approval seal, guaranteeing conformance to tough standards in safety, low emission, power consumption and ergonomics. The £2,999 monitor comes as standard with an on-screen display and one-step user-setting controls. It also incorporates an auto-set-up feature and OSD lock.

Philips, 0191 689 4444

**Kritter off the mark**
The iREZ division of PAR Technologies has introduced the successor to the Kritter digital-video camera. Kritter 2 (above) features powerful colour-imaging qualities, with light-sensitivity five times as powerful as its predecessor. Running a 350,000-pixel CCD capable of working at sensitivities as low as one lux – and with a 1mm-to-infinity focus range – Kritter 2 can create image-sizes up to full-screen, using 5-video. Software tools included in the bundle are iREZ Real-Eyes LE and iVisit 2.2 Video Conferencing software. This offers the potential to do video-conferencing without taxing your processor. Kritter 2 is available in two flavours, USB and non-USB, at £109 and £119 respectively. iREZ also offers the new CapSurePRO Type 2 PCI PCMCIA video-capture card (right). This allows users to input and output live streamed-video from any video source. Equipped with a dongle, the card connects to any PAL or NTSC source from camcorders to DVD, and outputs to a wide variety of recording devices.

Zoomed-video technology enables CapSurePRO (below) to bypass the microprocessor, delivering rates up to 27MB direct to the screen’s video buffer. Equipped with a full array of editing and special effects tools, the card costs £330.

AM Micro, 01392 426 473

**Play it on Rio ...**
The Rio 500, a Macworld Expo Best of Show winner, is the first Mac-compatible portable MP3 player from Diamond Multimedia.

The Rio Audio Manager software included with the player is used to create and store MP3 files from audio CDs, or download audio content from MP3 sites. The player stores up to two hours of digital-quality music and 32 hours of spoken audio programs. Equipped with a USB port for compatibility with the iMac or G3, the Rio 500 comes in teal, purple or solid grey.

The pocket-sized player weighs 2.75 ounces and plays for 13 hours on a single AA battery. As well as MP3, the Rio plays MPEG1.5, ADPCM, and Audible.com content. Rio has a 64MB built-in memory expandable to 96MB, and features a press-&-scroll interface for selecting tracks, and adjusting volume and EQ controls.

Play it on Rio from Diamond Multimedia.

**Arowana goes flat-out**
Arowana has released its first “flat-panel” speaker priced at £80. The speaker uses NXT technology and uses a thin, light-weight, rigid panel driven by an exciter element (transducer). This yields complex vibration modes over the entire panel surface, uniformly distributed over the desired frequency range.

Pons, 0131 234 1788

**Flamboyant Philips**

Philips has announced the 18-inch Brilliance 181 AF – its largest flat-panel monitor to-date. The company claims that it has the smallest footprint in the world for a monitor of its size, taking up far less space than a traditional CRT monitor. The Brilliance 181 AF incorporates wide-viewing-angle technology – 160 degrees horizontal and 115 degrees vertical. It carries the latest TOC 99 approval seal, guaranteeing conformance to tough standards in safety, low emission, power consumption and ergonomics. The £2,999 monitor comes as standard with an on-screen display and one-step user-setting controls. It also incorporates an auto-set-up feature and OSD lock.

Philips, 0191 689 4444

**Play it on Rio ...**
The Rio 500, a Macworld Expo Best of Show winner, is the first Mac-compatible portable MP3 player from Diamond Multimedia.

The Rio Audio Manager software included with the player is used to create and store MP3 files from audio CDs, or download audio content from MP3 sites. The player stores up to two hours of digital-quality music and 32 hours of spoken audio programs. Equipped with a USB port for compatibility with the iMac or G3, the Rio 500 comes in teal, purple or solid grey.

The pocket-sized player weighs 2.75 ounces and plays for 13 hours on a single AA battery. As well as MP3, the Rio plays MPEG1.5, ADPCM, and Audible.com content. Rio has a 64MB built-in memory expandable to 96MB, and features a press-&-scroll interface for selecting tracks, and adjusting volume and EQ controls.

Play it on Rio from Diamond Multimedia.
Indecent exposure

There is good and bad news for Internet users. The good news is that, by this time next year – or sooner, if you live in the right area – ADSL will probably be available to you. ADSL is a forthcoming high-bandwidth permanent Internet connection that uses existing telephone cabling. The bad news is that, unfortunately, if you live somewhere out of the way, you may not be given the chance to join in the fun. One of the costs of country living, I'm afraid.

But for the rest of us urban-dwelling Internet users, high-bandwidth, permanently connected Internet is on its way. Before you get too excited, there is something that needs addressing. It's something we Mac enthusiasts like to think doesn't concern us – but not any more: security is now more important than ever.

Hackers, the merry pranksters of the Internet, are as active as ever. In the past, their attentions have been focused on “exposing” security holes in government or military communications – but these are becoming ever scarcer.

What they've now turned to is hacking companies like Microsoft, such as the recent Hotmail hack that let anybody log into anybody else's Hotmail account without a password. Eventually, vulnerable companies will learn the lessons being taught the hard way – and tighten security.

What makes it easy for hackers to attack companies is a permanent Internet connection. So, what are the implications concerning permanent domestic Internet connections? Will it be safe? As time passes, the less safe it will become.

Until now, we have been cozy in the knowledge that it's practically impossible to hack AppleTalk from a TCP/IP connection. They are simply different languages, and TCP/IP can't do anything to AppleTalk. What is changing is that AppleTalk is gradually going to disappear in favour of TCP/IP. But once TCP/IP is used for file transfers, printing, file sharing and so forth – and you have a permanent ADSL connection – then, bingo, you have a security risk.

On the one hand, there are great advantages to using TCP/IP for these things; it's faster and you can communicate with just about any platform you care to mention. You are able to mount your hard disk at work from home if AppleShare IP is running fantastically convenient, but also fantastically vulnerable.

Many people don't worry about security. Why should they if Macs are so safe? Even when entire companies are connected to the Internet, their Macs can be run without a Firewall if AppleShare IP is not being used. But once AppleShare IP is there, security is suddenly extremely important because, in an instant, guest access to your Mac becomes extremely dangerous. Anybody connected to the Internet – about 40 million people and rising – will have access to your hard drive. Not only can they see your personal files, but they can amend, delete, or infect them also. Apple has made it easy for you to get Internet access, but not without giving the same ease of connection to everybody else. Of course, passwords are the first line of defence, and, in the majority of cases, this is all you need.

For large networks, firewalls are a safe, if costly, security measure – but for personal ADSL this may not be an option. When you're at home with a 512Kbps link to the Internet, you may be tempted to do more than merely browse other people's pages. The continuous nature of ADSL means you may be able to run certain server applications on your home machine. Some of the simplest methods of serving content to the Internet are via Hotline, Carracho or FTP server. These servers can run on your machine and give outsiders access to a certain folder, or your whole hard drive. They can be password-protected, but can also be hacked by malicious or inquisitive parties.

If you want to use any of these server apps, you are also probably savvy enough to know the risks. After all, Hotline and Carracho servers are the staple diet for hackers. A less obvious option is running a Web server from your Mac. This is done by turning on the Web Sharing control panel. In itself, this is not dangerous – but if somebody wants to wrest control of your machine, there is a fair chance that, with the right knowledge, they can.

So, what to do? We may have greater freedom, but it brings us closer to the anarchy of the Internet. Already, firewall companies are launching personal firewall software to safeguard Internet connections. As more and more people hook up to the Internet, such security software will multiply rapidly. I'll certainly be on the lookout for shares in companies that offer this kind of product.
PC fury all the rage

When riding around a sleepy midwestern suburb in a car with Ken Babbs and Page Browning Ken Kesey suddenly looked pensive and said: “You know, the problem with super-heroes is what to do between phone booths.” And, as Dennis Hopper once said: “Just because it happened to you doesn’t mean it’s interesting.” But sometimes, what people – super-heroes or not – do between phone boxes just might be interesting after all.

After a low-profile contemplative 30 years on his farm in Oregon, Kesey resurrected the spirit of the bus, brought it to the UK and drove around looking for Merlin. Instead of sharing the joke, a lot of trendy critics went into a kind of ‘hip rage’ and were aggressively indignant that a load of old wrinklies could still think of themselves as spiritual and cultural revolutionaries.

Perhaps it’s just another case of Sixties-envy. Instead of love and revolution, the 1990s seems doomed to be remembered as a decade of stress and anxiety. The problem is, we can’t all be super-heroes all the time. And what we do between phone boxes could be more important to our overall sanity and well-being then what we get in a stress about when we think we’re saving the world.

Hot on the heels of road rage, media rage, trolley rage, air rage, and pavement rage, the latest recognized psychotic phenomena is now, apparently, PC rage. A recent Mori survey discovered a growing need for stressed-out users to lash out and retaliate against their IT equipment. At one time or another, most Mac and PC-users will have uttered the odd expletive at the lack of responsiveness or understanding shown by their ‘user-friendly’ equipment.

But apparently, there’s also a growing need for physical retribution – a swift kick or a smack upside the monitor being dispensed by over a quarter of young men polled. Psychologists believe that PC rage is caused by – wait for it – the ‘user-friendly nature’ of the latest technology. Users also get ugly because PCs remain unruffled by displays of anger, which in turn, can lead to a heightened physical response. The inability to fix technical problems quickly, or even to understand what the problem is, increases anxiety, anger, and stress. The survey also cited that one in six respondents vented their anger on colleagues at work, or on family members. Given the gorgeous design of the iMacs and G3s, it’s hard to imagine anyone wanting to bash them about. As a matter of fact, if you look on Apple’s Web site, there are piles of touchy-feely testimonials from users that literally stroke and caress their iMacs on a regular basis.

However, even the coolest computers can annoy us: we all know that feelings of a loss of control, together with pressures of work and deadlines, inevitably leads to high levels of stress and aggro.

So, what can we do to combat this latest in a long line of sad aggressive dysfunctionalities? Well, how about a little Sixties Zen. Apparently, in the States, a guy called Les Kaye – an ex-IBM engineer-turned-Buddhist-monk-turned-meditation trainer – is on-call to help alleviate the tech-induced stresses and strains, suffered by Silicon Valley high-fliers. Corporate giants, such as Apple, IBM, Hewlett-Packard, NEC, Netscape, and Nortel have all retained the monk’s services to provide cubicle meditation, so that employees can learn to multi-task in peace.

Each hour-long session consists of 30 minutes of reflection followed by an ‘encounter session’ (peace, man) where feelings are, like, shared. Kaye says that the service is skill-building and that it helps employees regain control. Essentially, according to the ‘monk’, the programme aims to reduce stress, and increase productivity, decision making, and problem-solving abilities, and other business-speak nonsense. I can see it now: joss sticks burning alongside multi-coloured iMacs; loads of flickering candles; and a Zen Mac-master sitting in full lotus position saying: “Ah, grasshopper. When you can take the mouse from my hand, it is time for you to leave.”

They say that, at the age of four, children laugh more than 400 times a day. But by the time we reach adulthood – with its attendant worries and strains of work and home-life – that figure drops sadly to around 15.

PC users are so highly pressurized that stress levels and alcoholism are now reckoned to run second only to levels found in the pressure-cooker world inhabited by junior doctors. And we haven’t even started talking about substance abuse. Accepting the pace of technological change and the demands that this imposes, I suppose organizations and individuals might well benefit from some sort of cranky, counteractive measures against aggressive stress and burn-out.

Then again, maybe we should all stop taking this crap so seriously, have a laugh... and go looking for Merlin. "
Inspired by Ernest Lawrence Thayer's *Casey At The Bat*

**Desktop critic**


**Steven saves the Mac**

Steve Jobs gave his recent Macworld Expo keynote iCEO speech exactly two years after his first in 1997, when he had just rejoined Apple as its newest leader. In those two years, he's turned Apple, then a condemned property, into a hot, thriving, profitable company -- a feat that all agreed was impossible. If you've ever read the classic American narrative poem *Casey at the Bat* (confused British readers advised to read the original at www.historybuff.com/library/refcaseypoem.html), you can't help but notice a few parallels . . .

There was ease in Steven's manner
As he stepped into his place;
There was pride in Steven's bearing
And a smile on Steven's face.
The kid who'd started Apple
With a vision in his teens
Was once again a superstar –
In turtleneck and jeans.

The media was scornful
As he formed the board anew;
The faithful screamed in protest
As he axed the Newton, too.
And now he's on the Expo stage,
And now the world awaits,
And now he tells the world he's made
A deal with William Gates!

But then there came the iMac:
Steven's baby, Bondi blue;
As sales and shipments rocketed
The stock quadrupled, too.
The profits Apple took in now
Were not to be believed –
No wonder; frills like free support
And floppies had been "Steved."

But Diesel blew it big time,
And was ousted by the board,
And Gil, with golden parachute,
Abruptly pulled the cord.
And when the dust had lifted,
And they saw what had occurred,
Now Steve was back at Apple's helm:
The triumph of the nerd!

Then one by one, the pundits
Started eating public crow;
The Apple-bashing know-it-alls,
It turns out, didn't know.
Soon buying Macs was cool again,
And cutting-edge, and smart –
As Microsoft got stuck in court
And Compaq fell apart.

Oh, somewhere in this favoured land,
The market share is low,
The red ink's flowing somewhere,
And somewhere sales are slow.
And somewhere critics slaver,
And somewhere moods are black;
But by God, there's joy at Apple –
Steven Jobs has saved the Mac!
InDesign 1.0

Adobe

www.adobe.com

Pros: Fully-featured; powerful; cheap, compared with PageMaker and QuarkXPress (introductory offer until December 31); EPA normal price

Star Rating: 10/10

Calm and composed

E ver since PageMaker was unofficially relegated to the software market a few years ago, no software developer has been able to find exactly the right combination of a six-figure marketing budget and the sophisticated software necessary to tackle the dominance of QuarkXPress.

XPress has reigned supreme in the graphic design/page-layout software arena for the past five years; a position not necessarily maintained through the merit of the XPress software itself – but due, in some part, to the absence of decent competition. But, now Adobe's InDesign (ID) is here, and the status quo in graphic-design software is about to change.

 Casting XPress in the role of defending champion, the Adobe development team has clearly worked with the aim of matching or exceeding its capabilities – as if you have a wish-list for XPress, you’ll probably find it in ID.

Want to hang items off the pasteboard edge? Edit EPS graphics in ID? Customize your keyboard shortcuts? Zoom to 4,000 per cent? Specify position values to 0.0000? Sheer and rotate a group of text and objects? Create a picture box ‘frame’ in ID to a text box or vice versa? In-built pre-flighting? It’s all here, courtesy of a plug-in architecture that’s central to the ID philosophy: the core program is tiny (just 2MB), and it’s the plug-ins that cover the clever bits.

However, there are one or two important features missing from the standard in-box set of plug-ins: no indexing or automatic table-of-contents generation, for instance. It’s not clear yet if these may be added at a later date, or if they’ll cost extra.

Family resemblance

At first glance, the ID interface looks a lot like that of sister programs, Illustrator and Photoshop. Any graphic designer familiar with those will be off to a flying start with ID. Tools and navigation aids – such as the Pen, Gradient, Direct Selection, Scissors, Zoom and Line – work in the same way in all three programs. In fact, the range and sophistication of ID’s drawing tools calls into question whether or not you really need a separate drawing program.

Integrating with the natives

The Navigation palette is the same as in Photoshop and Illustrator, and ID’s also a version of the Layers palette, allowing you to make layers visible or invisible. There’s a high level of compatibility between the formats output by Photoshop and Illustrator, and ID – such as the ability to import native Photoshop files, layers being flattened automatically when you print, and the ability to edit Illustrator EPS artwork in ID. Swatches can be saved for import into Photoshop and Illustrator (and vice versa) – definitely an advantage over XPress.

Swatches while we’re on the subject, you also import XPress 3.3 and 4.0 documents into ID, a feature that works slowly, but, on the whole, well.

InDesign’s typographic features are superb. There are four kerning options – manual, optical, metrics and range (otherwise known as tracking) – of which the optical kerning is perhaps the most innovative. This determines the ideal spacing for characters visually – a great feature for those cases where different fonts, or sizes, have been used in a selection. There’s also the Flush Space feature, which inserts a right justified character to signify the end of, say, a magazine story. And there’s support for 21 language dictionaries, straight out of the box – Quark demands that you buy a new copy of XPress for each language.

Stunning composition

Perhaps ID’s most exciting typographic feature is Adobe’s multi-line component. Most page-design software uses a single-line composer, that considers only the current line when deciding where to make hyphenation breaks. With the multi-line composer, you can tell ID to look up to six lines back to make its hyphenation decisions in context. You can also tell ID to highlight where it’s had to break your composition rules, which it does in a fetching shade of yellow – the deeper the shade, the more seriously the rules have been broken.

Adobe is anticipating that studio workflows will turn more towards PDF format in the near future, and the PDF export facilities provided in ID are excellent. Files can be exported directly to PDF format 1.3 – supported by Acrobat 4.0 – from ID without going via Acrobat Distiller. Similarly, PDF files can be imported directly for placing on an ID page.

One potential drawback to using ID in a professional workflow is that it doesn’t print to non-PostScript printers: it ships only with a driver for LaserJet 4 and 3 printers. The theory is, you’ll be able to print to your desktop ink-jet using Adobe PrinterShare, which ships later this year – for the time being, you could export as a PDF and print using other drivers.

There are lots of clever, time-saving features in ID, the inspiration for many having been pinched from XPress’ XTensions. Take the ability to set up a master page as a ‘parent’, for example: editing the master page also edits the ‘child’ master. Or the ability to nest frames within frames, for layered text and graphics effects. Plus, there’s the automatic layout-adjustment feature that revises the proportionate distribution of the items on the page when you change page size. And how about multiple views: you can have one window set to 40 per cent, and another set to 300 per cent, to see the effect of your changes on the entire page.

Another great feature is automatic document recovery, which rebuilds your document if you crash – even if you didn’t save. And, unlimited undo and redo. Or the Position Proxy feature, that allows you to specify if a transformation should work from the centre, or any of the corners of a frame. And there’s a Guide Manager feature that creates guides automatically. Even the Step and Repeat feature works on guides.

For a first release, ID 1.0 is more than usable than you’d expect: there are quite a few bugs, but, presumably, Adobe will fix these shortly – if ID isn’t to alienate all its eager early users.

A more significant criticism of ID, at this stage, is that to be the program is less obviously as production-orientated as XPress. For my money, this is a combination of ID’s sophistication and Adobe’s strategy of palettes rather than dialogue boxes: the result is that there are too many palettes cluttering up the screen, with their contents are too small for easy point-8-click selection.

XPress-fluent designers whose hands hardly ever leave the keyboard will be impatient at the loss of speed that using a mouse over a key-combination entails. But the Keyboard Shortcut Editor could solve a lot of these problems – as well as shipping with a set of QuarkXPress-standard shortcuts, you can use the Editor to customize your own shortcuts to call up, amend and dismiss palettes via the keyboard.

Macworld’s buying advice

In what looks like a bid from Adobe to get bums on seats, the online AdobeShop is selling a full version of ID for just £295. This is where the Adobe marketing muscle really makes its presence felt – the average street price of XPress is between £750 and £900, which wasn’t Quark. Many friends, ID is definitely worth the paltry purchase price and a few days of dabbling time, but don’t expect to plumb its considerable depths in a few days; be prepared to spend a long time getting up to speed.

Karen Charlessworth
The friendly ghost
behaviours – pre-defined for animation
ready-mades: objects, deformers, shaders,
The Browser window is the key to
Full model jacket
This should help maintain its image as
3D work. Version 5.5 smooths out a lot of
no hardware graphics-acceleration.
Pros:
Ray Dream Studio keeps the auxiliary
whenever more than one model is open,
we go any further, one point must be made:
Another external module is the
Four Seasons Terrain modeller. Terrains
are created by editing a grayscale map,
which is then converted to height
information on a mesh. It’s a useful addition
in conjunction with the exterior Scene
Wizard, and the built-in Environmental
Shaders and realistic Water shaders
Another bundled application is
Painter 3D. Although an SE version, it’s
very nearly complete, lacking only the
plug-in brushes and Painters – floating
masks – of the full version. However,
Painter 3D itself can be a little dense,
and needs plenty of power for the
best results. That said, Ray Dream Studio
contains a powerful toolset, allowing us
to change data with Painter 3D, importing all
the texture maps, masks and properties
natively, without the need to reapply them.
Kit’s Power Tools 3.0 is also bundled.
If you’re not up to Painter 3D, you
cannot afford yourself of Ray Dream Studio’s
excellent Shader tools. These allow you to
compose custom-surfaces by combining and
mixing shaders – ready-made mini-applets
containing parameters for the description
of surface features, such as bump, texture
and highlight. Ray Dream Studio employs
a very powerful Shader Tree concept,
that allows shaders to be combined in very
subtle ways. But beware – the Shader
Tree takes a bit of getting used to.
On the animation front, not much
has changed. Ray Dream Studio 5.5 still
employs the tried-and-tested
keyframe/timeline approach to animation,
that gives a good view of how a scene
is put together. Motion can be hand-rolled
by the user, using the Translate tools
and setting keyframes, or the built-in
Behaviours can be dragged and dropped
onto the name of the object in the timeline.
Although motion paths of objects are still
signalled visually by a grey path you can’t
just manipulate them directly.
Macworld’s buying advice
When you consider the price – £200
Ray Dream Studio is great value. The
interface is a bit off-putting, and its proprietary
preview rendering means that QuickDraw 3D,
or OpenGL, are unnecessary. It won’t have an effect.
But, Ray Dream Studio is an ideal introduction to 3D.
Tim Danaher

Two-million-pixel digital camera
Camedia C-2000 Zoom
Manufacturer: Olympus (800 072 0070)
Pros: good-looking images; high resolution.
Cons: viewfinder prone to parallax problems.
Price: £140
Start Rating: 4 stars

Last year, megapixel digital cameras were the rage. Now it’s time for
models that produce images with two million pixels, or more. The new
Camedia C-2000 Zoom – the first two megapixel camera from Olympus –
is a point-and-shoot model whose ingredients aren’t a bad thing.
It won’t have an effect. But, Ray Dream Studio is an ideal introduction to 3D.

Macworld’s buying advice
When you consider the price – £200
Ray Dream Studio is great value. The
interface is a bit off-putting, and its proprietary
preview rendering means that QuickDraw 3D,
or OpenGL, are unnecessary. It won’t have an effect.
But, Ray Dream Studio is an ideal introduction to 3D.
Tim Danaher

Macworld’s buying advice
When you consider the price – £200
Ray Dream Studio is great value. The
interface is a bit off-putting, and its proprietary
preview rendering means that QuickDraw 3D,
or OpenGL, are unnecessary. It won’t have an effect.
But, Ray Dream Studio is an ideal introduction to 3D.
Tim Danaher

Macworld’s buying advice
When you consider the price – £200
Ray Dream Studio is great value. The
interface is a bit off-putting, and its proprietary
preview rendering means that QuickDraw 3D,
or OpenGL, are unnecessary. It won’t have an effect.
But, Ray Dream Studio is an ideal introduction to 3D.
Tim Danaher

Macworld’s buying advice
When you consider the price – £200
Ray Dream Studio is great value. The
interface is a bit off-putting, and its proprietary
preview rendering means that QuickDraw 3D,
or OpenGL, are unnecessary. It won’t have an effect.
But, Ray Dream Studio is an ideal introduction to 3D.
Tim Danaher

Macworld’s buying advice
When you consider the price – £200
Ray Dream Studio is great value. The
interface is a bit off-putting, and its proprietary
preview rendering means that QuickDraw 3D,
or OpenGL, are unnecessary. It won’t have an effect.
But, Ray Dream Studio is an ideal introduction to 3D.
Tim Danaher
Batch processing has always been one of Media Cleaner Pro’s strengths, but its clunky interface remains.

The not-so-new batch
Batch processing has always been one of Media Cleaner Pro’s strengths, but its clunky interface remains.

Media Cleaner Pro 4.0

Publisher: Terran Interactive

www.terran.com

Price: One-stop shop for video and sound compression and processing; batch-processing ability.

Core: Long-served interface; still-image processing rudimentary compared with video capabilities.

Price: £329; £69 for upgrade from any previous version.

Star Rating: *** 3/4

If you downloaded any of the Phantom Menace trailers from the starwars.com site, you already know just what amazing quality Terran’s Media Cleaner Pro 4.0 can produce. Cleaner 4.0 is the only media-compression program offering such a high degree of configurability for compressing and re-processing video, audio and still-images in a wide range of formats. As such, it’s both unique and indispensable. What other program lets you specify a high-quality first and last frame, set audio and video fades, crop and scale, normalize sound, check it using a dynamic preview on hundreds of files – and leave it to run overnight?

Although previous versions of Cleaner have supported the creation of Windows-playable media on the Mac, version 4.0 is the first to actually run on both platforms. As such, it supports not only QuickTime and RealG2 but also Windows Media, Microsoft’s bid to become the third player in the streaming media-arena. Terran has also made some serious attempts to bring Cleaner’s audio processing in line with its impressive video capabilities. Although the program has been known as Media Cleaner Pro since version 3.0, version 4.0 is the first to justify the change of name from Movie Cleaner, as the first two versions were known. The re-sampling features have been extended, with the addition of filters, such as adaptive noise-removal, dynamic range-compression, noise gate, high-pass and low-pass. Meanwhile, down-sampling capabilities have also been boosted, to produce a better sound quality at lower sample depths and bit-rates.

Cleaner 4.0 now also includes capabilities for still-image processing, although these are not as extensive as the video features, or even the sound-processing capabilities. There’s a basic crop and scale, dithering, and support for JPEG, GIF, BMP, QTIF and PICT formats – none of which comes close to matching the capabilities of, say, I ciderVision’s DeBejebeler, which offers sophisticated batch-processing facilities.

One of the most significant new features in version 4.0 is the support for new streaming formats. QuickTime 4.0 is supported, including poster frames and enhanced alternate support – which uses a “meta-movie” mechanism to determine which video to stream according to the speed of the receiving modem. The list of included codecs is impressive – QuickTime 4.0, RealG2, AVI, DV, MPEG 1 and Windows Media (ASF). Cleaner 4.0 also supports an upgrade to MPEG-2. Terran has thrown in the Fraunhofer MP3 codec for free charge. Cleaner 4.0 can also convert, without losing quality, between certain formats – say, AVI to QuickTime or ASF – without needing to recompress the file. And there’s also support for Variable Bit-rate Encoding, supported in latest-release codecs such as the developer version of the Sorenson codec. Usefully, Cleaner 4.0 also supports direct-to-tape DV output via FireWire.

Cleaner users edit using Premiere, After Effects, Media 100 or Avid set-ups, and use Cleaner to do their final compression. In the light of this, Terran developers have been busy developing methods of allowing the output directly from the editing software to Cleaner, making the final rendering and compression process effectively a single-step job. Version 4.0 comes with an export plug-in for Premiere and direct export capabilities from Avid and Media 100 – as you’d expect, because Terran is now owned by Media 100. We’ve also promised an After Effects plug-in, in the near future.

Productivity is similarly enhanced by a new Help/Progs menu, which opens files in related applications for last-minute pre-compression editing. And if you’ve new to this compression lark, Cleaner also includes an excellent Settings Wizard that takes a series of basic attributes – streaming of an ‘action sequence’ to a 36.6Kbps modem, for instance – then shows you a similarly compressed example from its library for your approval. It then sets the appropriate parameters.

Cleaner’s batch-processing capabilities have always been one of its strengths, so it’s unfortunate that version 4.0 has done nothing to address the clunky interface that you encounter as you try to apply your settings to a batch of media, it involves a lot of unnecessary swapping between the settings list and the batch list. The Preferences in version 4.0 offer the ability to set the interface colourways, but a “make interface work better” button would be more use. This is a minor quibble though, especially when set against the power of being able to apply settings to as many as 2,000 separate files at a time.

Macworld’s buying advice

Media Cleaner Pro 4.0’s claim to be an all-round media-compression facility rests mainly on its superb video capabilities. There are other packages that handle sound and still-image processing better, although the batch-processing ability still recommends it for sound and still use. But if you edit or re-purpose video, there’s no better package. Karen Charlesworth
Spell-checking utility

Spell Catcher 8
Publisher: Casady & Greene
www.casadyg.com
Distributor: Softline (01372 726 333)
Price: Works with all applications; excellent proofreading facilities; supports multiple languages; good anti-crash feature
Cons: The resource could be larger, requires System 8.1 or later; problems with XPress 4.
Price: £1,095; Student Version £75.
Star Rating: ★★★★☆/5.3

Most modern word processors and DTP packages have built-in spellcheckers, so why consider an external one such as Spell Catcher 8? One reason, it is a UK English dictionary. Also, uniform spelling is guaranteed from one application to another, and you only have to maintain one extra dictionary. With support for multiple language dictionaries, additional legal and medical terms, and an HTML word list, Spell Catcher 8 offers everything a spellchecker could need. SCB is now a simple app that presents itself via a menu bar, and memory requirements are less than 2MB. There are two modes. The first, Interactive Checking, filters each word as you finish typing it. It can pick up standard types, capitalization errors, punctuation errors and double words. Take the time to avail yourself of SCB’s Learned Words facility, where you control the possible suffixes for each word added, and the process smooths out. This also allows you to enjoy the advantages of the Shorthand feature, where your common phrases are typed by their initials.

Aside from the basic modes, SCB can also handle full proofreading through a number of selectable modules. Change straight quotes into curly ones, capitalize sentences, convert double dashes into em or en versions, or strip double spaces all in one run-through. There is even an anti-crash Ghost Writer facility, where all text is saved as you type it. In terms of replacing text, SCB uses one of three methods. Using the clipboard, it pastes with formatting into word processors. Where formatting info is not included in the clipboard, it can automate an application’s find-and-replace facility. Unfortunately, both of these methods fail with QuarkXPress 4 where text has to be pasted back without formatting. The only fix is to check a document before formatting text.

Macworld’s buying advice
Spell Catcher 8 has almost every conceivable spellchecking facility and is highly customizable. With Downside? The problem with QuarkXPress 4 is awkward. Even so, it’s a decent utility for the price, and there’s a demo on this month’s CD. Vic Leonard

Maths for snobs

Mathematica 4.0
Publisher: Wolfram Research (01993 883 400)
www.wolfram.co.uk
Pros: Anticipates and solves a wealth of computing and publication problems; faster than version 3.0.
Cons: Thesaurus could be larger; requires memory requirements are less than 2MB.
Price: £1,095; Student Version £75.
Star Rating: ★★★★☆/5.3

Anyone who has used Mathematica 3.0 may find it hard to believe, but Wolfram Research actually found a few important improvements to make in version 4.0. With its beefed-up numeric operations and print and Web output, Mathematica 4.0 reaches beyond its roots as a symbolic-computation program – it’s now an all-purpose tool kit for any task relating to technical information. Mathematica’s number-crunching abilities – particularly with respect to large arrays of numbers – have improved steadily over the years, but in version 4.0, they’re revolutionized. A standard Power Mac G3, running the new version outperforms older SGI RISC workstations, when processing huge data arrays, and when running signal-processing applications. Specifically, the rewritten matrix operations store large and sparse arrays more efficiently; the code for the Fourier-transform routines has been optimized, and the program now reads HDF files at impressive speeds.

The MathWorks’ MATLAB, is no longer being developed for the Mac. But, in tests using a ten-item matrix-math test suite, Mathematica 4.0 – on a 266MHz Power Mac G3 – beat MATLAB 5.2 – on a 300MHz Pentium II system – by an average factor of 4.3. And, because Mathematica’s automatic translators can convert MATLAB M-files to Mathematica notebooks, developers of custom matrix-processing applications should be able to make the switch easily.

Symbolic advances
In the realm of advanced development aids, Wolfram has further refined Mathematica’s rules for simplifying symbolic expressions, and has added to the special-function list some math functions that previously defied useful computer definition. For science and maths development, Mathematica no longer has any direct competitors on the Mac – or, for that matter, on PCs and Unix systems.

Mathematica 3.0 simplified the task of producing journal-quality printed output. It introduced features for using standard textbook-style notation, rather than the computer-code output style used by most other maths programs – including earlier versions of Mathematica. In version 4.0, the word-processing features are so solid that you could easily make Mathematica your primary technical word processor. Not only are its editing features and style sheets more useful for technical work than those in Microsoft Word, but printing as TeX and the newer LATEX 2e files is also faultless. Equally impressive are Mathematica 4.0’s Web facilities. Notebooks, saved as HTML, generate files of HTML, source code and folders of GIFs for artwork; notebooks can also contain hyperlinks to other notebooks or to URLs. The program displays any kind of math notation beautifully on the Web, and version 4.0 can work with Web-audio and -graphics files.

Macworld’s buying advice
Besides being faster and more compact than version 3.0, Mathematica 4.0 has a great range of useful new features. It’s the best program I’ve seen in ten years of reviewing technical software.
SkyLine Wireless PC card

Manufacturer: Farallon

Distributor: Softline (0181 401 1234)

Price: £230

Star Rating: 8.3

The more popular it becomes, the more often you will find somebody to network with. SkyLine lets you get in on the action, and hook-up with the un-wired generation.

David Fanning

Wireless networking

Fast-framing plug-in

PhotoFrame 2.0

Publisher: Extensis

Distributor: Computers Unlimited (0181 358 5857)

Price: £129

Star Rating: 8.4

Incredibly easy to use; lots of free frames included on CD; access to more on new Website. You can apply effects to the edges of the frames using the Edge palette; you can add multiple edge-effects until you get a combination you're happy with. Any of these can be re-set at any time, so if you manage to create a particularly hideous effect, you can undo the offending move without jeopardizing the others.

Apply within

When you're satisfied with the frame, the Apply to New Layer button applies the frame to a new Photoshop layer. In version 2.0, you can save your settings for future use: these are stored in the Extensis menu in Photoshop, so you don't need to open the plug-in to apply them.

If the 1,000 sample frames supplied on the CD aren't enough for you, Extensis also offers PhotoFrame users access to a new companion Web site, eFrame, run by Dynamic Graphics. Simply click the eFrame button in the Frame palette to launch your browser and meander among thousands more frames. You can subscribe for $14.95 a month, or download individual frames for $9.95 ($4.95 to subscribers), on the American Web-site.

Macworld's buying advice.

When the iBook and new G4 Power Macs become available, the wireless option will make wireless networking more popular. The more popular it becomes, the more often you will find somebody to network with. SkyLine lets you get in on the action, and hook-up with the un-wired generation.

David Fanning

Karen Charlesworth

Karen Charlesworth
Logic Audio 4.0
Publisher: E-magic
www.emagic.de

Distributor: Sound Technology (01462 480 000)
Price: User interface has been improved, the technical advances will make this upgrade pretty much essential.

Cons: There is still room for the user interface design to be improved.
Price: Platinum, £468 (96 tracks, PlatinumVerb, choice of SilverVerb, GoldVerb or PlatinumVerb, plus sounds, MIDI tracks – finally bringing Logic into line with software like Digital Performer that has always had this capability.

Pros: One of the best new features is being able to record simultaneously onto multiple MIDI tracks – finally bringing Logic into line with software like Digital Performer that has always had this capability.

A choice of SilverVerb, GoldVerb or PlatinumVerb, and adds more useful new effects – all looking great on screen and, more importantly, sounding good as well. And, when you change the audio driver settings, this will now often work without rebooting Logic. Previously, this was always a pain.

Macworld’s buying advice

The biggest competition is from Cubase VST, but Logic Audio Platinum is the software of choice for TDM users, although there is increasing competition from Digital Performer and Studio Vision. When it comes to the Gold or Silver versions, some of the competition starts to look more attractive in terms of value for money.

Mike Collins

Yamaha YST-MS55D

Manufacturer: Yamaha
www.yamaha.com

Distributor: Ideal Hardware (0181 286 5000)
Price: £3.50 off when you upgrade from Logic Audio 3.5

Cons: I mention USB-speakers earlier; USB doesn’t work; cheap-skate cable omitted; Windows manual.
Price: £134

Star Rating: ******/8.0

Wall-of-sound speaker

Yamaha YST-MS55D

The USB-based Yamaha YST-MS55D multimedia-powered speakers, the set-up includes a breeze-block-sized subwoofer and two satellite speakers, building a wall of sound that will make your hair stand on end.

The audio quality is astounding. I tested this with both audio CDs and a platoon of shoot-em-ups, and both resulted in my deaf neighbour banging on the wall.

The speakers deploy Yamaha’s Active Servo Technology – market-speak for their ability to deliver rich, deep base that you can actually feel beating a tune in your stomach. And, when you slip the subwoofer off its lead, the bass really adds a fantastic dimension to games and audio tracks.

In fact, the entire dynamic range is impressive – there’s little distortion at full volume, which is very loud, and there’s crisp audio range on display. In use, you could feel every thud as bullets slammed into your space marine in games like Quake, while post-frag audio CDs sounded like they were belting out of a proper home-entertainment system.

I mentioned USB-speakers earlier; USB promises to deliver clearer sound, with less noise and distortion. Only it doesn’t – not on a Mac, because the Mac OS doesn’t support audio over USB. And it gets worse. Yamaha has included only the USB cable in the box, omitting the expensive 3.5mm stereo jack – about ten pence, last time I looked – so you can’t use them without a second trip to your local music Mecca.

There’s more to dislike; the entire instruction booklet is geared to Windows – the Mac doesn’t even get a swansong – and, the CD is loaded with Windows software. In fact, I even disliked the satellite speaker volume knob – it was way too tiny for accurate turns, and lacked grip features, meaning sweaty fingers tended to slip when adjusting the volume.

Macworld’s buying advice

The speakers start on a bum note when you open the box – lousy manual, zero software and no cable. Get past that though, and the real reason you got them in the first place – terrific sound – will quickly make you forgive. Just don’t be fooled by the USB overture.

Matthew Bath
I got this product to review because SCSI hates my guts, and always has. As production editor of Macworld, I rely on it for endless copying to and from 1GB Jaz disks. But it dogs my every step – crushing me in ways that beggar belief and, to date, necessitating three clean installs of my system software.

Fittingly, in the course of Jaz speed-testing the Microtech USB XpressSCSI adaptor against SCSI, my G3 Power Mac blew up. Ideally – given my track record – I failed to shut down before moving from the XpressSCSI adaptor to SCSI. It blew the internal SCSI link on my hard disk, costing myself and our Reviews Editor a day's work. I'm now on a different machine while waiting for a replacement part.

Plug-and-d'oh

This debacle – and similar SCSI fragilities – makes USB's hot-swappability a real plus. Whether you need it for an external hard drive, removable media or a scanner, the adaptor supports up to seven devices in plug-and-play fashion, recognizing them on-the-fly. The one-metre adaptor has a standard USB connector on one end, and a male SCSI DB25 connector at the other.

Microtech says that all driver updates will be free of charge and available on its Web site (www.microtechint.com).

The company also sells a 25-pin version of the XpressSCSI, which is aimed at owners of older SCSI peripherals.

With USB connectivity, speed is always the rub: this device delivers data at a meagre 1.2MB per second. After demolishing one machine, I did manage to run my speed tests on another – a 300MHz G3 Power Mac. Using SCSI, a 73.7MB file took 48 seconds to copy to an Iomega 1GB Jaz drive and 26 seconds to copy back.

The XpressSCSI adaptor, though, took 2.25 and 2.11 respectively. In the speed stakes, it's more all-aggro than allegro.

Macworld's buying advice

For iMac owners with a stack of SCSI peripherals, the XpressSCSI is your only option. With no SCSI card capability on any Mac, a USB-to-SCSI adaptor is all that can save your SCSI devices from the classified ads. If you're a Power Mac G3 owner – and speed is crucial to your work – you'd be better off buying a SCSI card. But for SCSI Jonahs like myself, the speed trade-off is less of an issue. The XpressSCSI may be a slowcoach, but at least it's a slowcoach that remains between the kerbs.

Sean Ashcroft

---

The Accel-a-Writer 3G

Manufacturer: Xanté

Distributor: Infotec (01202 511 448)

Price: £59 for iMac owners with SCSI peripherals.

Star Rating: 8.8

You may be forgiven for thinking that, as far as design goes, mono printing is on the way out. Colour lasers, inkjets and others are certainly the most talked about, but there are still instances where nothing else will do. Xanté has a new printer, the Accel-a-Writer 3G, that offers such high resolutions and large formats, it's ideal for film making.

It would be wrong to compare this printer with run-of-the-mill office laser printers. For a start, it prints on paper up to 330mm-x-911mm in size – that is larger than full-blood A3. This is because it can print directly to film, and needs to include all crop marks on the page. Resolution is true 2,400-x-2,400, which makes fine screen of up to 150 lines per inch. It is possible to print different line screens on a single page.

Quality and quantity

The speed of the printer is faster than you might expect at this resolution – due to the ten-page-per-minute print engine, plus the use of Adobe PostScript 3. Other printers that use emulated PostScript have had problems dealing with complex PostScript commands. This can slow the printing process dramatically. Other things are included to make sure printing is as quick as possible, like the 133MHz RISC processor and 256MB of RAM. The results are certainly impressive to the naked eye, but this printer – like other mono lasers – doesn’t have a naturally perfect greyscale. In fact, printing a page with different shades of grey – 10, 20, 30 per cent, and so on – is wildly inaccurate when put under a densitometer. This is normal with mono lasers, but the Accel-a-Writer needs more accuracy, because it is used for film printing. To fix this, there is densitometer support built in to the 3G, meaning you can set the greyscales to be far more accurate. It is features like this that make it such a popular model with printers.

Macworld's buying advice

The fact that the Accel-a-Writer is used for film doesn't mean that you can stop using a pre-press company altogether. The film it can print is in polyester – which is not suitable for huge print runs, but fine for up to around 10,000 copies. It is also not really suitable for full-colour printing, though duotones are fine. But, for short-run, single-colour printing, it is far quicker and easier than any other method around. This also makes it a great money saver for anybody who needs to do this kind of work on a regular basis.

David Fanning
**G3 colour-coordinated printer**

**G3 colour-coordinated monitor**

---

**ProNitron 17/250**

Manufacturer: Tektronix

Price: £3,995

Star Rating: ★★★★★

Pros: Super-fast; free mono prints; luscious colour.

Cons: It clashes with beige.

**Formac (0181 533 4040)**

Price: £165

Star Rating: ★★★★

Pros: Great flat screen; G3 colour-coordinated styling.

Cons: Not a great match for new G4 machines.

---

**Phaser 840 Designer Edition**

Manufacturer: Tektronix

Price: £315

Star Rating: ★★★★★

Pros: Fast; mono prints; accurate colour. The prints are glossy and sharp – even on grotty photocopier paper.

Cons: Some models have more basic calibration, using simpler visual comparisons.

---

If you are not familiar with Tektronix and its printers, then I should point out some differences between the Phaser 840 and other printers. While it looks and acts much like a normal colour laser printer, the technology in the Phaser 840 is quite different. Rather than using laser technology, it uses solid-ink technology – a form of ink-jet that uses wax-crayon-like blocks. You won’t have seen this technology anywhere else, because it’s owned by Tektronix. There are many advantages to using solid-ink over laser. First of all, because the ink is held in liquid form, it is faster to the first print than laser. A laser printer needs to heat the fuser before it can get started. Also, the single-pass paper path means that once it starts it can crank out as many as ten pages per minute. Only the Lexmark Optima Color 1200 can match that speed.

Quality of image is paramount to designers, and there is no skipping on this. The Designer Edition uses enhanced Adobe PostScript 3 and ColorSync, for accurate colour. The prints are glossy and sharp – even on grotty photocopy paper. Older solid-ink printers suffered when excessive ink was laid down. This could cause cracking and other problems when folding. The 840 uses less ink, so the image is more stable. Connectivity is plentiful – 10/100BaseT ethernet and USB are standard. This can often be a hidden cost with colour laser printers, that don’t include a network interface in the base price. And what about the design of the Designer Edition? Obviously the styling is inspired by the latest G3 Power Mac – with translucent blue and "ice" colouring. The designer tag says as much about the people who will use the machine as the people that designed it. At first glance, the blue looks as though it might not quite match the G3 Macs, but it is close enough. I’m sure that every fashion-conscious ad agency in the West End already has one on order. It’s essential office wear, along with matching Studio Displays and G3 Power Macs.

---

Macworld buying advice

Aside from the Designer Edition’s obvious fruit-fancy, it is also a very powerful machine. It is an obvious choice to replace old mono laser printers, because the black ink is free. Yes, if you want to use this printer for mono prints it will cost nothing. There is a maintenance tray that needs replacing every few thousand prints, otherwise you only pay for the coloured ink.
Classic games at a classic price

The Big 6ix: Volume One
Distributor: Softline (0181 401 1234)
Pros: Great value for money; hours of game play.
Cons: The games are all shoot-'em-ups.
Price: £34
Star Rating: *****/7.9

The Big 6ix: Volume Two
Distributor: Softline (0181 401 1234)
Pros: Again, great value for money; good variety of games.
Cons: A few dull games.
Price: £34
Star Rating: *****/8.0

The Big 6ix volumes One and Two are bundles of classic Mac games. Volume One contains: Duke Nukem 3D; Duke it out in DC; Shadow Warrior; Prime Target; Damage Incorporated; and Postal. Volume Two comprises: Civilization II; Real Pool; Star Control 3; Dark Colony; Master of Orion II; and Top Gun. At only £34 each, they are great value – even if both are mixed goody bags.

Volume One concentrates on adventure shoot-'em-ups. Duke Nukem 3D is the stand-out game from this bunch, with its great visual and sound effects – such as animated signs and roaring beasts. And its weapons are suitably devastating, delivering a high body count and blood-splattered streets.

There are nice touches to this game. You can use mirrors to see if any bad guys are laying-in-wait and, more importantly, Duke can use them to preen himself.

Hard Target
The Die Hardconque Prime Target is another good game. A US senator has been killed and it's up to you to find the assassins. The weapons in this game aren't as powerful as in Duke Nukem, but there are plenty of bad guys to kill, and lots of blood to spill. For an old game, the graphics are smooth, and you can interact with the scenery – but only to a limited extent.

Psycho warrior
Our favourite, though, is Shadow Warrior. Again, it's a first-person shoot-'em up, but this time you're a master of martial arts – armed with everything from from Uzis to rocket launchers. Call us a blood-thirsty savages if you will, but the most satisfying kills are with the humble sword – your hands and the blade get covered in blood.

Volume Two is a far more relaxed, but more challenging, affair.

Civilization II is a gaming classic. Its complexity will please even the most seasoned strategy gamer, as will its ability to allow you to build up an empire over millennia. You begin the game with nothing more than a plot of fertile land, from which can spring cities and all-conquering armies that may have the Romans, Sioux Indians and Egyptians on the back foot.

The game can be slow-paced, but even this works to its advantage, as you need plenty of time to contemplate your next move.

If you prefer your gaming fix in undemanding bite-size chunks, Real Pool may be for you. It has six game options, five of which range from tedious to plain daft. In "straight" you have to pot 150 consecutive balls to win; tedious, while "Bumper" is an unholy mix of pinball and bar billiards – plain daft. Good old eight-ball, though, is all you'll need.

True to its pre-PC roots, skill levels range from woeful (a curvy blonde dolly bird) to brilliant (a big, fat bearded bloke). Apart from some dodgy graphics that let you cue right through balls, the touch and feel of the game is commendably real. You can also choose two-player or network options.

The best thing about Real Pool, though, is there's no danger of being threatened by a cue-toting, lager-swilling psychopath.

Top Gun, the old man's Falcon 4.0, is truly dated – not so much the game play but the music and the tone. This Cold War flight-sim comes complete with an eighties soundtrack from the film – so, unless you're still wearing pink shirts and playing Bonnie Tyler albums, you might want to scratch the sounds. The controls take a bit of getting used to and, like the film, being a myopic American would probably make it more enjoyable. It's still worth a few hours of your time though.

Macworld's buying advice
The savage in us liked version one, but the more varied game play in version two just gave it the edge. With Star Control 3, Master of Orion and Dark Colony also included in the bundle, Volume Two is a bargain – the individual games cost £15 each – and, there's enough game-play here to keep you going for ages.

Woody Phillips and Sean Ashcroft
MacTicker has all the stock market information you could need – whether you're an enthusiastic amateur or a financial giant. Not only does it give an update of the latest stock prices, but it can also show reports, the latest indexes, and prices for mutual funds. However, before I get down to business, I have to mention the little features MacTicker possesses – the features that make the difference between a blue chip and a bag of chips. MacTicker is fully customizable, allowing you to change the speed at which the ticker scrolls across the screen, the font it uses and the colours displayed. You can also specify the size of the ticker, the rate that it updates prices at – anything from one minute to one hour for stocks and indexes – and the size and detail of the reports it shows you.

The information it shows can also be changed. If you want your prices in nickels, fine. If you want them in fractions, no problem. The ticker can also display the stock-market code for a company – KOTI, for Motorola for example – or give the company's name in full. A full list of the codes would be a useful addition.

I decided to see how Apple was doing. Reassuringly, it was close to its 52-week high of $62. Even more reassuringly, this was up from a 52-week low of $28.50. If only I had invested a year ago.

Then I checked out Microsoft, hoping against hope that the evil empire would be in free-fall. It wasn't.

Once you have checked out the companies you want, MacTicker will help you trade. Simply go to a drop-down menu at the bottom of each report, click on Trade, and you go straight to your favourite trading site. MacTicker will fill in the name and code for the stock you want to trade – all you have to do is choose the right time.

Macworld's buying advice
MacTicker is perfect for the hobbyist trader; you can keep an eye on the stock market all day, without being too distracted from your work. If you dabble in the markets, or need to keep a constant track for work, MacTicker is for you.

Woody Phillips

Publisher: Aladdin Systems
Price: $70 download

MacDrive 98 is identical to version 2.0. It adds HFS+ support to MacDrive 98 3.0, which handles floppy, Iomega Zip and Jaz cartridges, CDs, external hard-disks, or any other disks available in a PC. The program handles Macintosh disks on a Windows 95, 98, or NT 4.0 PC. The program handles floppy, Iomega Zip and Jaz cartridges, CDs, external hard-disks, or any other disks available in a PC version. You can read-&-write data to the disks as if they're Windows media. With HFS+ support, the program can now handle media in the new disk-format, as well as the older HFS format.

Forget it
The program remains an install-and-forget utility. Without using any special commands, you can access Mac disks from the Windows deskto – in Windows Explorer, and from Open-&-Save dialogue boxes in Windows applications. The only time you'll remember you're working with Mac media, is when you see the apple that MacDrive 98 adds to disk icons.

However, when you right-click, with the mouse, on the disk icon to bring up Windows' contextual menu, the utility adds Macintosh-specific media options – such as the ability to format a disk for the Mac.

Although it's similar to MacOpener, MacDrive 98 offers a few extra utilities that its rival does not. For example, it can identify the creator and file types of Mac files – handy when you're trying to update extension maps in Mac-disk-mounting software, in cross-platform networking software, or in Mac OS File Exchange.

Another handy utility lets you copy Mac disks from your PC's drives. On Media4's Web site, you'll find several other utilities that re-map special symbols between Mac and PC files, so they'll appear correctly when you open a document.

MacDrive 98 doesn't work with Windows 3.1, but neither does MacOpener – which previously supported the older Windows version. DataViz dropped Windows 3.1 support in MacOpener 4.1, a recent update. MacOpener 4.1 is also included with DataViz's £85 Conversions Plus 4.6 cross-platform file-translation utility.

Macworld's buying advice
We prefer MacDrive to MacOpener. It has a few niceties that MacOpener does not, allowing you to map file-name extensions more easily, and providing the handy iconic reminder when you're working with Mac media. Most people probably won't use these extra features, but it's nice to have them if you need them.

Galen Gruman
looked gloomy. It was around then that HP Steve Jobs came back, the future of Apple parting of the ways can be traced back to hardly mentioned in relation to Macs. This top ink-jet printer manufacturers, yet it is best printers – long before Epson got in drops – as many as 29 per dot – make it Technology, it controls the amount of drops of ink used in each dot. The smaller ink drops – as many as 29 per dot – make it possible to achieve 3,500 colour shades per dot. This means that there is never any halftoning or banding from this printer. The dots are practically invisible. Another effect of the multiple drops is that it takes the pressure off the processor, because less data is needed for a high-resolution appearance. This makes the whole process faster. On top-quality printing, it is a tie between Epson and Hewlett-Packard. Epson recommends that you use special paper for best-quality prints. HP agrees, but also claims to be good at printing on plain paper. In the tests the Deskjet certainly proved to be good at getting regular photocopier paper to display high-quality images. Epson also deals with plain paper well, but it does cut the resolution to do it. This means that the quality doesn’t quite match the DeskJet on rough settings. Speed is something that all ink-jet printers appear to disappoint on. This is because they tend not to have RAM like most laser printers. Laser printers can usually hold the printing images in memory, letting you carry on working while it prints. Ink-jet usually need to get a constant stream of information to print, which means that the faster your machine, the faster the printing. At 2,400dpi, the HP is clearly slow – that is why it is not a recommended option. However, the recommended option prints at 4800dpi, and that makes printing much faster. In fact, HP boasts that the 970Cxi is the fastest ink-jet printer around – claiming 10 colour pages per minute in draught mode. It certainly seemed fast, but, unfortunately, we didn't have Epson's fastest model – the Stylus Color 900 – available for a direct comparison. When we do a group test on ink-jets in our December model – the Stylus Color 900 – available £279

Star Rating: 4.5

Price: £279

Cons: 
- No colour choice for casing. 
- DeskJet does not automatically clean nozzles. 

Pros: 
- Top speed, top quality prints. 
- Professional Series DeskJet 970Cxi

Macworld's buying advice 
Epson has ruled the roost in the Mac ink-jet market for a few years now. It is refreshing to have a new player to liven things up again. The new DeskJet is in a different league to previous HP ink-jets – in fact, it's a quantum leap. It has all the features of the best Epson printers, as well as some great innovative features – such as duplex and colour layering. I expect Epson will counter this attack on its supremacy soon, but for now HP looks to be on top. David Fanning

Macworld reviews

Macworld Win

... one of one DeskJet 970Cxi with Macworld Liverpool, Ring 0950 1010241 before October 31. Calls cost 60 pence per minute.
CallunaCard
Manufacturer: Calluna Technology
Price: Compact and quick.
Come: Hot and pricey.
Pros: Lots of potential.
Cons: Doesn't support Premiere; Peak allows only one 96KHz sampling rate; Peak doesn't do TDM. Spark uses the new 96KHz sampling rate; Peak doesn't. When recording, Spark can have two VST plug-ins in the chain; Peak allows only one. Spark lets you transfer audio files to and from popular samplers, a major application for this type of software. Also, you can export a playlist from Spark as an image file that you can open into Adapter's Toast or Jam. Toast Pro is bundled with Spark, but you have to shell out quite a bit extra to get Jam. Jam is the professional CD pre-mastering software required for making commercial CD pre-masters.

Installation is simplicity itself. Just slip the drive into the PC slot on your PowerBook and it mounts on your desktop. It acts like an additional hard drive, indistinguishable from the real thing.

You can copy files to it quickly, so quick backups are a snap.

Another possible use could be to transfer files from one PowerBook to another.

Macworld's buying advice
The CallunaCard is certainly a simple way of safeguarding your data while on the road. Both drives are light and small – ideal for a hotel safe, or under your mattress. The incidences of RAM theft appear to be on the decline, but PowerBook theft is rife. Losing your PowerBook is one thing, but losing your data too would be disaster for many – especially when away from the office. The CallunaCard could avert such a disaster happening to you.

Mike Collins

TC|Works Spark 1.0
Manufacturer: TC|Works
Distributor: Ahead Pro Audio
Price: £255
Star Rating: ***

Spark is a professional sound file editor that will provide some competition for BIAS Peak editor (see Reviews, July 1999). There are a few main differences between Spark and Peak. Peak doesn't do TDM plug-ins, Spark doesn't do TDM. Spark uses the new 96KHz sampling rate; Peak doesn't.

When recording, Spark can have two VST plug-ins in the chain; Peak allows only one. Spark lets you transfer audio files to and from popular samplers, a major application for this type of software. Also, you can export a playlist from Spark as an image file that you can open into Adapter's Toast or Jam. Toast Pro is bundled with Spark, but you have to shell out quite a bit extra to get Jam. Jam is the professional CD pre-mastering software required for making commercial CD pre-masters.

Installation is simplicity itself. Just slip the drive into the PC slot on your PowerBook and it mounts on your desktop. It acts like an additional hard drive, indistinguishable from the real thing.

You can copy files to it quickly, so quick backups are a snap.

Another possible use could be to transfer files from one PowerBook to another.

Macworld's buying advice
The CallunaCard is certainly a simple way of safeguarding your data while on the road. Both drives are light and small – ideal for a hotel safe, or under your mattress. The incidences of RAM theft appear to be on the decline, but PowerBook theft is rife. Losing your PowerBook is one thing, but losing your data too would be disaster for many – especially when away from the office. The CallunaCard could avert such a disaster happening to you.

Mike Collins
Dance with i

Distributor: Mygate (0800 018 1424)
Price: The colours match your iMac.
Con: Stupid name, stupid price, stupid instructions.
Price: £39
Star Rating: ★★½/3.1

With the sort of unlikely name that only a Japanese marketing executive could think up, Dance with i – disappointingly – is a plain swivel stand for the iMac. The blurb on the box muddies the linguistic waters even further with the following printed instruction:

"Stand up Please! Fellow iMac! Dance with i".

This is crazy name, crazy guys. The brochure has, possibly, the best quote ever: “Receiving fantastic reputations, iMac standard stand ‘Dance with i’ can be handled easily – even by a lady!”

Fitting it involves flipping your iMac over – hoping that all your icons don’t fall out of the top – yanking off the tilt stand, and lining up the unit’s rubber feet with the stand. It’s kept in place by two screws, that were tricky to align.

Macworld’s buying advice

Whether it’s a wise purchase depends on how often, if ever, you miss the ability to be able to tilt your screen to a different angle. It’s colour co-ordinated and looks rather fetching. Ergonomically, its greatest benefit is that it raises the screen to a higher and more comfortable position – though that might be a quirk of my upper torso. At any rate, it costs nigh on £40, which, as your grandparents would tell you, is a lot of money to pay for a bit of coloured plastic.

Please remember though – never ever attempt to dance with electrical equipment, especially when fresh out of the bath.

Chris Hayes

Something for the ladies

Dance with i is so easy “even a lady can use it.”

Silicon-enhanced mouse-mat

UniTray

Manufacturer: Contour Designs
Distributor: Mygate (0800 018 1424)
Price: Super squishy wrist pad; nifty colours.
Cons: There’s no banana iMac.
Price: £17
Star Rating: ★★★½/8.6

It isn’t every day that I review a mouse mat. But then it isn’t every day you find a mouse-mat like the Contour UniTray. It is, without a doubt, the most comfortable mouse-mat I have ever had the pleasure to use. The secret ingredient is the gel pad that gently supports your wrist. It has the feel of a surgically enhanced breast, or at least how I imagine this might feel. Perhaps with the likes of Pamela Anderson swapping old implants for smaller ones, there may be a market for recycled silicone.

Macworld’s buying advice

Joking aside, the mat is higher than normal, which stops rogue printouts slipping under your mouse. The gel pad is adjustable in height, so you can make it just right for you. Last, but not least, it’s available in all iMac colours: Lime, Tangerine, Strawberry, Grape, Blueberry, and, err… Banana.

David Fanning

Decent non-beige speakers

Apolla Speakers

Manufacturer: Pele
Distributor: Mygate (0800 018 1424)
Price: They’re blue and cheap.
Con: They lack beef.
Price: £49
Star Rating: ★★½/6.6

If your iMac also doubles as your CD player, you probably need better speakers than the standard built-in ones. Of course, you don’t want to spoil the luscious curves of your iMac by standing a couple of ugly grey boxes next to it. Perhaps the answer is the Apolla speakers from Pele. They certainly look the part. We looked at is Blueberry speakers, but there are plenty more colours available. The Pele Website at www.pelezone.com shows six colours, one for each iMac flavour, plus Bondi blue.

Looks aren’t everything when speakers are involved. More important than colour co-ordination is sound. The speakers sound pretty good, not exactly hi-fi separates, but they are decent quality. The thing to remember is the price – you can buy much better speakers, but for not less than £100, and more likely £200. There is a bass knob, for when you want to get the full recoil from your bazooka while playing Marathon or Quake. It is quite effective for such small speakers, though can’t compete with the rumble of a proper powered sub-woofer.

Macworld’s buying advice

For iMac owners, the Apolla speakers are far superior to the built-in ones. Colour co-ordination helps, and they are inexpensive. For the money, you won’t find much better speakers for your Mac – but perhaps consider spending more money on a system with a sub-woofer (such as YST-M555D on page 57).

David Fanning
When Apple’s iMac was introduced last year, it represented a revolution not only in industrial design, but it set new technical standards for communication ports. No more SCSI, no more serial ports, not even a floppy drive. The non-Mac press latched on to the lack of floppy drive immediately, but the arrival of the Universal Serial Bus (USB) standard was not so immediately obvious.

In fact, the Windows market had been trying to launch USB unsuccessfully for months (it was invented by Intel), but it was the iMac that really started the barrel rolling. Steve Jobs had successfully changed the way peripherals connect in one clean sweep. This instantly put new the Mac on the cutting edge of communications technology.

Printers

USB represents a major upgrade in the speed that your Mac communicates with printers. Previously, the old serial connection caused a bottleneck that held back ink-jet printer speeds. Most manufacturers now have printers that support USB, and have really focused attention on the growing Mac market by producing colour-co-ordinated translucent models. For the moment, the majority are some flavour of blue, but other colours are appearing. Expect to wait a while for G4 Graphite colours, though.

Epson Stylus Color 740i
Epson was the first to market with an iMac-inspired printer. Aside from the coloured plastics, the 740i is identical to the beige 740 — both boasting 1,440dpi resolution and excellent colour output.

Though not as great as the Epson Photo Color series of printers at photographic images, the 740i does an excellent job of printing colour images on plain paper. Adding special coated or glossy paper improves the quality still more. The 740i also has serial and parallel ports for maximum compatibility.

Price: £135 at Epson (0171 222 222)

Hewlett-Packard DeskJet 895Cxi
Hewlett-Packard has had a poor record of Macintosh support in recent years. But it has started an about-turn with its current range of USB-equipped printers.

The DeskJet 895Cxi offers outstanding colour on inexpensive plain paper, and manages a speedy 11-pages-per-minute in monochrome in economy mode. Currently, blue is the only colour available in Europe. Until Hewlett-Packard starts making translucent plastics that match up to strict Euro laws, it’s either blueberry or grey on this side of the Atlantic.

Price: £199 at Hewlett-Packard (0990 474 747)

Tektronix Phaser 840 Designer Edition
Tektronix is the only company to offer a high-end colour printer that is obviously aimed at Mac-based studios. The Designer Edition comes in a translucent blue & white case, and sports both 100BaseT ethernet and USB connections.

The Designer Edition is much the same as the regular Phaser 840, which was already terrific, but there’s extra memory and other features too. You can see a lot of the workings of the printer through the fun plastics. For a full evaluation of the Designer Edition 840, see Reviews, page 67.

Price: £3,995

Epson Stylus Color 740i
Epson was the first to market with an iMac-inspired printer. Aside from the coloured plastics, the 740i is identical to the beige 740 — both boasting 1,440dpi resolution and excellent colour output.

Though not as great as the Epson Photo Color series of printers at photographic images, the 740i does an excellent job of printing colour images on plain paper. Adding special coated or glossy paper improves the quality still more. The 740i also has serial and parallel ports for maximum compatibility.

Price: £135 at Epson (0171 222 222)

Hewlett-Packard DeskJet 895Cxi
Hewlett-Packard has had a poor record of Macintosh support in recent years. But it has started an about-turn with its current range of USB-equipped printers.

The DeskJet 895Cxi offers outstanding colour on inexpensive plain paper, and manages a speedy 11-pages-per-minute in monochrome in economy mode. Currently, blue is the only colour available in Europe. Until Hewlett-Packard starts making translucent plastics that match up to strict Euro laws, it’s either blueberry or grey on this side of the Atlantic.

Price: £199 at Hewlett-Packard (0990 474 747)

Tektronix Phaser 840 Designer Edition
Tektronix is the only company to offer a high-end colour printer that is obviously aimed at Mac-based studios. The Designer Edition comes in a translucent blue & white case, and sports both 100BaseT ethernet and USB connections.

The Designer Edition is much the same as the regular Phaser 840, which was already terrific, but there’s extra memory and other features too. You can see a lot of the workings of the printer through the fun plastics. For a full evaluation of the Designer Edition 840, see Reviews, page 67.

Price: £3,995

Others

The USB revolution means that there are lots of Windows printers sporting USB. There have the potential to be Mac-compatible, but demand the right software drivers. This broadens the choice of printers available to the Mac community, but doesn’t necessarily add any value to it. The best ink-jet printers are already Mac-compatible. You get no better quality by using an adapter to use a Windows ink-jet printer. One area where you may want to go to the bother of using a Windows printer is monochrome laser printers. There are few cheap laser printers on the Mac market — perhaps manufacturers imagine we just must colour. In the PC market, however, cheap lasers are all over the place. If you need only mono prints, you can use software and hardware such as PowerPrint from Infowave to take advantage of PC laser bargains. Remember that some fast ink-jets now give cheap lasers a run for their money as well as printing in colour, so compare them both to avoid false economies.

continues page 79
The Mac's move to USB was soon backed up by the introduction of the Power Mac G3 range this January. Now, the professional market was switched on to USB and also Apple's even faster FireWire (IEEE 1394) connection standard. Even SCSI was only an option. These changes in the Mac market didn't go unnoticed by peripheral manufacturers. These companies had been waiting for the USB revolution to start. And when Apple adopted USB across the board, things started happening — usually in some shade of translucent blue. When the iMac was released, Imation was first out with the SuperDrive, in its own blue-white colour scheme. Unfortunately, when technologies are forced to the cutting edge, some things get cut. Professional users' first problems arose from a need for high-end scanners and removable media. High-end scanners still haven't moved beyond SCSI, but there are some options for removable media right now. One of the most popular formats — the Mega Jaz — is yet to be made available in a USB version, but Omega promises an adaptor soon. If you can't wait that long, there is a USB-to-SCSI adaptor available. This may help a lot of SCSI-starved Power Macs — though if you have more than one SCSI device, a PCI SCSI card is a far-better solution.

Another challenge is to add USB to your old Mac so you can buy up-to-date peripherals. SCSI is not an ideal candidate for conversion to USB. USB slows a SCSI connection to a crawl, but if you need to get it across the technology barrier: SCSI, ADB or Serial can all be brought across to USB with the right tools. Another challenge is to add USB to your old Mac — so you can buy up-to-date peripherals. SCSI is not an ideal candidate for conversion to USB. USB slows a SCSI connection to a crawl, but if you need to do it then it is at least possible.

Adaptors

For those unfortunate who are stranded on the cutting edge, here are some solutions to common problems. Making a change from old to new generally means that you are left with some equipment that didn't make the grade. Depending on how fond of that stuff you are, there is usually a way to get it across the technology barrier: SCSI, USB or serial.

**Keyspan PCI-USB**

If you are reading this article with a view to getting a USB-equipped Mac in the future, you may not have to wait as long as you thought. Simply install this PCI card into your Mac, and, hey presto, you'll have USB. If your old Mac doesn't even have PCI — it is really time to buy a whole new one.

This card means that you can take advantage of USB today. And when you do move to a USB-native machine, your peripherals come too. Remember that some peripherals simply do not have a serial equivalent. For example, just about every decent joystick is available only in USB or PC connections.

**Price:** £79 at AM Micro (01352 425 477)

---

**Microtech USB-SCSI**

Once you've made the move to the latest Mac, the first thing you are likely to miss is SCSI. It would be nice if we could all simply move directly to FireWire for external communications. However, in real life you are likely to need a Jaz drive or something similar. FireWire Jaz drives, scanners and hard drives are still rarities. The Microtech USB-SCSI adaptor may not be as fast as SCSI — in fact, it is considerably slower — but you need never again worry about SCSI ID clashes. Without USB adaptors, SCSI drives must have unique ID numbers and can never be plugged in with the power still on.

**Price:** £99 at New Century Computers (0181 192 6599)

---

**Inflowave PowerPrint USB-Serial**

At first glance, the PowerPrint USB-Serial Adaptor looks like an oddity because it connects PC printers to Macs. Why should you want to do that? Well, just about every office and hotel has a printer of some sort — and it's usually a PC printer. PowerPrint gives you access to all this outsider output. Some canny PC printer manufacturers even include PowerPrint with their printers. Allowing Macs in gives these companies a whole extra market to sell printers to. PowerPrint supports almost all laser printers that use the PCL printer language. It also supports printer specific features such as duplexing and resolution enhancement.

**Price:** £79 at Computer 2000 (01204 453 344)

---

Others

Where possible it is probably better, and simpler, to avoid adaptors altogether. Unfortunately, they are a necessary evil in some circumstances. The USB to SCiS adaptor is good for a single device, but for faster access you should use a SCSI card from Adaptec or Atto (see MacUser, August 1999). That way, you may still be hindered with SCSI and all its headaches — but performance will be fantastic in comparison. USB replaced two previous interfaces: ADB, with which you plugged in your mice and keyboards, and the 9-pin serial connection. There are a few USB to 9-pin serial adaptors around, but these are for use with peripherals such as modems and printers, not networking — presumably a task for serial. The advantages of using USB are most apparent when carrying data, as it is much faster than serial. For those unfortunates who are stranded on the cutting edge, here are some solutions to common problems. Making a change from old to new generally means that you are left with some equipment that didn't make the grade. Depending on how fond of that stuff you are, there is usually a way to get it across the technology barrier: SCSI, ADB or Serial can all be brought across to USB with the right tools. Another challenge is to add USB to your old Mac — so you can buy up-to-date peripherals. SCSI is not an ideal candidate for conversion to USB. USB slows a SCSI connection to a crawl, but if you need to do it then it is at least possible.
Scanners

Agfa SnapScan 1212U
The Agfa SnapScan 1212U was already a great scanner before the translucent dark-blue version became available. Boasting a healthy resolution of 600-x-1,200dpi, the SnapScan is good enough for any consumer-level scanning.

For the professional user armed with a USB-equipped Power Mac, the SnapScan can provide quick and sharp positional scans. This is all helped by the impressive software bundle, which includes FotoLook, FotoSnap and OmniPage Lite OCR.

Price: £129

at Agfa on 0181 231 4903

Umax Astra 1220U
The Umax Astra 1220U has none of the coordinated translucent styling of the other scanners here, but it does have a secret weapon. It is cheap. At just £84, the Astra 1220 is just about the cheapest scanner available for Mac. The price isn't reflected in the quality of the scanner. It scans as well as any other, and also comes with an excellent software bundle that includes Adobe PhotoDeluxe 2 and OmniPage OCR. If you need a scanner and money is tight, then the Astra is an excellent choice.

Price: £84

at IMC (01344 871 329)

Interex Scrolling Mouse
Many of the USB mice around at the moment are basically two- or three-button PC mice. This is fine except that a Mac mouse usually only has a single button and sometimes only one button is used. The Scrolling Mouse has all the drivers necessary to get the most from the extra buttons, plus a wheel that lets you scroll pages without clicking on any arrows.

Price: £22

at Interex (01923 263 108)

Mac Ally iKey
The latest Power Macs look terrific, but many people complain about the kindergarten keyboard that accompanies them. Grown-up hands tend to prefer slightly larger keyboards. Old ADB keyboards will work with G3 Power Macs, but fashion frowns on grey keyboards these days. And the new G4 Power Macs shun ADB altogether. The iKey is a full-size USB keyboard in modern Mac translucent blue & white. It includes all the function keys, number pad and direction keys nicely spaced for adult hands.

Price: £49

at Mac Accessory Centre (0191 296 1500)

Wacom Intuos USB
If mousing around isn’t arty enough for you, the Intuos graphics tablet is the answer. Traditional artists will particularly like the pressure-sensitive stylus for natural-media painting applications. Sweeping brush strokes and airbrush pressures are achieved by 1,024 sensitive levels. There are additional tools available, so whether you prefer to use an airbrush, puck or stylus, there is something here to fit the bill. The tools are wireless, while the tablet is plugged in via a trusty USB.

Price: £249

at Computers Unlimited (0181 358 5857)

Extra extra
USB is an ideal connection for scanners as their data throughput isn’t quite as fast as hard drives, so they are not hindered by slower transfer rates. This would still be the case for more professional models, but manufacturers are beginning to stick with SCSI for now — and perhaps even faster FireWire in the future. For now, all the USB scanners available are aimed at the entry-level or consumer market; however, the specifications of even the cheapest machines are remarkable. Just about all the scanners around today offer 600-x-1,200dpi resolution — which is perfectly acceptable for most non-professional jobs. One thing to keep an eye out for is the software bundle included with scanners. Make sure you have at least some kind of image editor and OCR package. Be careful to check this when you are buying the scanner, as these bundles may vary or be limited. Special offers. See MacUser, June 1999, for our feature on consumer scanners.
**Hubs**

**Entrega Seven-Port USB hub**
Entrega has a whole range of iMac colour-co-ordinated hubs and other adaptors. The seven-port USB hub will allow you to keep all your peripherals connected together. If you fill all the seven ports, you can easily stack another on top.

The hubs are coloured with the now ubiquitous translucent plastics. You can buy different pieces, so whichever iMac you own you will always have matching USB livery.

*Price:* £79 at Ingram Micro (01908 260 160)

---

**VIS 4 Port Hub**
This tiny hub offers four ports and is available in all the iMac colours. Don’t let its diminutive stature alarm you, it is quite capable of powering four USB devices because of its external power supply. Always choose a powered hub because the further down the USB chain a device is, the less juice it gets. This isn’t a problem for things with built-in power supplies, but it can be for devices that use the power from USB.

*Price:* £39 at VIS (01344 360 220)

---

**New Motion iDock**
Here is an example of killing three birds with one stone. The iDock is a swivel stand for your iMac, raising it a few inches with a side-to-side swivel. It is also home to a small USB hub, with three ports. On top of this, there is a USB-to-PC-serial converter built in. It may not be the most aesthetic iMac peripheral, but, if you need even two of its three functions, it is a good one. If you need all three, then it’s the bargain of the century.

*Price:* £129 at IMC (01344 871 329)

---

**Communications**

**Hermstedt WebShuttle**
The WebShuttle is one of many ISDN terminal adaptors available, but shines because it’s the most Mac friendly. It supports dual-channel ISDN access like the majority of others – but it makes using it easier than most.

The purple casing was designed to kind of co-exist with the original Bondi Blue iMac – but when the Grape iMac was released, it found a perfect partner. ISDN terminal adaptors are basically external ISDN cards that work in a similar way to modems. To use one for connecting to the Internet, you need BT’s. Highway service and an ISP that supports ISDN connections.

*Price:* £159 at Hermstedt (0171 242 4050)

---

**MultiTech USB V.92 Modem**
The iMac has a built-in modem, so it doesn’t require any additional hardware to connect to the Internet. Power Macs have a space for an internal modem, but they don’t come supplied as standard. Without a serial port, you must use a USB modem.

Face used to be tops in this department, but recently went belly up. Fortunately, MultiTech has recently released a Macintosh solution.

The MultiTech USB V90 offers 56Kbps access to the Internet, plus fax capabilities with appropriate software (not included). It runs from the power provided by USB, so the cabling is neat.

*Price:* £99 at MultiTech (0118 959 7774)

---

**Global Village USB 56K**
The USB 56K modem marks a welcome return for Global Village, a champion of the Mac for many years. Global Village has been off the scene for a while since its modem business was sold to Boca Research. Anyone familiar with the Teleport range of modems will recognize this as the same, but now boasting a translucent design.

The great thing about Global Village modems is software support. Installation is a breeze, and you will be online in no time. Also, the higher bandwidth of USB means you never need to worry about whether your serial connection is slowing transfer rates.

*Price:* £99 at Global Village (0990 420 421)

---

continues page 84
Storage devices

In the absence of SCSI, the iMac was stuck for a while with no external storage options. Only the Imation SuperDisk filled the gap for a while, but now more choices are arriving every month. Floppy drives are available for anybody wishing to access historical disks, but more forward-thinking readers will be more interested in Iomega Zip drives and optical options. Fixed-drive options are also becoming more widely available. La Cie, for example, has a wide range of USB hard drives. For the Power Mac user, though, a FireWire drive is a faster option. Macworld will be lab-testing FireWire drives in next month’s issue.

Iomega ZIP USB
Iomega has two main removable formats that are now almost universally used: 100MB Zip and 1-2GB Jaz. Unfortunately, only one of these formats is compatible with the new Power Macs. So, for now, you can only enjoy only the Zip format for USB. A Jaz adaptor will be available in the next few months.

The Zip disk was widely touted as the next generation of floppy, and, to a certain extent, it has fulfilled that promise. The USB version comes in a fetching translucent blue casing, perfect for the new Macs. Iomega is just about to release a 250MB USB-friendly version of the Zip drive.

Price: £84 at Iomega (01628 822 444)

Teac Floppy Drive
The lack of floppy drive in the iMac, and then the Power Mac really rocked the computing world. PC users though it stupid, but then they’ve only just stopped using 5.25-inch floppies. Personally I was glad to be rid of them, having hardly used them for years anyway.

Unfortunately, the need for floppies hasn’t entirely disappeared. For instance, QuarkXPress 4.x requires a floppy for installation, and some other applications require a floppy for anti-piracy reasons. Teac has the smallest and neatest USB floppy drive around. It’s almost as thin and flat as a floppy disk itself.

Price: £59 at Mac & More (01442 870 300)

Imation SuperDisk
The Imation SuperDisk was released almost simultaneously with the iMac, providing the solution to the blown-up lack-of-floppy controversy. It even shared some of the iMac’s styling. Each disk can handle up to 120MB of data. In the absence of any other choices, the SuperDisk was a godsend. And although Iomega’s Zip drive is more widely used, it lacks the SuperDisk’s floppy compatibility.

If you don’t need to exchange data with other people, the SuperDisk is fine – and its compatibility with floppies is handy. But if you want to share with most people, Zip is the better option.

Price: £149 Imation (01344 402 200)

La Cie Plug’n’Store USB 10MB Hard Drive
USB isn’t really the ideal choice as an interface for a hard drive. Unfortunately, if you have filled your iMac’s disk you don’t really have a choice. The only interface even close to being up to the job is USB.

La Cie has designed a hard drive to work with the iMac or Power Mac via USB. It works well, even though it’s slower than average. If you have a new Power Mac, however, you’d be best advised to get a SCSI card and SCSI drive – or better still one of the new FireWire drives. But for less flexible Mac users, it’s a perfect solution for an imperfect situation.

Price: £189 at La Cie (0171 872 8000)

Que! CD-RW drive
If you want to exchange information with other people, and your files are too big to send via email, you need another solution. The most widely accepted format after floppy is CD-ROM. So if you invest in a rewritable CD-RW, you get instant compatibility with most modern computers.

The Que! CD-RW is cheap and stylish with colour-coordinated plastics and even a nifty carry case. It can record CDs as fast as 4x, and also uses re-writable media. This all adds up to make it one of the most versatile USB peripherals you can get for an iMac or Power Mac.

Price: £239 at Compu B (0800 118 6625)

La Cie 640MB optical
One of the longest-running storage formats is the 3.5 inch optical disc, which over the years has evolved from a 120MB format to a 640MB double-sided cartridge. For long-lasting archives, optical discs are unbeatable. They are not affected by magnetic fields, so they don’t deteriorate like other magnetic media, and the cartridge keeps them safer than CD-ROM.

If you want to keep your data safe into the next millennium, optical is the way to go. If you want to use optical discs on your USB Mac then the La Cie 640MB optical drive is exactly what you need.

Price: £229 at La Cie (0171 872 8000)
Other USB essentials

Kodak DC265 Digital Camera
Kodak is building in USB connectivity in to all of its new digital cameras. The DC265 offers professional high-resolution images with a very simple point-and-click interface. It has a 1.6 megapixel resolution (1,536 x 1,024dpi), which is good enough for A4 prints. Best of all, you can avoid lengthy download times by using USB to transfer the images to your Mac. In the past, pictures of this size could take an age to download using a serial connection. If you already own a digital camera that uses a SmartMedia or Compact Flash card, buy a USB card reader.

Price: £749 at Kodak (0870 243 0270)

XLRII InterView
If you want to add video to your Web site or multimedia presentation, and all you have is an iMac, InterView will sort you out. It lets you plug in your VCR and capture small video movies.

The basic hardware consists of a small but clever black box with S-video and Composite connecting cables. On the software side, Avid VideoShop allows you to edit and play the captured movies.

You can even save the movies to attach to emails. Making mini-movies really is simple with InterView.

Price: £199 at Interex (01923 266 400)

Zoom USB Video camera
The Zoom Video camera may not seem immediately useful, but you can have hours of fun with it. It comes with a demo of StoCam and a full-working version of the non-shareware version of CU-SeeMe 3.1. StoCam allows you to very simply set up a Web cam with quite sophisticated controls. Of course, you need a permanent connection to the Internet to use it properly. If you don’t have that luxury, you can use your camera for video conferencing with CU-SeeMe. Ironically, the only thing you can’t do with this camera is zoom.

Price: £70 at Zoom (01340 352 403)

Microsoft GameStick
One of the best things that USB has brought to Mac entertainment is a wider selection of game controllers. Choice was severely limited before USB, but now just about all devices are USB equipped. However, there are some quirks with USB game controllers when compared to traditional ADB controllers. There are no software drivers for USB controllers, so the controls need to be built into the game. And not every game supports USB controllers. But, generally, if a game is new and appropriate, it will support USB. The Microsoft Game Stick is one of the best.

Price: £30 at Microsoft (085 802 808)

Apple Studio Display 21
The Studio Display 21 monitor is a huge beast that incorporates a handy USB hub. The quality of the image is outstanding and, more importantly, it will remain so for years. The reason for this is that it can calibrate itself with amazing push-button ease and accuracy. As always, beauty is in the eye of the beholder – so sample before purchase. Part of its bulky design does actually save space, because the legs allow the keyboard to be stored underneath. Apple has updated the Studio Displays to the new Graphite colour scheme, so blue Power Mac owners should quickly snap up older stock.

Price: £939 at Apple on 0870 800 6010

Apple Studio Display Flat
Apple seemed ready to drop out of the monitor market a year or two ago. But it bounced back with monitors as stunning as this. LCD Studio Display. The sleek design has changed colours twice already to allow colour-coordination with the latest models. Expect a Graphite version

A USB connection is used to adjust the screen’s features from a control panel. The Studio Display has proved a favourite with set-designers and can often be seen in shows like Who wants to be a Millionaire? and Film 99.

Price: £749 at Apple on 0870 800 6010

/9.2
A Macworld survey earlier this year showed that 90 per cent of our readers either have – or will soon have – access to the Internet. Some are newcomers and some are old hands who know it all. Whatever category you fall into, now is a great time to take a look at what’s new in the world of Internet Service Providers (ISPs). Free ISPs are springing up like bluebells in spring, and, at first glance, it certainly looks like there’s pressure on the traditional £10-per-month ISPs.

And for those of you who believe there really is “nowt-for-owt” – prepare to be convinced.

Here, we are not examining the deals offered by every ISP in the land, but looking at ISPs capable of supporting Macs without asking what a Mac is.

The purpose of the feature is to equip you with the expertise to make the right decision when choosing your first ISP or when switching ISPs. The trick is knowing if you’re getting the most from your ISP or if you’re paying for features that you don’t use. It’s maybe time to re-evaluate your choices.

A new user, starting with a clean slate, is going to need the most help when connecting to the Internet. It can be pretty scary and more than a little confusing for a first-time user. I know when I made that first leap, it took weeks to appreciate all that the Internet could offer – and months to understand how it all worked.

Things are not quite so bad now. Years ago you needed more than a dozen bits of software to get things done. Now, you can get away with Microsoft’s Internet Explorer and Outlook Express, or Netscape’s Communicator suite.

At the risk of sounding like an old fart from a Monty Python sketch, in my day, you needed three applications just to receive email – never mind ftp, gopher, finger, IRC and Telnet. When they invented the World Wide Web it got even more confusing.

The key to helping new Net users is good installation software. The simplest of installation software is to be found on the iMac. The iMac comes with a limited choice of ISPs, each with a simple registration script. However, a new user may not have the information available to make the choice that’s right for them. Worse, if you’re on the same junk-mailing lists as me, you probably have daily deliveries of installer disks for various ISPs.

The first names that’ll be familiar to a new user are most likely those seen advertised on television. AOL (America On Line) is probably the biggest advertiser, but what do you get for your money?

There are a number of different AOL pricing tiers available. For £4.95 per month you get three hours of Internet time, with additional hours costing £2.35. This might be suitable for people just using email, but it hardly gives you time to look at the AOL-exclusive contents page 92
content, never mind the rest of the Web. For a less hurried look at the Web a better option would be the £9.99 unlimited access deal.

AOL pricing could be a symptom of US-style billing. As the US has free local calls it isn’t expensive to pay for in public. In the UK, though, local calls aren’t free, and additional hourly billing can be pricey. CompuServe has also similar billing options, but generally, hourly billing is a bad idea.

Ironically, the same company that owns both AOL and CompuServe has just launched Netscape On-Line, a free ISP. It will offer similar content to AOL and CompuServe, but isn’t available for Mac owners. The promotional material claims Netscape On-Line is targeted at people without a modem, and has a similar ability to provide a service comparable with paid-for ISPs. This need not worry Mac owners, because Freeserve doesn’t support Macs. However, there are work-arounds for such platformism; a quick search of the Web will bring up methods of beating the system.

How free ISPs work

You may wonder how ISPs can make money through free Internet access. It was something tried before Freeserve came up with its business model in the US, some firms looked at ways to force advertising on the user – to pay for the service. This never worked, because users always found a way to avoid – or at least ignore – the ads.

Other methods included free Internet access for buying particular supermarket goods. If you bought Heinz ketchup instead of Daddies sauce for example, you could send off the receipt and get a number of hours free access. This could have worked – it wasn’t for the sanding of the receipts, which was falling.

Eventally, someone figured out that BT was making bundles of cash from Internet customers. They’d collect the payment and that, if those calls could be routed through another telecoms firm, there would be enough money from the kickback to support the service. So now all companies offering free Internet access are supported by a cut of the telephone charges that are passed on to you, the consumer.

This all makes perfect sense – except for one thing. If these companies can cut this deal with the telephone companies, why don’t they offer the other ISPs? Or perhaps they already are.

Frankly, I feel that if they don’t want us, then they shouldn’t enjoy our custom.

Virgin is a Mac-friendly free ISP. Virgin Internet appears to offer similar facilities as paid-for services, but there’s a slight sting in the tail. Technical support is £25 per hour – or £1 per minute. If you ever need to call it, you may be better choosing a different ISP! I don’t often have problems with my ISP but I’m sure I’ve spent more than 30 minutes on the telephone to its tech guys. I would hate to think of the cost if I had a real problem with Virgin Internet.

Charging for tech support is common among free ISPs. UK2.net and Freeserve also have similar – albeit slightly cheaper – support at 50p per minute. The only free service that charges at a national call-rate is Apple Online. This, as the name suggests, is very Mac oriented, and a quick look at the Web site will demonstrate just how committed it is to working solely with Macs. It might be a bit cheaper, but it’s nice to think that somewhere in the world, PC users are treated as second-class citizens.

One thing you definitely need if you’re yet to pop your Internet cherry, is an installation disc. You can do it without one, but it’s far from straightforward if you’re unfamiliar with the Internet. A good installation disc will hold your hand throughout the process of getting online. If an ISP doesn’t have a Mac installation disc, then new users should look for one that has.

Flexible email

An email address for life is difficult to achieve, especially when you change service provider regularly. The problem lies in the addresses provided by your ISP. It normally includes a reference to the ISP in the address – so, change ISP and you must change address. This also applies to change jobs that happen when you have a work email address.

The solution is to subscribe to a free Web-based email service. This is a double-edged sword because, on the one hand, you get a free and flexible email address, but on the other you are at the mercy of yet another provider. They are just as likely as any free ISP to go belly-up. You can cut the risk of this by going with a leading free email provider – such as Microsoft’s Hotmail service – but even a Microsoft service isn’t without its hiccups. Microsoft has recently posted a Web site that acted as a gateway to the Hotmail server. It allowed people to log in to any Hotmail account – without using a password. Microsoft has plugged this alarming breach in its security, but it makes one wonder how secure mail is when using free email providers. It is possible that smaller companies have even shakier security.

The only way to guarantee personalized email is to register your own domain name. The domain name is exactly what you want. Connecting methods

There are a number of ways to connect to the Internet: modem, ISDN, cable modem, and even satellite access, has been tried. For the majority of users, though, a 56kbps modem is the way to go. It needs no special lines – plugging into your telephone socket – and it is accepted by all ISPs. The 56kbps speed refers to the speed download that is theoretically possible. In practice, 50kbps is the limit. Uploading is slower at 33.6kbps.

If this isn’t fast enough for you, perhaps ISDN is what you want. BT launched Home Highway last year – after years of milking businesses for corporate ISDN charges. The calls cost the same as normal telephone calls, unless both channels are used. For full 128kbps speeds, two lines are used at once – but costing as twice as much simultaneous telephone calls. The equipment needed costs a little more than a modem, but if you don’t have a USB-equipped Mac you’ll need an ISDN card. This will cost considerably more than an external terminal adaptor.

If you’re lucky enough to have cable television, check with your cable provider for an ISP service. There are a number of packages that are very cheap and far between, but if you get lucky you can get continuous, high-speed Internet access for a low price. This deal is even better than the

b
fastest possible connection: ADSL (see “What is ADSL?” on page 92). If you happen to be one of the very privileged few in west London that’s taking part in the ADSL trials, you don’t need telling how cool it is. The rest of us will need to wait until next March before the service is publically available. Even then, it’s only in big cities that it’s being rolled out. If you live more than two and a half kilometres from a telephone exchange, ADSL may take some time to arrive. In the meantime, ISDN is your fastest option.

Internet extras
Roaming. In the cut-throat business of Internet service provision, all the players are looking for additional services to offer. A popular provision for business travellers is a “roaming” feature. This allows you to go to, say, New York and dial a local server, rather than making long-distance calls from your hotel. Depending on the wired-ness of your destination you may have a choice of local numbers, or even free-phone numbers. Freephone numbers are not totally free, though, because you pay for your normal monthly bills. What it does do is give you considerable savings on hotel call charges. It’s an invaluable service for the hard-core traveller.

CompuServe has one of the best world-wide networks of dial-up Internet access. However, the service is pitched at businesses and is expensive for the casual user.

Free Webspace. All ISPs now offer an amount of free Web space, but be sure to read the small print for terms and conditions. Many place limitations on what you can do with the site, the kind of files you can upload, and the type of businesses advertised. They are more geared to serving family or small-business-type Web sites rather than e-commerce or pirate sites. You may also be limited in the amount of traffic allowed.

It’s easy to think that the more Web space offered the better the deal, but a well-produced Web site is rarely over the standard 5MB offered. If your site is larger than this, then you have either put in a lot of work and have dozens of pages, or the site is badly designed and has lots of heavy graphics or files to download. Average free Web-space is around 15MB – plenty for most non-commercial uses.

Telephone support. One provision often overlooked is telephone support. With luck, you’ll never need it, but if you do, you want it to be worthwhile and prompt. Although many ISPs offer around-the-clock support, most problems are not going to be solved at 4am. It’s better to have good support during normal hours that 24-hour support that is, at best, patchy. When choosing your ISP ask how many of its support team know Macs. The correct answer should be “all of them”, but this is rarely the case. Direct Connection prides itself on its support record, and particularly with Macs. All its support staff are trained to answer questions about Macs and PCs, so you don’t have to wait days to catch the Mac guy. In fact, Macs are far easier to hook into the Internet than PCs, so you shouldn’t have much trouble – although it’s nice to know it’s there when you need it.

email addresses. Multiple email addresses are excellent for families accessing the Internet. Most ISPs offer unlimited email addresses, but some are limited to five or less. Granted, you may not need an unlimited number of addresses, but you can soon use up free if you have a Web site, or a large family. It’s good to have separate addresses for Webmaster@, sales@, mum@, and so forth.

Macworld ISP advice
You should now have a good idea what to look for in an ISP. Free ISPs are good value, but it’s possible that you’ll want to change from one to another as better deals become available. This means either keeping all your friends informed every time you change, or, better still, getting a Web-based email service. For a more stable service, choose an ISP with a good pedigree and then, when ADSL arrives, it should be able to change your service without you having to change your ISP. You may think that ADSL is something you won’t need, but, then again, you may think your Mac doesn’t need to be any faster either. I guarantee that, in two or three years’ time, modem access will be only for die-hard Internet Luddites.

Never underestimate the pain of changing email addresses and Web sites: it’s very easy to get stuck with an ISP that you’re not happy with – but can’t be bothered to change.

Also, if you don’t already have a service provider, choose one that you’ll want to stick with. If you do have an ISP then – unless you’re getting a poor service – it’s better off sticking with it. Beware of so-called “free” deals. Some are good, but read the small print – and be prepared to change again when you want ADSL.
Remote control

How to master remote collaboration.

By Jim Heid and David Fanning

It used to be that the people who worked together on a project were located under the same roof. Today, they might not be on the same continent. The Internet has enabled workers to scatter like dandelion seeds in a gale, and it isn’t unusual to find yourself working closely with someone you’ve never met in person.

Telecommuting is wonderful, but it does introduce complications. How can you proof and comment on page designs and other documents without the delay and expense of couriers? How can you brainstorm in real time without racking up huge phone bills? How can you monitor or control a Web server that’s located a thousand miles away? Several software tools can help you address these issues.

Here’s a guide to stocking a remote-collaboration toolbox, and some tips for our favourite tools.

“Please comment ASAP”

This is a common request, along with: “Look over the latest brochure layout and get back to me.” “Approve the new logo design.” “Proof the annual report before tomorrow.”

These chores used to mean last-minute sprints to the post office or a visit from a hairy motorcycle courier. Then fax machines came along and made their contributions to eyestrain and aggravation.

The advent of email has made it far more convenient to move documents around, and business software has evolved accordingly – Microsoft Word and Excel, for instance, have features for adding annotations to documents. These sticky-note-like comments don’t appear within a document’s text, but instead show up as small icons. Double-click on an annotation’s icon, and up pops a small window containing the comment. But graphics and design programs generally don’t offer annotation features. And even with Word and Excel, there’s the risk that someone will make changes to a document without letting others know about it.

The answer: Adobe Acrobat 4.0. Acrobat has always been a great tool for distributing documents electronically – convert a file into Acrobat’s Portable Document Format (PDF), and then send the PDF to your colleagues, who can review it and print it using the free Acrobat Reader software. Acrobat adeptly preserves the original document’s formatting, even simulating fonts not installed on a recipient’s system.
Acrobat 4.0 goes beyond these basics to pack a full array of collaboration tools (see “Acrobat annotated”). Each member of a work group can attach annotations to a document and review annotations others have made. Acrobat 4.0 also enables you to mark up a document; you can, for instance, draw a strike-through stroke to mark a section of text for deletion, and then reattach replacement text by typing it in a pop-up window. Because reviewers are working on a PDF file, there’s no worry about changes to the original file, or over whose copy is the current version.

Chat and swap
Annotation features are noteworthy, but they don’t allow for real-time remote brainstorming and collaboration. The telephone does, but can lead to a hefty phone bill.

One potential solution is instant-message (IM) software. Several free IM programs are available for both the Mac OS and Windows, and although they’re most commonly associated with love-letters, they can be powerful collaboration tools, too.

From a telecommuting perspective, the best IM software for the Mac is the freeware ICQ (www.icq.com). ICQ’s interface is cluttered and cumbersome at times, but the software has two crucial features: it supports file transfers and URL exchange. Apple is planning to collaborate with ADOE to produce an instant messaging standard.

Remote nirvana
ICQ does the job for occasional telebrainstorming, but if remote working is to become a big part of your work life, go all the way to Timbuktu. Available for both the Mac OS and Windows, Netopia’s Timbuktu Pro ($49.95; 175-675 000) provides first-rate chat and file-exchange features and even an intercom mode that lets you chat using your vocal cords instead of your hands.

But these goods are only side-dishes; Timbuktu’s main course is remote observation and control. Outfit two or more computers with Timbuktu, and each user can watch the others’ screens, or even control them.

You get real power by combining remote observation with Timbuktu’s color-coding, and file-exchange features, as in the following example:

“I’ve got the latest layout on my screen. What do you think?”

“Change the headline font to Ransom Note Bold.”

“Good. And by the way, I rescanned the photo. I’m sending you a new version now.”

OK, How’s that?

“Good. And by the way, I rescanned the photo. I’m sending you a revised version now.”

This live collaboration is faster than annotating and emailing PDFs. It’s almost like sitting alongside a colleague, except you can catch his or her cold.

One of the beauties of Timbuktu is its support for multiple protocols and platforms. You can tap into other Macs on your network via AppleTalk, or you can use the Internet to tap into remote Macs and Windows PCs via TCP/IP. You can even mix and match within a single chat window, connecting to local Macs via AppleTalk and remote machines via TCP/IP (for more tips, see “Telecommuting with Timbuktu”).

Another way to approach this kind of collaboration is by using a bridge or router, which is used to link two Apple networks. This allows you to route another network seamlessly, either as an individual or an entire remote network.

Outfit two or more computers with some of the available bridges. This is because the ISDN line used as the link is called up automatically when there is any network activity. On Apple networks, this is costly because — as the server checks that other servers are working — they generate a preprocessing of low-level network activity. Such activity can include OS 8’s insistence on checking regularly the contents of other network users’ workspaces.

Unsurprisingly a normal router does not hold this information, so the ISDN line is dialled immediately to check. Only one company, JPIV, has found a way around this problem: ISDNShare (JPIV, 0181 396 8487). It costs £500 for the software and £495 for the router. JPIV is alone in managing to crack the problem of “flushing” AppleTalk. Spoofing is a tactic used by PC bridges to reduce network traffic between sites. ISDNShare works via routers at each site that kick in when a server issues a request to check that the other site is working. Instead of dialling up the other site, the router simply replies with the equivalent of “chill”. This will work until the server poses a question that the router can’t answer with its store of information. At this point, the ISDN line is dialled, so that the machines can talk directly. Only ISDNShare has been able to overcome this and other peculiarities to successfully spoof AppleTalk.

The package consists of a 3Com OfficeConnect Remote, plus the ISDNShare software. As a router, it can be accessed by an individual or entire network, and can be configured to link to other ISDNShare routers, or even the Internet.

You can permanently keep a remote volume — maybe your hard disk at work — on your desktop. The only time the connection dials up is when you are copying to or from the volume.

When used with the Internet, ISDNShare can mount volumes from machines on the other side of the world — at the cost of a local call. You can allocate disk space to databases, cut down the need for synchronizing separate records.

One of the most useful things in the graphics industry is being able to print remotely. You can send prints to or from image sets simply by selecting them through the Chooser. In fact, all remote volumes and printers are accessed via the Chooser, so no special networking knowledge is required.

Unfortunately, it won’t be long before we needn’t fret about the cost of remote working. The technology is already here but the price of telephone calls remains an issue. ISDN is faster, but no cheaper. But another option should be available by next year — ADSL. This promises continuous networking, no dial-ups and no per-minute charges. For remote access, it is these features that are more important than bandwidth. However, the bandwidth of ADSL is huge compared to the average modem or even ISDN dial-up link. With a little luck, this service may reduce the cost of alternative ways of networking knowledge is required.

Tools for teleworking
The pros include geographic and scheduling versatility, significant savings, and the flexibility to choose colleagues based on their talents, rather than their location.
When it comes to the Web, Adobe Photoshop has always been a program fraught with contradictions. It’s probably the most popular tool used by people in the Web-design and Web-graphics businesses, whether it’s to shape images for the Web or to sketch out a Web-site design before implementing it in HTML code. Despite all that, the flagship product of Adobe Systems (www.adobe.com) has never been particularly Internet-savvy – a situation that has led to the creation of a whole industry based on plug-ins and programs that perform the vital jobs that Photoshop simply doesn’t do.

But as of version 5.5, Photoshop has finally embraced the Web. Sure, this upgrade adds some features that will be attractive to Photoshop’s traditional-print fans (see the sidebar “Not just for the Web”), but the bulk of the changes to the venerable image editor are meant to satisfy the long-suffering Web-graphics community.

How’d they do it? Basically, Adobe rolled in most of the features found in the Web-graphics product the company released last year – Adobe ImageReady. In a move that shows both how far Web design has come and what a mis-step leaving Web features out of Photoshop proved to be, Adobe has now made ImageReady available only as part of the Photoshop 5.5 package.

A new version, ImageReady 2.0, is bundled with Photoshop. It handles higher-end tasks, such as Web animation, and other fancy techniques, such as using JavaScript rollovers and image slicing.

Window to the Web

With Web graphics, you’ve always got to walk a tightrope between creating high-quality images and making ones that download quickly over slow modem lines. Web designers work primarily with JPEG files (for photographs) and GIF files (for text, logos, and other graphics with large blocks of solid colour). Careful tweaking makes all the difference with images saved in either of these formats. The more control designers have when making trade-offs between beauty and speed, the better.

Until this newest version, Photoshop lacked that control, so most designers instead used Photoshop plug-ins, such as the £30 ProJPEG and £45 PhotoGIF from BoxTop Software (www.boxtopsoft.com), or programs such as ImageReady and Fireworks 2.0 from Macromedia.

Net gain

Version 5.5 sees Photoshop getting Web-savvy – at last. By Jason Snell
and throw away all but 256 of its colours. To make this easier, the file size. The first thing Photoshop must do is take your source image controlling the palette of a GIF file, you can dramatically reduce the job. Photoshop 5.5 gives you an impressive amount of control over perfecting GIF images. Unlike JPEG files, which use millions of artifacts you'll see – but in the lower left corner of the window, you'll one by one from the palette to you, the smaller the file size of the image and the shorter its downloading time. One option in the Save For Web window helps you slim down your colours by directly controlling the number in your GIF image. We took a sample image with 204 colours and knocked it down to 64 colours. In the process, the image’s size fell from 15.3K to only 9.3K.

Adobe’s lossy-GIF algorithm cleverly exploits the way that GIF images are compressed, by taking large areas of a single colour and simulating a colour by placing dots of two other colours close together so that from a distance, they appear to be a third colour.

One way to approximate a more expansive variety of colours is through dithering – simulating a colour by placing dots of two other colours close together so that from a distance, they appear to be a third colour. Photoshop 5.5 offers three different dithering effects. It also allows you to set a dithering percentage, so you can vary the amount of dithering in your image and see how it affects image quality and file size. Although it’s nice to have these options, avoid using dithering if you can. It usually increases file size.

For the ultimate in colour control, Photoshop lets you edit the GIF palette. This is a powerful and quite useful feature, allowing you to lock colours that you don’t want to change under any circumstance (for example, the colours in a company’s logo). You can also select individual colours and shift them to their nearest Web-safe equivalent (so they won’t dither, even on a monitor that can display only 256 colours), or delete colours one by one from the palette to simplify your images and reduce their file sizes.

One innovation: The features in the Save For Web window are new to Photoshop, but it’s only fair to point out that they’re not new altogether – most of them will be familiar to users of ImageReady or Fireworks. There is one unique feature offered for the first time in Photoshop 5.5: the lossy GIF.

Adobe’s lossy-GIF algorithm cleverly exploits the way that GIF images are compressed, by taking large areas of a single colour and describing them in shorthand, rather than pixel by pixel. This lets it create a lower-quality image with a smaller file size. As you increase the compression, you’ll start to see distortions, including 1-pixel-high horizontal streaks across your image, but you may not mind when you’re at a pinch.

Photoshop's new pal Artfully exporting files in the GIF or JPEG format is far from the be-all and end-all of Web-graphics production. There are several Web-specific features of vital importance to Web-graphics professionals that don’t appear in Photoshop 5.5. Instead, these features are a part of the much improved ImageReady 2.0.

Tight integration Although Photoshop and ImageReady are clearly meant to work together, they’ve also been developed to work successfully apart. Many users used to grumble about ImageReady’s lack of image-editing tools, such as the rubber stamp and the airbrush – features that were available in its competitor Fireworks. If you were among those people, you’ll be happy to see the program’s more comprehensive set of image-editing tools.

Even though everyone owns ImageReady 2.0 will now automatically Photoshop too, these tools will save you from toggling back and forth between the two programs just to do minor touch-ups. When you must toggle, switching between the two applications is now a much easier task: both: fully understand the Photoshop file format, and clicking on a button at the bottom of each program’s tool palette opens the currently active document in the other program.

Slicing and dicing Most Photoshop users don’t spend a lot of time taking the images they’re carefully creating and cutting them up into little bits. Yet the practice of slicing an image is quite common important, because the success of any selection is based entirely on the transition between what is selected and what is not. A lousy transition means that you get some of the original background along with the object you actually want. This line along the edge of an object is a dead giveaway it came from somewhere else. Note, that the Extract feature doesn’t make a mask. Rather, because it needs to remove the background from edge pixels, it actually deletes the background. This is unfortunate. Because using Extract rarely results in a perfect selection and you’ll need to do some fine-tuning. For this reason, it’s a good idea to duplicate your layer before using Extract. Again, no one ever said it was going to be easy.
Not Just for the Web

Although the Web publishers of the world have reason to rejoice at the release of Photoshop 5.5, the rest of us – the mere mortals who still have to make a living based on print publishing – can quietly cheer at several features in this upgrade that may make our days easier too.

Carefree compositing If you do any photoncomposing (cutting an image out and putting it into another), your nemesis is most likely edge spill, where the background of the original image appears as a gitty halo around the composited graphic. Now to the rescue came the new Extract feature and the Background Eraser tool. Both erase pixels relatively intelligently, but, more important, both perform edge-colour decontamination – they carefully remove the background colour from pixels at the cut-out object’s edge.

Where the Extract feature deletes the background colour all at once (see the sidebar “Quick’n’easier masking”), the Background Eraser tool lets you paint away (or erase) the background in a smooth, intelligent way until it becomes transparent. Unfortunately, neither tool works particularly well with really tricky images that contain, for example, breezy blonde hair against a sunny golden beach.

Another compositing tool, the Magic Eraser, gets essentially the same results as using the paint bucket tool with a “clear” fill instead of a colour. However, it’s too blunt an instrument to be particularly helpful for anything but very rough, first-draft work. Ultimately, although these new features are powerful, they don’t obviate the need for additional masking plug-ins, available from companies such as Ultimatte, Extensis, and Human Software.

Rollovers compatibility is an issue. Rollovers generated in ImageReady work well within ImageReady, but may not in Macromedia Dreamweaver. Rollovers designed a Web page as a graphic and distinct parts of it (say, the photograph in one corner and the text in the other) require different guides out from a ruler or by choosing the Slice tool and drawing a rectangle over a particular area. You can choose a different GIF and JPEG setting for each slice. This is particularly useful if you’ve designed a Web page as a graphic and distinct parts of it (say, the photograph in one corner and the text in the other) require different compression methods.

Simple JavaScript You’d think that creating graphics and wading into the world of HTML coding would be two separate jobs. But with so many of the bells and whistles on Web pages being the result of JavaScript rollovers, images that change when you move your mouse over them, it makes sense that ImageReady includes some HTML-related features. You can still separate the jobs – a Photoshop user can create a big image or a series of sliced-up ones and send it to an HTML jockey who adds the necessary JavaScript code to make the dazzle-dazzle happen. ImageReady 2.0, however, can also generate all the necessary HTML magic by itself. From within ImageReady, you can set up rollovers (even images that change in one place when you move your mouse over a different place), and the program will generate an HTML file.

Fireworks 2.0 offers this feature too, and as you might expect, compatibility is an issue. Rollovers generated in ImageReady work well in Adobe GoLive, but may not in Macromedia Dreamweaver. Rollovers from Fireworks from the other hand, work in Macromedia Dreamweaver and GoLive if you download a template from www.adobe.co.uk that lets Fireworks export HTML in GoLive style.

Jumping GIFs In the past, Photoshop users had to resort to shareware programs such as Yves Pujol’s free GIFBuilder to create GIF animations, usually after painstakingly generating each frame within Photoshop. The arrival of ImageReady and Fireworks changed that by adding robust animation tools. ImageReady 2.0 carries on that tradition, matching Fireworks 2.0 at every step.

You can create animated GIFs by using ImageReady’s Animation palette, moving layers (or switching them on and off) to achieve animated effects. For those of us who are too lazy to move items through a series of steps to get the final animated effect we seek, there’s ImageReady’s Tween command, which uses the information in “before” and “after” frames (for example, a red ball at the bottom of the screen and the arch at the top) to figure out and create what would come in between.

Similarly, the Contact Sheet feature – which puts thumbnail images on a single page – contains new options, such as the ability to add file names under a thumbnail and include all the images in nested folders.

If you’re not the type to muck about with HTML code and need to get photos on the Web quickly, you’ll also appreciate the Web Gallery feature. Select a folder of photos, and Photoshop will automatically convert them to the JPEG file format and generate HTML pages with links between these images and small thumbnail versions of them that it also creates.

Show me the Monet In a nod toward fine artists, Adobe has included the Art History Brush, which lets you create various impressionistic effects simply by brushing it over your images. Unfortunately, the arty options – with names such as Tight Short, Dab, and Loose Curl – are a far cry from what you can create in MetaCreations’ Painter. With luck, future versions of Photoshop will expand on this tool. Most of features in this upgrade are for Web professionals. But there are a few gems that may tempt the rest of us to upgrade too.

David Blatner

Photoshop 5.5

Publisher: Adobe  (0181 606 4001)  www.adobe.co.uk

After years of ignoring the Web, Photoshop is finally Internet-savvy – but is it too late? Macromedia’s competing product, Fireworks 2.0, is powerful and popular. Although its mix of drawing program and Photoshop-like abilities makes it harder for many people to learn, it also gives the program unique strengths. It’s also tightly integrated with Dreamweaver – an HTML editor that seems to have a lot of momentum, at least for now. On the other hand, if Photoshop and ImageReady can provide most of Fireworks’ features in one package with one price tag, Adobe may have a major advantage. Regardless of who wins this battle, one fact can’t be denied: Web pros who use Photoshop finally won’t have to pay extra to get the basic tools they need. It’s been a long time coming, but Photoshop has finally embraced the Web.

Price: £275. Upgrades from v.5.5, £189; from v.4.0, £129.

Star Rating: *** **
Moments in time

Use digital-image editing to twist time and create motion
By Mike Wooldrige

One of the many freedoms that digital-image manipulation offers, is the capability to depict motion without need of a video camera. You can give the feeling of movement and the impression of passing time in a single image by using digital effects – a combination of still images – and your imagination.

Photographer Jeff Schewe used digital techniques to add a temporal twist to an image of a long-jumper in flight. By compositing seven photos – which were shot with a motor-driven, film-based camera – and applying subtle Adobe Photoshop effects to blur the trailing edges of the jumper’s body, he conveys the feel of a short movie-clip in a single image.

The long-jump piece, designed for a Motorola marketing brochure, is typical of Schewe’s photo-realistic style. He prefers to scan his photos at very high resolutions and then work with the high-res files in Photoshop.

For this image, he took dozens of photos in his studio of a man jumping, picked the best ones to create a cohesive series of motion, and applied masking techniques and blur effects in Photoshop. Schewe also tries to retain the fine detail associated with film in his digital creations. Here, he added an extra layer atop the images to recover some of the grainy texture present in the original film, but lost during the Photoshop manipulation. As a result, the final image doesn’t appear digitized, even at close range.

Because the Photoshop files, with all their layers, can be as large as 1GB, Schewe’s computer has to pack a lot of power. For this project, he used a DualStar Genesis Mac clone with a 400MHz Newer G3 upgrade and 1GB of RAM. Schewe also uses an Imacon FlexTight Precision II scanner, plus a Seagate SideWinder AIT tape drive for archiving his super-size projects. He shot the original photographs with a Canon EOS-1N RS 35mm camera. His primary software tool is Adobe Photoshop 5.0.

Mike Wooldrige is a freelance writer and new-media artist.
Do you have valuable content stored in your QuarkXPress documents – content that you’d like to use elsewhere, maybe on the Web. Until now, though, there’s been no easy or affordable way for you to extract that content for re-use.

Some organizations have assembled their own systems for moving QuarkXPress content to the Web, but such systems are often costly, slow, and difficult – requiring multiple tools and many intermediate steps.

That’s all about to change, thanks to avenue.quark – a new QuarkXTension that will let you tag the content of your QuarkXPress documents and then extract that content in XML format. Avenue.quark will even automate a significant portion of the process, making it easier than you ever imagined.

Avenue.quark is based on one of the Internet’s hottest new standards: XML.

A “neutral” format
XML – Extensible Markup Language – is a “neutral” format in that it contains no information about formatting. Because of this, it can be used with a wide variety of applications, which can apply different kinds of formatting when the content is presented through different kinds of media.

What can I do with content stored in XML format? Once you’ve extracted the content from a QuarkXPress document, you can use that content in a variety of ways. For example, you can dynamically translate XML-tagged content into HTML format and serve it on the Web. This method of converting QuarkXPress content into HTML is superior to simple HTML export because it lets you easily format, reformat, and reorganize the content.

What exactly is XML?
XML is a way for you to specify the meaning and structure of content. Why do we need to specify meaning? Because although we can pick up a magazine, such as Macworld, and know that a particular line of text is a headline, such distinctions aren’t so easy for a computer. XML lets you “label” information in a way that computers can understand. And once a computer understands that a particular line of text is a headline, it can automatically format that line as a headline.

To specify the meaning of a piece of content, you insert an opening XML tag before the content, and a closing XML tag after the content, like so:

```xml
<headline>Internet Grows by 400%</headline>
```

As you can see, an opening tag consists of an element name between a `<` and a `>`. A closing tag is the same, with a `/` after the `<`. Here, we’ve “tagged” the text “Internet Grows by 400%” as a headline by putting it between opening and closing `<headline>` tags.

Identifying structure
We know that a news story generally consists of a headline, a byline, body text, and some photos or diagrams with captions. However, computers don’t know such things until you tell them.

XML lets you describe the structure of your documents with DTDs, or document type definitions. A DTD specifies a particular XML markup language, with its own particular tags and structure rules.

For example, a DTD for a news story might specify that:

- Each story must have exactly one `<headline>`.
- Each story may or may not have a `<byline>`.
- Each story must have at least one `<paragraph>`.
- Each story may have zero or more `<illustration>` elements.
- Each illustration must be immediately followed by exactly one `<caption>`.

By consistently adhering to the rules of a DTD, an organization can ensure that its information is always structured predictably and consistently. This makes it much easier for organizations to move content from one medium to another – for example, from print to the Web, or vice versa.

Because computer programs have been developed by many different people and organizations for many different uses, they store information in many different formats.

Macworld is proud to bring you a world-exclusive pre-release version of avenue.quark on its cover CD this month. The version of avenue.quark included on our CD enables you to start reusing your QuarkXPress content straight-away. The final version, which is expected to ship in spring next year, will include a more complete feature set.

For more information on how to use this software, go to the Macworld CD and open the “avenue.quark Pre-Release Guide.pdf” document.
avenue.quark recommends that you use this software only with version 4.04 of QuarkXPress or QuarkXPress Passport. To be on the safe side, make copies of your original QuarkXPress documents. This pre-release version of avenue.quark will remain usable only until March 31, 2000. It has the following limitations, which will be removed in the final shipping version:

- It is used only for Mac OS. avenue.quark will not run on the Windows (or PowerPC) version of QuarkXPress.
- Avenue.quark does not support seven DTDs that come with QuarkXPress-read-only files (e.g., XML files that are created in QuarkXPress 3.0). (This is necessary to preserve validity.)
- If an element may contain one of a list of elements (for example: `<ELEMENT a (b|c|d)>;`). avenue.quark automatically inserts one of the elements in the list. If all of the elements have an occurrence of one or more (for example: `<ELEMENT a (b+|c|d+)>;`), the first element in the list is used. If some of the elements are optional and others have an occurrence of one or more (for example: `<ELEMENT a (b?|c*|d*)>`) the first non-optional element in the list is used. This is necessary to preserve validity.
- If QuarkXPress crashes when you attempt to exit the program or create a new XML document, try disabling Adobe Type Manager and restarting your computer.

Content is the information that makes your documents valuable. avenue.quark lets you separate content from presentation by extracting that content from your QuarkXPress documents and storing it in XML format. Then you can re-use that content with different presentations – in print, on the Web, on CD-ROM, and so forth. You need only adjust the presentation for each medium.

When viewed in a Web browser (Mac or Windows), an XML document can look completely different depending on which CSS file is used to display it.
To edit a tagging rule set, first choose Edit > Tagging Rules.

Next, select the tagging rule set in the scroll list and click Edit.

To see which tagging rules are assigned to an element type, click the element name in the scroll list on the left. The Rules list (upper right) shows the rules assigned to that element type. The Rule Type area (lower right) displays the rule selected in the Rules list and allows you to edit that rule. The rule displayed here specifies that paragraphs that use the "Head" style sheet should be tagged as <head-L1> elements.

To add a new tagging rule, first select an element type in the scroll list on the left. Next, click Add Rule to add a new rule for that element type. Then choose options in the Rule Type area to configure the rule. Here, we’ve added a rule that will tag paragraphs that use the "Legal Text" style sheet as <parag-legal> elements.

Now that the new rule is installed, paragraphs that use the "Legal Text" style sheet can be automatically tagged.
Digital cameras can bring freshness to your art.
By Mike Wooldridge

Digital cameras still can’t quite match film’s image quality at the high-end of the photography market, but they do offer distinct advantages when it comes to the artistic process. With a digital camera, you don’t have to interrupt your creative flow by sending out film for processing. Instead, you can immediately dive into the results of photo sessions and begin creating.

Photographer John Lund, though schooled in traditional film-based techniques, discovered digital imaging eight years ago. He likes to use a digital camera so he can begin work on his photo art only moments after shooting – with no need for a trip to Max Spielman’s.

For this Magritte-like photo collage, *Blinders*, Lund shot most of the elements – the train, the umbrella-toting man, and the blinkers, composed of a belt and a wallet – in his studio with a digital camera. This piece, which included 51 layers, is typical of the surreal – and complicated – artwork he creates for his many clients including Federal Express, IBM, Kodak, and UPS. You can view more of Lund’s art at www.johnlund.com.

Digital artists tend to rely exclusively on Adobe Photoshop for digital-image editing, but Lund says that many artists – including himself – prefer Live Picture. He finds its brush-based tools more efficient and precise than Photoshop’s filters, for mixing the different photographic elements in his work. However, he did use Photoshop’s Hue/Saturation controls to create the picture’s sepia colouring.

Lund shoots images in his studio using a Leaf DCB I digital camera with 2,048-x-2,048-pixel resolution. For *Blinders* he also used stock images to create the steam effect. He then imports them onto a DayStar Genesis Mac clone with four 200MHz processors.

He used Live Picture 2.5.1, and Photoshop 4 and 5 to create *Blinders*.

Mike Wooldridge is a freelance writer and new-media developer.
There are two computers on my desk – one Macintosh and one PC – and lately, they’ve been getting along quite well. Part of the reason is that exchanging files got easier with OS 8.5’s File Exchange 3.0 control panel. File Exchange has two basic functions: opening a PC file, based on the extension used in the file’s name – such as .txt or .doc – and determining which program can open a document when the application that created it can’t be found. However, both parts of File Exchange can be used to do much more than open and convert files. Here’s how to tap into File Exchange’s file-handling smarts.

Streamline the creation of PDFs

You may think of File Exchange as a tool for crossing from PC to Mac, or vice versa, but its ability to link documents to specific applications can pay off in other ways. One useful trick is to turn PostScript files into PDFs simply by double-clicking on them. To configure File Exchange for this trick, follow these steps: In the File Translation panel of File Exchange, click on the Add button to open the Add Translation Preference dialogue box. Select a PostScript file in the dialogue box, and then click on Continue. From the list of applications available to open the file, choose Acrobat Distiller, and click on OK. You may have to turn off the Show Recommended Choices Only check box to make Distiller appear as a choice in the window. You’ll end up with a translation-preference listing like the one shown in “Click to distil”. Now when you double-click on a PostScript file, your Mac will launch Distiller and process the file. With the help of the PC Exchange window in File Exchange, you can even control which program will open a given file – simply by changing the file’s name. That’s because PC Exchange chooses the program it will use to open up a PC file, based on the DOS-style extension tacked on the end of the file’s name: double-click on a .doc file, and Microsoft Word is launched; double-click on a .xls file, and you get Excel. Change a file’s name to include a different extension, and PC Exchange will launch it in a different application.

Imagine you have three text files imported from a PC. All three files bear the .txt extension, but one of them is a document created in a word processor, one is a tab-delimited text file exported from a database, and the third is financial data exported from a spreadsheet.

By default, double-clicking will open all three as SimpleText files – readable but not very useful. But, with a few keystrokes, you can have each file open in a more appropriate application. Add a .fm3 to the name of the second file, for example, and...

---

The PC extensions glossary

Just about everyone knows that a .doc file is a Microsoft Word document. But what exactly is a .pot file or a .ram document? If you mix with the Windows world with some frequency, you’ll probably encounter such files every day. If you want to know what they are, read on.

In such cases, you can use File Exchange as a mini-glossary that serves as a guide to the world of PC extension names. By default, the control panel lists more than 200 different extensions – along with the names of the applications needed to read them. To find out which application belongs to a particular extension, just click on File Exchange’s PC Exchange tab then type the first letter or two of the extension to jump straight down to the appropriate entry in the list. Moments later, you’ll find out that a .pot file is a PowerPoint template and that those .ram files your friends sent you are RealPlayer documents.

You can do reverse look-ups, too. Need to know what the three-letter PC extension is for a Microsoft Excel template? Click on the Application header in the PC Exchange list, and type the first few letters of the word Microsoft to see all the extension entries for Excel – including .xls for Excel templates.
Q&A/tips

Customize your mouse • Transfer data to your new iMac • Regain Lost keys

L

ove your Mac or blue-and-white G3, but hate its mouse? Frank Sauder found a simple way to improve its ergonomics. Buy a double of cement for plastic molds. Put four or five tiny beads of glue on the mouse’s equator of the coloured plastic part, using a toothpick or a straightened paper clip to control bead size. Wait about two hours for the glue to dry — you now have tactile reassurance the mouse is pointing in the right direction. The principle is the same as the usual guide beads; on the surface of the F and J keys on your keyboard.

If you don’t have one of the newer round mice with the dimpled button, try what Troy on your keyboard.

The principle is the same as the small reassurance the mouse is pointing in the right direction. The principle is the same as the small reassurance the mouse is pointing in the right direction.

Do you miss the end and forward-delete keys on your Mac, blue G3, or old PowerBook (keyboard)? Here’s how to simulate them, using AppleWorks (ClarisWorks) and a Hayes ISDN modem.

First, target the file type you want to open – in this case, PC HTML files.

To set up a new preference, open File Exchange and click on the Add button (not shown). Then, target the file type you want to open – in this case, PC HTML files.

To configure File Exchange to open documents using the Automatically Update Document Styles option, you must add one. Or, you could attach a LocalTalk connector to the 6200’s serial port, and bridge LocalTalk to ethernet with a device such as Asanté’s AsantéTalk or Farallon’s EtherMac iPrint Adaptor LT.

To set up a new preference, open File Exchange and click on the Add button (not shown). Then, target the file type you want to open – in this case, PC HTML files.

The simplest solution is to buy a Zip drive for each computer, download your files to a Zip disk, and click on OK. The translation preference in File Exchange causes the PC files to open in Excel.

Alternatively, you can choose which template will open when a PC file is opened.

If you don’t have one of the newer round mice with the dimpled button, try what Troy on your keyboard.

The principle is the same as the small reassurance the mouse is pointing in the right direction.

Do you miss the end and forward-delete keys on your Mac, blue G3, or old PowerBook (keyboard)? Here’s how to simulate them, using AppleWorks (ClarisWorks) and a Hayes ISDN modem.

First, target the file type you want to open – in this case, PC HTML files.

To set up a new preference, open File Exchange and click on the Add button (not shown). Then, target the file type you want to open – in this case, PC HTML files.

To configure File Exchange to open documents using the Automatically Update Document Styles option, you must add one. Or, you could attach a LocalTalk connector to the 6200’s serial port, and bridge LocalTalk to ethernet with a device such as Asanté’s AsantéTalk or Farallon’s EtherMac iPrint Adaptor LT.

To set up a new preference, open File Exchange and click on the Add button (not shown). Then, target the file type you want to open – in this case, PC HTML files.

The simplest solution is to buy a Zip drive for each computer, download your files to a Zip disk, and click on OK. The translation preference in File Exchange causes the PC files to open in Excel.

Alternatively, you can choose which template will open when a PC file is opened.

If you don’t have one of the newer round mice with the dimpled button, try what Troy on your keyboard.

The principle is the same as the small reassurance the mouse is pointing in the right direction.

Do you miss the end and forward-delete keys on your Mac, blue G3, or old PowerBook (keyboard)? Here’s how to simulate them, using AppleWorks (ClarisWorks) and a Hayes ISDN modem.

First, target the file type you want to open – in this case, PC HTML files.

Next, click on Continue and pick the program you want to use to open the file.

The new preference will automatically open the files in the program you chose, without prompting, as long as the second check box is turned on. To double-clicking on it will launch FileMaker Pro, putting the data into a new database. Change the end of the third field’s name to `.txt`, and the data will open in Excel. Alternatively, you can choose which program you want to use to open a specific file: by turning off the second check box in the PC Exchange window – the one that says Open Un-mapped Files On Any Disk Using Mappings Below. With that option turned off. Now when you double-click on a Windows file, you’ll see all the available applications that can open the file.

The previous secret is useful if you have a handful of individual files that need converting, but what if you have lots of files you need to open with a specific program? Instead of adding the correct extension to each file’s name, you can create a global-translation preference in File Exchange, that tells your Mac to open the files in the application you want. For example, you could configure File Exchange so that multiple HTML files created on a PC would open directly in a Web-authoring program. To do this, go to File Exchange’s File Translation panel and click on Add. Select one of the PC HTML files – you can just drag one from the Finder straight into the Add Translation Preference window to select it – and click on Continue. From the list of applications available to open the file, choose GoLive, and click on OK. The translation preference will now cause the PC files to open in GoLive (see “Program of preference”). After you’re done editing all these pages, you can change the translation preference again, deleting the GoLive preference, and replacing it with a mapping that links the HTML files to Internet Explorer. Now, clicking on the same HTML files will make them open in Internet Explorer.

Even with these tips, you’re still likely to encounter the odd file that takes a little more effort to open, but with File Exchange properly configured, most of the journeys your files take from Windows to the Mac OS should involve little more than a simple double-click.

Joseph Schorr

Program of preference

Each File Exchange program should open each document, by creating new translation preferences.

To set up a new preference, open File Exchange and click on the Add button (not shown). Then, target the file type you want to open – in this case, PC HTML files.

The new preference will automatically open the files in the program you chose, without prompting, as long as the second check box is turned on. To double-clicking on it will launch FileMaker Pro, putting the data into a new database. Change the end of the third field’s name to `.txt`, and the data will open in Excel. Alternatively, you can choose which program you want to use to open a specific file: by turning off the second check box in the PC Exchange window – the one that says Open Un-mapped Files On Any Disk Using Mappings Below. With that option
Apple’s wireless ethernet technology is great – let’s get rid of cables all together

Peter Worlock

N ow that some of the hype has calmed down, perhaps we can get around to discussing the really significant development from New York’s Macworld Expo, which was not the iBook but Apple’s Airport wireless networking technology. Airport looks like a genuine winning technology for Apple, if the company can get it out the door and into customers’ hands quickly enough.

Apple is riding the curve of an industry wave with Airport – while it may have come as a pleasant surprise to many in the Mac market, the underlying technology is – I believe – poised to become one of the biggest trends in the industry. As is often the case with new Mac stuff, Apple wants to promote AirPort as a Mac-only benefit, while simultaneously seeking to reassure everyone that it is also an open standard. Unlike a lot of other Mac stuff, though, with AirPort, Apple really can have its cake and eat it, too.

AirPort is a stylish implementation of something known horrifyingly as IEEE 802.11 HR DS, but behind that deadly bit of jargon lies a concept of beautiful simplicity: wireless ethernet. And some of the biggest names in the industry are climbing aboard.

AirPort, Apple’s own-brand variation, was created in conjunction with Lucent Technologies, one of the world leaders in communications and networking. Lucent is also a founder member of a new organization called the WECA – the Wireless Ethernet Compatibility Alliance – together with other giants including 3Com, Nokia and Intersil (formerly Harris Semiconductor).

The WECA is establishing an independent, industry-supported testing facility to ensure that all products conforming to the 802.11 standard are compatible. In other words, that your AirPort card from Apple will talk to a 3Com card in a Dell laptop, and that both will talk to wireless servers and routers from any other manufacturer. (Incidentally, if you were wondering about the other bits of that standard designation, IEEE 802.11 HR DS, here’s the explanation – and don’t say this column isn’t educational. The HR stands for High Rate; there’s another, already fairly common, variation of the wireless standard that works at 2Mbps compared with the 11Mbps of High Rate; the DS stands for Direct Sequence, as opposed to Spread Sequence. It really doesn’t matter what they mean: it’s just a different way of bouncing the wireless signal around.) What it all means in real terms is very, very exciting. Imagine checking into a hotel knowing that, instead of fooling around with dozens of different telephone adaptors for your modem, you will immediately, and automatically, get wireless ethernet links for collecting your email, connecting to the Internet, or logging into the office server. Imagine the same facilities at the airport while waiting for your plane. The infrastructure for some of those things is already in place. Several US airports have installed wireless networking technology, as have a number of the leading hotel chains in America; Europe will inevitably follow.

For those of us who don’t do a lot of jetsetting, the implications are no less pleasant: ethernet networks at home, without drilling walls and stringing cable.

I work from home, with two phone lines already, one of which is converted to BT’s Home Highway version of ISDN, the other running BT’s ADSL high-speed data trial. There are four computers, including laptops, and two printers and, believe me: I want them all networked as much as I do not want more cables. Wireless ethernet can’t happen quickly enough.

Even in less technomaniac households the need is there, and growing. With a family PC and one or more adults bringing laptops from work, the era of the home network has arrived.

Apple needs to get AirPort out of the iBook and into the business PowerBooks and the consumer iMacs. This is a technology for business users on the move, and for the home. It isn’t fast enough for mainstream business, especially in the creative industries, where Fast Ethernet is the norm, and it has major limitations in education, too (sharing an ISDN line or even a 56Kbps modem between two machines at home is one thing; sharing between ten or 20 pupils in a classroom is an exercise in frustration).

Apple’s early adoption of wireless ethernet is very smart. I really, really want AirPort – but you couldn’t get me to buy an iBook if you put a gun to my head. Following the news that AirPort is Power Mac G4 bound (see page 16), we must hope for the arrival of wireless PowerBooks and iMacs. Come on, Apple; fly first class, and take off with AirPort.

MW

Loot in AirPort