

reviews

IT companies seem to know just when to release products to ensure maximum exposure, and this month's *Reviews* section is something of an Adobe-fest. We look not only at **PAGEMAKER 6.5 PLUS**, the latest revision of this hugely successful package, but also at **INDESIGN**, the company's much-awaited challenge to the professional market dominance of Quark XPress. Fans of Windows alternatives will be keen to see what our resident Linux expert Chris Bidmead thought of

RED HAT 6.0, while for those happy with the Microsoft option, we lift the lid off

WINDOWS 98 SECOND EDITION. Iomega clearly believes that

small is beautiful: **CLIK!** holds 40Mb on a disk the size of an after-dinner

mint. **PSION** has lent us one of its **SERIES 5MX** palmtops, and

Personal Computer World is one of the

first PC magazines to look

at the latest fruit of

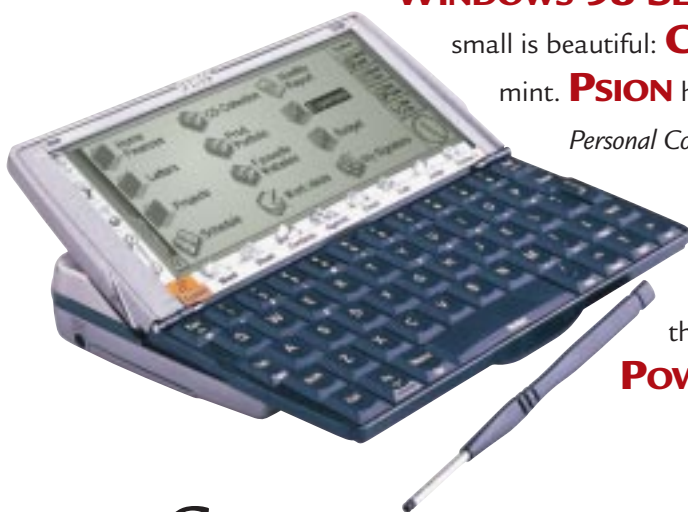
APPLE's labours,

the **400MHz**

POWERBOOK G3.

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VNU European Labs



VNU Labs tests all kinds of hardware and software, from PCs to modems to databases. All our tests simulate real-world use and for the most part are based around industry-standard applications such as Word, Excel, PageMaker and Paradox. Our current PC tests for both Windows 95 and NT are the SYSmark tests from BAPCo. In all our performance graphs, larger bars mean better scores.

Ratings

- ★★★★★ Highly recommended
- ★★★★ Great buy
- ★★★ Good buy
- ★★ Shop around
- ★ Not recommended

Adobe InDesign

Desktop publishing

BETA



Most of the **page layout** facilities you know and love in other packages, rolled into one.

InDesign was first revealed to the press in a series of secret briefings back in February. At that time, it was known by its codename, K2, and we were told that it is not just a new piece of software, but also a new *type* of software. Rather than being a single, large

the way it handles images. To minimise the size of your projects, images bigger than 48k are applied as links to the source file instead of being embedded in the document. Images smaller than that size, and text, are saved as part of the document layout.



▲ **COMPLEX LAYOUT IS SIMPLE WITH INDESIGN**

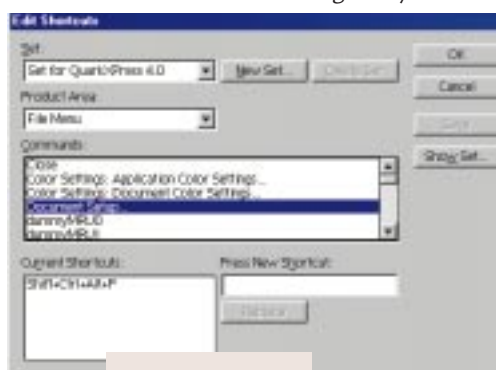
executable, InDesign is a very small piece of code controlling a multitude of plug-ins. This not only allows in-house programmers to develop company-specific features, but also means that, because developers will be working on smaller chunks of code instead of the whole program at any one time, they can develop and release Mac and PC versions of their plug-ins simultaneously, instead of with the familiar time lapse between the two.

To keep the software up to date, users will also have access to Adobe Online, which will check the Adobe web site and automatically download and install updates. The security-conscious can set this procedure to manual.

So what is InDesign? At heart it's a page layout tool. Although it allows the user to load, edit and save PDF documents, this is not the native file format which is, instead, a database of page objects. This is best illustrated in

➤ **The basics**

The first thing you'll notice about InDesign is its remarkable similarity to other Adobe products, particularly Photoshop and Illustrator, which have an almost identical interface and a similar set of keyboard shortcuts. Adobe has put a lot of effort into making it easy for users



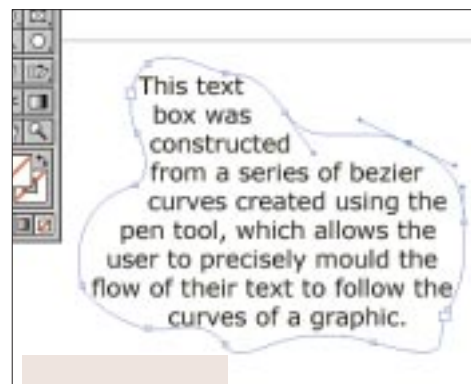
▲ **QUARK XPRESS USER? NO PROBLEM: CUSTOMISE YOUR INDESIGN SHORTCUTS**

of these two industry-leading packages to integrate InDesign into their workflow. The company is no doubt also aware that many Quark XPress users in publishing and design work with Photoshop as part of their daily routine and hope that this commonality may lure them away. With this in mind, InDesign includes the option of using XPress keyboard shortcuts, allows users to design their own shortcuts, and includes filters for importing documents created using XPress 3.3 to 4.0x and PageMaker 6.5.

InDesign is an extraordinarily versatile

package. Page sizes range from a minimum of 0.421 cm sq (equivalent to 1 pica or a sixth of 1 in sq) right up to 5.48m sq (1296 picas or 18ft sq).

PageMaker users may be used to a right mouse click toggling between 100% and full-page zoomed views. In InDesign, the right mouse button has been reassigned to context-sensitive menus. While this may take a few minutes to get



▲ **CREATE TEXT BOXES FROM BEZIER PATHS**

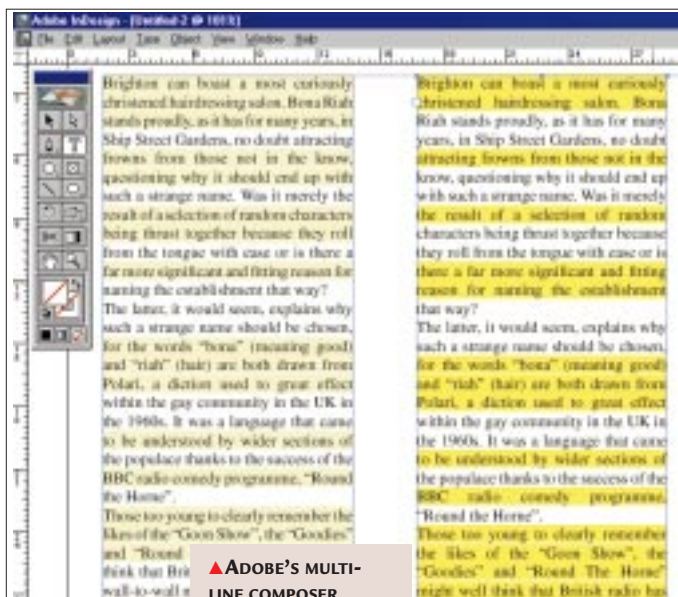
used to, zooming is still quick and easy. Holding Ctrl and space while

left-clicking temporarily activates the zoom tool, taking the user a single increment closer to the document — just like Photoshop. A text input box is also provided at the foot of the application window, allowing the user to zoom the document to between 5% and 4000% of original size for precise placement of page elements.

Combine this with the facility for opening multiple views of the same page in separate windows and at differing zoom settings, and you can easily see the effect changes on specific areas will have on the overall look of the page, without having to zoom in and out.

➤ **Images, text and frames**

It's a shame that instead of opting for a click-and-type approach to text input, Adobe requires the user to first define a text box. While these can be constructed using the standard Text or Frame tools, a much more interesting method is to



▲ **ADOBE'S MULTI-LINE COMPOSER HIGHLIGHTS UNBALANCED TEXT**

use the Bezier pen for precisely defined shapes, making it easy to fit text precisely around or into a complex graphic. Regular frames constructed using the standard text tool can later be modified using the pen in the same way.

InDesign text frames can feature intelligent columns. Once a frame has been defined, the columns within it can be set to resize with the box as the user makes it larger or smaller; or it can remain the same size but multiply so that the space remains filled by multiple columns of a uniform size.

InDesign's innovative multi-line composer balances text layout, making it easier to read and generally more pleasant to look at. It can be set to show only one line at a time, but normally this mode examines a defined number of lines before and after the line being worked upon simultaneously, adjusting each to balance the text. It favours even spacing, avoids hyphenation and assigns penalties to good and bad break points.

lines, the less balanced the copy. The more similar they are (in other words, the lighter and less frequent the yellow), the better. In the example shown above, the column to the right uses Adobe's single-line composer, while the one to the left uses the multi-line composer. The sharp contrasts between dark yellow and white in the right-hand example show at a glance that the composition is less balanced than that composed using the multi-line composer.

Adobe has invented a completely new character, the flush space. Many magazines place a character or small logo at the end of the last line of a feature. This is usually done in either of two ways. In one, the text is force justified so that even the last line aligns on both the left and right margins, even if that means it contains unsightly wide spaces between the words. In the second, the designer may drop the character onto the page in a text box of its own, which can be both fiddly and

messy. Adobe's flush space aims to resolve this. Placing it between the last full stop and the end-of-story mark, it expands to fill the gap, effectively right aligning the mark and leaving the last few words of the

This helps to decide whether a break in an alternative location would be more appropriate. At the same time, the text is highlighted in yellow to show at a glance how balanced it is. The greater the colour contrast between adjacent

InDesign recognises the PhotoShop clipping path and can use it to generate frames around an imported image to create text-flow boundaries. Not having any software capable of producing such paths is not a problem: InDesign's clipping path tool allows the user to apply a path to any imported image by specifying which parts of the image should be discarded, based on a user-defined colour intensity threshold. Anything lighter than the threshold selected is discarded and forms the boundary of the path. For speed, images can be dragged directly out of PhotoShop and Illustrator.

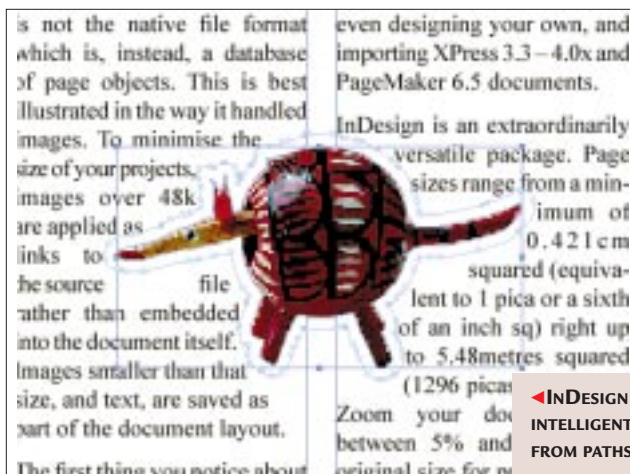
Adobe has also done away with the need for a cropping tool. No longer does the user need to place an image and then crop the edges — simply resizing the frame in which it sits will cut it down to size. Although only one page element can exist within a frame, there's nothing to stop the user nesting frames within one another, each with its own editable content. The effect is similar to that of 'grouping' elements within a graphics package, but far more versatile: the contents of the embedded frame can be moved around within its boundaries without affecting the larger frame into which it was placed.

Working with InDesign

The PDF file format is now a well established format in the publishing industry, and being an Adobe creation, it's hardly surprising that it is well supported in InDesign. It is fast becoming a common way for designers to transport graphics, such as advertisements, to publishing houses, and InDesign makes it easy for PDF files to be dropped straight into the document on which you are working. In this way adverts can be placed in magazines exactly as they were designed, no matter which package was used to design the ad.

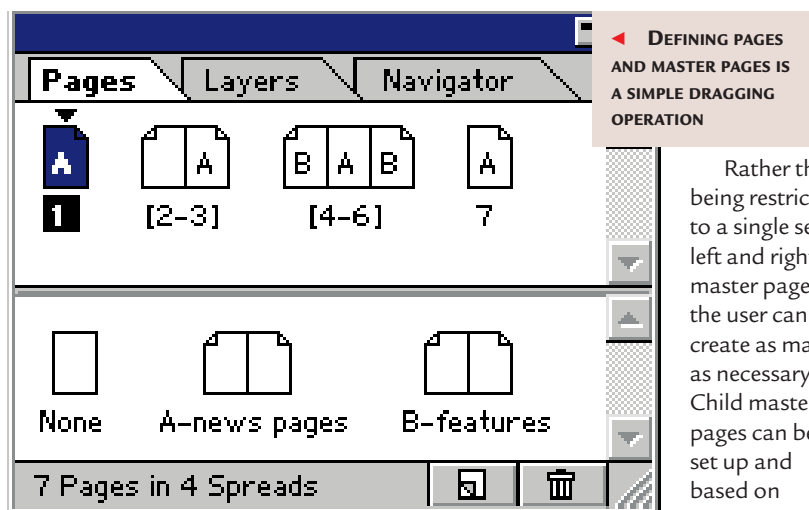
The PDF file can be set to have a transparent background so that the colour or underlying design of the page on which it is set remains visible; and once it has been placed, it can be rotated to any angle and have a clipping path applied as though it were a graphic.

Adobe has put a lot of effort into examining workflow procedures and working out how production time can be shortened. To this end, not only custom colours but also gradients, guides, and character and paragraph styles can be saved to ensure a uniform look throughout documents.



◀ **INDESIGN DRAWS INTELLIGENT TEXT FROM PATHS**

feature regularly spaced. Neat.



Paragraph styles define not only the font and size used, but also attributes — such as whether drop capitals should be used to open each paragraph — hyphenation rules, and even the language in which it is written (this is useful when you come to running the work through the spell-checker). Frequently used styles can be assigned keyboard shortcuts for fast access.

When defining gradients, the user can specify not only the colours through which it cycles, but also how quickly it changes from one colour to the next. Not all colours in a gradient have to fade at the same speed. Selecting multiple objects and dragging the gradient tool across them applies the gradient to the group as a whole, rather than to each item in turn. This makes the group look unified instead of like a collection of separate parts.

Gradients are defined by the frame boxes into which they are applied, so it's also easy to drop them onto words within frames and to change the characters later without losing the effect of the fade. This is because the characters act as a kind of mask through which the gradient is seen.

Moving objects around the page while keeping them in line with their original location is a doddle. Dragging with the shift key held down allows an object to move in one of only eight directions along 45-degree lines. Each page has its own pasteboard (the area around the edge onto which objects can be dropped while you rearrange things), rather than having to share a common board with the rest of the document. This provides a much greater sense of space, and avoids cluttering up your working area when you move onto a different page.

pages. Any change in the primary master page will ripple down and be incorporated into the subordinates. Master pages can be given names, which makes it easier to remember what they're for without having to open them.

To apply a master page, simply drag it from the master pages section of the page viewer, as in the example above, and drop it on top of a page in your document in the upper part of the same viewer. Similarly, existing pages can be used as the basis for master pages by dragging them in the opposite direction and dropping them in the master pages window. (Another thing to notice on the screenshot is that pages 4-6 have been grouped together as a gatefold spread that will fold out from the publication.)

Photoshop users are already familiar with the benefit of layers. Putting different types of work onto separate layers makes it possible to temporarily hide each individually as another part is worked upon. Similarly, different elements can be re-ordered by clicking and dragging them up and down the stack.

This does away with the need to use the 'Bring forward' or 'Send to back' commands employed by so many DTP applications. In creating InDesign, Adobe has made it possible to define the layers in a document on the basis of their content. As a result, the user can turn off, for example, all text while working on underlying photographs, and then reveal it once more while simultaneously hiding line art to simplify copy editing.

It also means that when creating multilingual documents you can place each language on a layer of its own, and switch it on and off as necessary when printing each version.

Rather than being restricted to a single set of left and right master pages, the user can create as many as necessary. Child master pages can be set up and based on primary master

Automatic adjustment

Few people or organisations will buy InDesign for one purpose and use it for nothing else. In many instances, it will be used for producing one design and then adapting it for use in a variety of alternative media. Perhaps a CD cover needs to be turned into a poster for advertising, and then from a portrait-format document into a landscape flyer for street distribution.

It is here that Automatic Layout Adjustment comes into play. Once an initial design has been completed, this handy utility allows the user to specify a different media size, either from the predefined selection or by entering custom dimensions. InDesign will then examine the original document, paying particular attention to rulers and guides, and redesign it to fit the new format.

In our tests this worked surprisingly well, particularly when making relatively basic adjustments such as changing from portrait to landscape format. It didn't resize our graphics, but then, nobody said you wouldn't need to do some tweaking yourself at some point.

InDesign features comprehensive preflight functions that will check through finished documents to ensure that all the necessary fonts, links and colour management profiles have been included to save costly printing delays. It generates a full report and allows the user to package everything for printing, including contact details and specific instructions for the printer.

Expressing itself

InDesign represents an immense step forward for page layout on the PC, and even in this extended review, it has been impossible to do more than give a general overview of what the package can do. Adobe is obviously making a big play for the Quark XPress market, and in providing these features at this price, it might just succeed in capturing it.

NIK RAWLINSON

PCW DETAILS

★★★★★

Price £468.83 (£399 ex VAT)

Contact Adobe Systems 0181 606 4000
www.adobe.com

Good Points Low price. Familiar interface. Extensive feature set.

Bad Points No table editor: spreadsheet importing functions are very basic.

Conclusion An extensive and versatile package that dramatically reduces the entry price for professional page layout tools.

Psion Series 5mx

Email palmtop



Another little winner that goes **a few steps further** in helping you to organise your life .

Psion is positioning its latest baby as 'the email palmtop for busy people', quoting research showing that 60% of mobile device use is for email alone, with 29% of European business users sending their mail through a mobile phone.

It's not surprising, therefore, that the company is keen to point out the integration of version 2 of its email package, which is built into the ROM, with support for multiple accounts and compatibility with Microsoft Outlook 97/98 and Lotus cc:Mail versions 6 and 8; and the ease with which the device can chat to a mobile phone using infra-red.

We're told that compatibility with Notes email too will be along soon, but in the meantime, the device allows the mobile professional to download Notes databases and has an integrated viewer for Word 97 attachments. With support for MIME for both incoming and outgoing messages, and for incoming UUEncoded attachments, it now has much of the functionality of many desktop email packages.

A new contacts manager integrates with the email package, allowing users to insert contacts directly into the email's 'To' field, and copy the incoming email addresses of 'From' fields back into the database. The device can also send and manage SMS messages.

The 5mx looks the same as the earlier Series 5, apart from the silver metallic painted finish. Under the hood, the changes are more substantial.

It has a faster processor, running at twice the speed of the Series 5 but consuming no more power, so Psion is still claiming an average of one month's use from a couple of AA batteries. With 16Mb RAM, it also has twice the amount of user-accessible memory. In layman's terms, if you use the integrated word processor, that equates to enough room to store about 4000 pages of text.

The screen, which has in the past been a bone of contention for many

users, has been improved, thanks to an upgraded backlight.

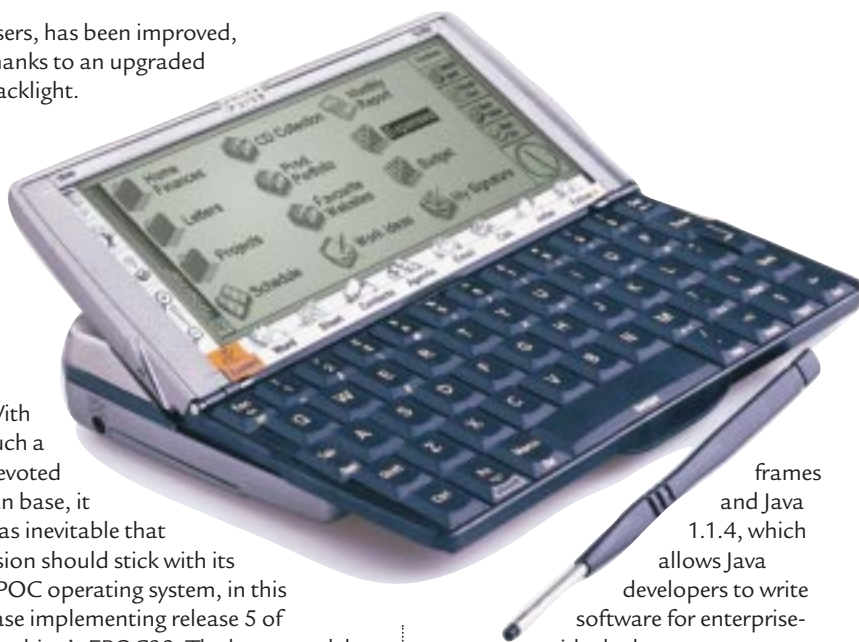
With such a devoted fan base, it was inevitable that Psion should stick with its EPOC operating system, in this case implementing release 5 of Symbian's EPOC32. The latest model also features the same excellent keyboard as the Series 5

The Word application has been updated to allow users to create personalised templates, including signatures and graphics, while the spreadsheet now has a sort function to organise data in ascending or descending order by any column or row. The Agenda has also been updated, with a 'busy bee' function that gives an overview of the week, blocking out bookings so users can see at an glance when they have free time.

To ensure maximum compatibility, the 5mx uses the

vCalendar format, based on an industry-agreed set of fields. vCalendar was developed in conjunction with vCard, the standard for electronic business cards, by Apple, AT&T, IBM and Siemens, so it is understandable that Psion has used vCard as the basis for its contact management module. Not only can users fax from the 5mx, and customise their cover sheets, but they can also initiate fax polling for faxback services.

The web browser now supports



frames and Java 1.1.4, which allows Java developers to write software for enterprise-wide deployment, encompassing everything from a workstation to a palmtop device.

In common with Windows, EPOC32 now includes a recent files list and a find files function that will search across both the internal memory and the compact flash for matches. And, as a nice final touch, you'll even find a set of batteries in the box.

The Series 5 was a winner from the start, with its good build and sturdy, well-supported operating system. The 5mx takes these strengths a step further and ensures EPOC's continued existence in a market that is quickly coming to accept Windows CE.

NIK RAWLINSON

Psion has produced a winning machine for the mobile user

PCW DETAILS



Price £429.95 (£365.91 ex VAT)

Contact Psion 0990 143050

www.psimon.com

Good Points Great keyboard. Builds on the strengths of the Series 5.

Bad Points Still only one angle for viewing the screen.

Conclusion Once again, Psion has produced a winning machine for the mobile user.

Macromedia Flash 4

Web design



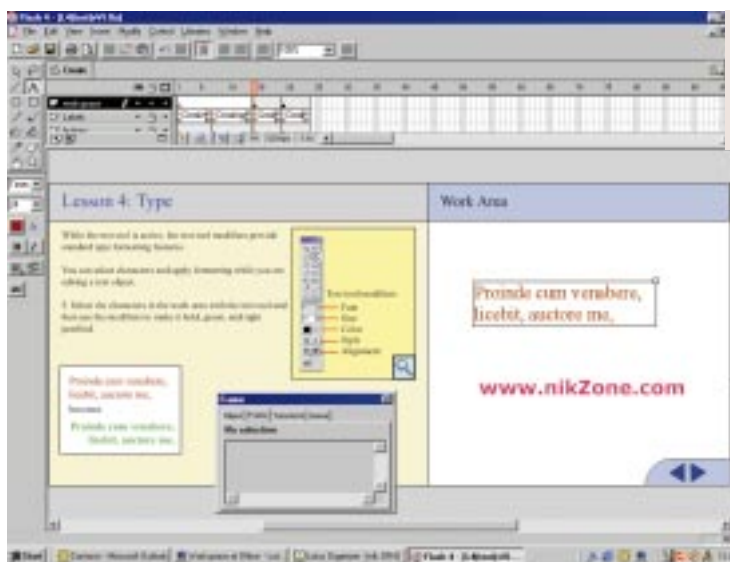
Bring your **web site to life** with this time and space saving movie-making tool.

The Flash player is included with most web browsers and operating systems, making this vector-based form of movie making almost as widely web-compatible as Adobe's Acrobat format used for document distribution. Flash is therefore a very viable format for inclusion on any site.

Version 4 brings a number of new time-saving features, as well as a whole host of tools to ensure your movie is as small as possible. One such tool allows the use of MP3 for audio compression between 8Kb/sec to 160Kb/sec, as well as a range of other audio formats. Such sounds can be placed on their own layer in the timeline and are represented by a graphical waveform, making it easy to coordinate on-screen events precisely with sounds. The package also includes a flexible library to store all your sounds and symbols — effectively objects created for use in multiple locations throughout the movie. Defining them just once and saving them in this way saves enormously on space.

Standard tools have a wide variety of supplementary options. The pencil tool, for example, often difficult to use in regular applications, includes straighten and smooth options for forming straight lines and smooth curves, which makes it easy to draw smooth arcs without resorting to drawing an ellipse and then cropping.

The brush tool includes a useful 'paint inside' option that will not fill past the boundaries, while at the same time not acting like the paint pot that insists on filling the whole area. The paint pot itself is intelligent enough to block even



◀ **THE FLASH INTERFACE WILL BE FAMILIAR TO USERS OF PREVIOUS VERSIONS**

commands and condition checking options. These functions are accessed from a simple front-end that writes all necessary programming scripts based on user-selected options culled from a dropdown list.

But the primary strength of Flash 4 is its handling of animation, and in particular 'motion tweening', in which the

user defines a start and end point and lets the software work out what to do to the on-screen objects to move them from the first position to the last without any user intervention. This saves not only time, but also space — Flash need not write every intermediate frame to disk.

Flash is also now able to handle motion paths so that objects can not only move along straight lines, but also follow complex paths defined by drawing the chosen route on-screen using the pencil tool. Symbols on such a path can be forced to orientate themselves towards the course of the path so that it looks as though a bird, for example, is flying forwards at all times and turning to face the flow.

Flash need not write every intermediate frame to disk.

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Excellent online lessons are included in the help menu

Flash need not write every intermediate frame to disk.

NIK RAWLISON

PCW DETAILS

★★★★★

Price £233.83 (£199 ex VAT)

Contact Computers Unlimited 0181 358 5857 www.macromedia.com/software/flash/

Good Points Widely accepted format. Faster than ever. Excellent online lessons included in the help menu.

Bad Points None.

Conclusion At this price, you can afford to add a bit of Flash to your online presence.

Carrera Cygnus 550

Big, fast storage



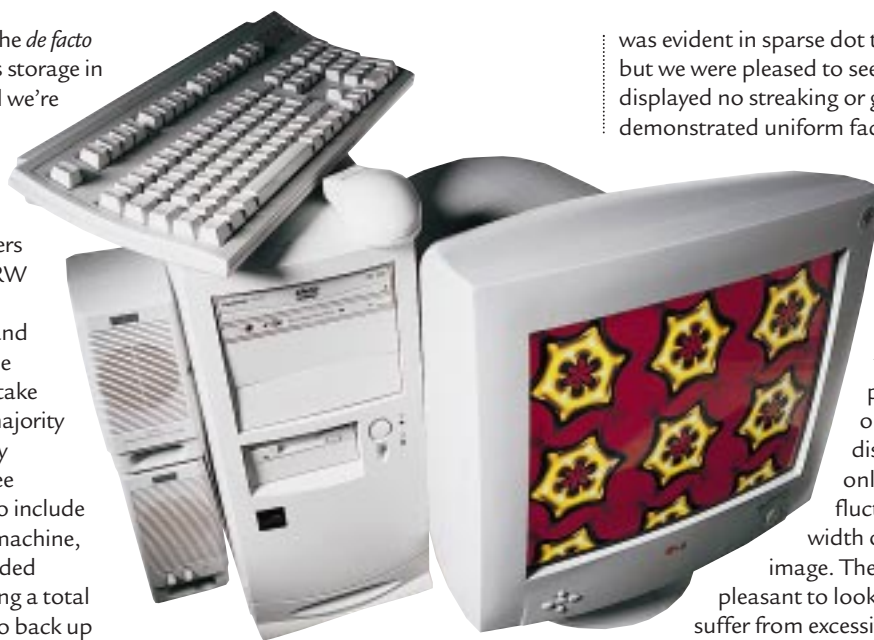
The inclusion of a **DVD-RAM drive** with huge storage capacities makes this an impressive system.

DVD is becoming the *de facto* medium for mass storage in modern PCs, and we're seeing the DVD drive replace CD-ROM drives throughout the market – even in budget machines. While we've had CD burners for a while now, and CD-RW drives to provide a viable alternative to tape drives and other backup media, home DVD recording has yet to take off in a big way, and the majority of drives sold are read-only models. It's nice then to see Carrera striking out here to include a DVD-RAM drive in this machine, complete with a double-sided cartridge capable of holding a total of 5.2Gb. This is enough to back up half the contents of the hard drive, an IBM Deskstar 14GXP clocking in at 10.1Gb and recommended, by IBM itself, for audio and video editing applications, thanks to a sustained data transfer rate of 13Mb/sec.

The drive itself is an interesting piece of kit. Insert a DVD cartridge and it acts as a removable drive D. Slide a CD through the narrow grooves in the middle of its oversized slot, which is much wider than we're used to seeing on front-feed CD-ROM drives, and it's recognised as drive E – two drives in one.

With access to such a generous capacity, one of the first uses that springs to mind is that of real-time video encoding, and Carrera has provided well in this area with an ATi All In Wonder 128 graphics card [reviewed, PCW July 99, p78]. This 16Mb card not only has basic editing tools for topping and tailing clips, but also supports real-time video compression that includes MPEG-1 and MPEG-2 formats.

It's no slouch when it comes to sound either, sporting a VideoLogic SonicVortex 2 card. This PCI device produces 3D positional sounds through headphones, two or four speakers, and has support for up to 320 MIDI devices.



Removing the case reveals what is perhaps the tidiest PC interior we've seen in the PCW labs. All cables are neatly folded and clipped out of the way, making access to the components a doddle. There's plenty of room for expansion too, with the 128Mb SDRAM supplied on a single module leaving two further slots free, so that with today's technology you can easily reach 384Mb without chucking out what you already have. To the front, there's a couple of free external 5.25in drive bays, which could come in handy if you choose to install any further removable media storage drives, and a spare external 3.5in bay.

Around the back there's the usual complement of input ports, including two PS/2 ports for the mouse and keyboard, two 9-pin serial ports, a couple of USB connectors and a parallel port.

The monitor is LG's excellent 17in Studioworks 795SC. Its extensive and well organised OSD includes horizontal convergence correction, but no option to do the same on a vertical plane. This is a shame, as its vertical registration was very slightly off in our DisplayMate tests, although it is unlikely that this would be evident in everyday use. Animated moiré

was evident in sparse dot test patterns, but we were pleased to see that it displayed no streaking or ghosting, demonstrated uniform fading of colour scales and had very good screen regulation. Although the image was not rock solid, the effect of placing bright objects on the display caused only minor fluctuations in the width of the overall image. The screen was pleasant to look at and didn't suffer from excessive reflection.

The core of the Cygnus is a 550MHz Pentium III, and connectivity is catered for through the inclusion of a Rockwell-chipped PCI modem. The Keytronic Windows 95 keyboard was comfortable to use for extended periods throughout our testing. In all respects this is an impressive setup, and one which we are loath to return to the manufacturer.

NIK RAWLINSON

PCW DETAILS



Price £1937.58 (£1649 ex VAT)

Contact Carrera 0181 307 2800

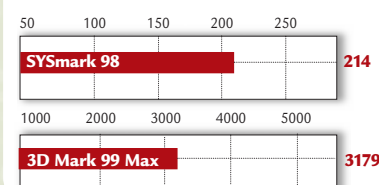
www.carrera.co.uk

Good Points A fast, well-implemented, huge storage device.

Bad Points None.

Conclusion Truly deserving of our Recommended accolade.

PERFORMANCE RESULTS



Apple PowerBook G3

Mega mobility



Apple's redesigned PowerBook G3 range offers **processing power and stamina** on the move.

At Apple's World Wide Developer Conference in May, Steve Jobs launched the new generation of PowerBook G3. Based on last year's dark and curvy models, the new range nonetheless raises the machines' speed to an impressive level. And in a move that will gladden the hearts of all notebook users, the two models are significantly lighter and last a very long time indeed on a single battery.

The technical specifications of both the new PowerBooks are generally excellent, and the higher-end model is particularly

attractive. The PowerPC G3 processor fitted in this notebook runs at 400MHz, with a full 1Mb of back-side (Level 2) cache on a dedicated 160MHz bus. The hard drive is a particularly fast 6Gb model (a 10Gb option is available), and a DVD-ROM drive is included as standard, with hardware support for DVD video built on to the motherboard. The base level of RAM has been increased to 64Mb, a welcome step up from the previous 32Mb, and it can now accept a maximum of 384Mb.

Upgrading is easy. Two small clips on the keyboard allow it to be lifted off.

Unscrew a protective plate, and the top RAM slot and the hard drive are right there for you to mess with. This uses industry-standard SO-DIMMs, so sourcing memory shouldn't be a problem. If you don't want the keyboard to lift off, you can lock it down from the back of the PowerBook.

The media bay on the right comes fitted with a 2X DVD drive (which runs at 20X for CD-ROM use) but can accept a second battery or other devices, all of

which are hot-swappable. Other media bay devices available include a Zip drive, an MO (magneto optical) drive and a SuperDisk drive. Apple isn't making floppy disk media bay devices any more, so for people still using these relics, a SuperDisk drive is essential.

The screen is the same clear 14.1in TFT (thin film transistor) active matrix device as found on last year's

Stunningly fast, the PowerBook G3 range includes features you'd only expect to see on high-end Macs

PowerBook G3. This is a 1024x768 pixel display, but now it can also display 800x600 and 640x480 resolutions smoothly interpolated across the full screen. There is a VGA-style external monitor port in the back

for connecting a second monitor — and this works for both video mirroring and as a true second display.

The trackpad is easy to use and supports tapping, clicking and click dragging, allowing users to navigate using a single finger, if they really want to.

The range of ports on the back is excellent when compared to other notebooks; the 56K V.90 modem is standard fare, but the 10/100Base-T ethernet port lets users plug straight in to virtually any network and move data around faster than most desktop machines. The IrDA port provides 4Mbps/sec infra-red connections with

compatible devices, but the lack of widespread infra-red support means most users will just use this for simple wireless networking with other PowerBooks.

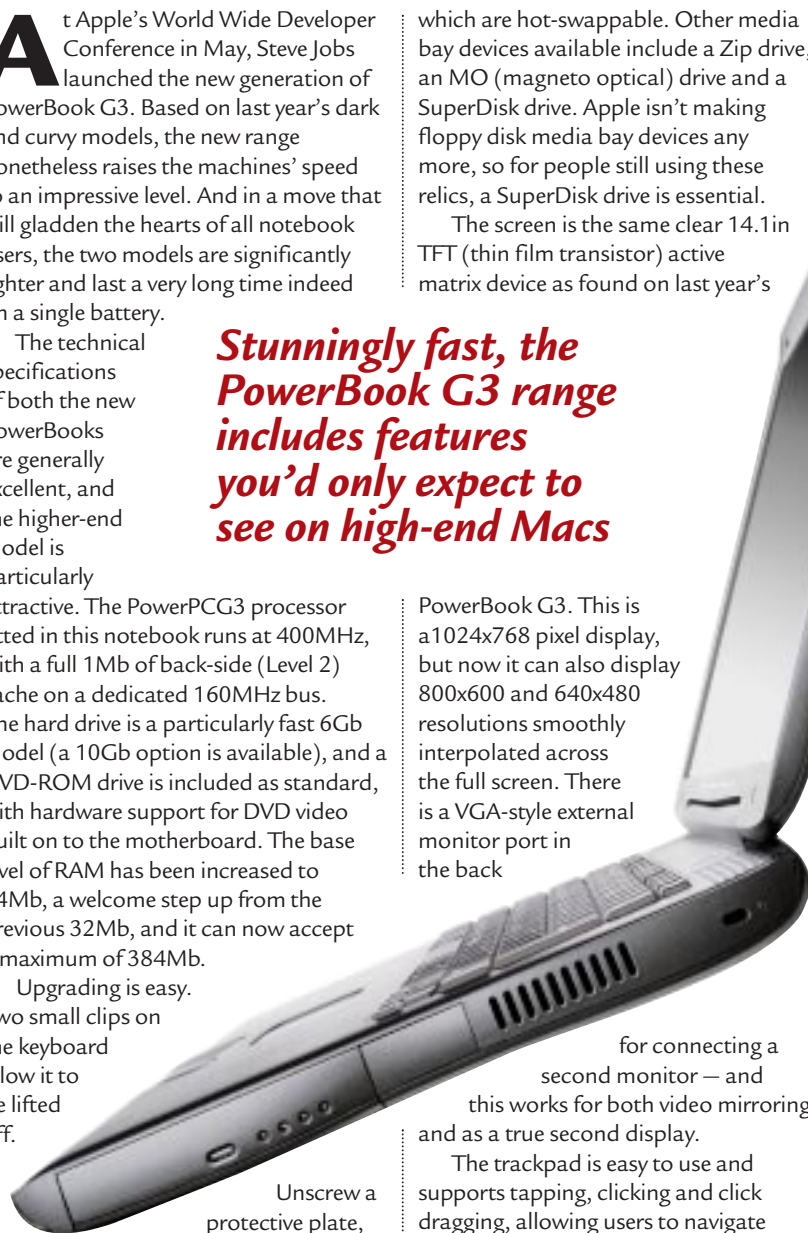
There are two USB ports and even a SCSI port (using Apple's PowerBook-specific 'high density' port format).

Apple has essentially turned its back on serial and SCSI in favour of USB and Firewire, but this last showing of built-in SCSI allows users to connect existing devices.

Firewire isn't included as standard, but Newer's Firewire To Go PC Card should be available by early June.

Battery life is an impressive five hours, a feat managed partly through improvements in the PowerBook and battery hardware, and partly by using the new Mac OS 8.6. (Some of the changes in the Mac operating system help make the CPU run cooler and more efficiently, a trick that also helps older Mac notebooks to an extent.) By using a second battery in the right-hand media bay in place of the CD/DVD drive, users can expect to get around 10 hours of continuous use without battery swaps. Doing high-powered Photoshop work on a balcony in Hawaii is now a reality!

KEITH BERRIEN



PCW DETAILS

★★★★★

Price £2,818 (£2,399 ex VAT)

Contact Apple Computer 0800 600 6010
www.apple.com

Good Points A very fast CPU. High-end technologies included as standard. Excellent battery life.

Bad Points No Apple-supplied floppy drive.

Conclusion If portable power and stamina are important to you, this PowerBook is a dream. It isn't cheap, but it is stunningly fast, and includes features you'd expect only on high-end Macs.

Red Hat 6.0 Official edition Linux-based GUI

Red Hat's latest graphical user interface helps to reinforce Linux as a **desktop OS**.

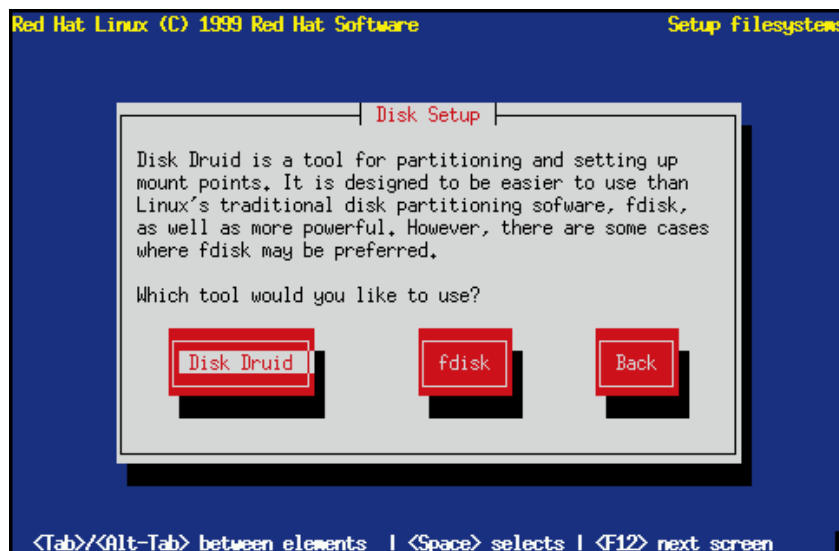
When readers of what was then this magazine's *32-Bit Computing* column pointed us in the direction of Linux almost five years ago, we would never have imagined — and neither, we think, would they — that the intriguing hackers' operating system would have come this far.

No-one who has been following the subject can be left in any doubt about the seriousness of Linux as a contender in the server operating system stakes. 'Ah, but it's not ready for the desktop,' a chorus of spectators has been chanting, much to the puzzlement of users who have been happily running Linux as a workstation for nearly half a decade.

The arrival of the new 2.2 Linux kernel has triggered a fresh round of distributions from Caldera (OpenLinux 2.2), SuSE (SuSE 6.1) and now Red Hat, with its version 6.0. These editions, with their superb new graphical user interfaces (GUIs), should be enough to finally settle the Linux-as-a-desktop question; and in this respect, the Red Hat offering leads the pack.

One of the aspects of Linux that often baffles newcomers is the way the X Window System (the 'glue' that connects the underlying operating system to its graphical front-end) opens up a huge choice of quite different GUIs. Red Hat 6.0 offers a selection of the main GUIs, in particular the two latest, Gnome and KDE. Both of these have a default configuration designed to make Windows users feel at home, but can be reconfigured in millions of ways.

We tested the installation of Red Hat 6.0 on two machines from opposite ends of the hardware spectrum. The first was the £300 ProMedia 300 from Bell Science, built around a Cyrix M2-300MHz processor. The second installation went onto a Siemens Celsius



2000 Workstation featuring a pair of 400MHz Pentium IIs. The ProMedia has 32Mb of RAM, the Celsius 256Mb.

Earlier Linux distributions had failed to automatically recognise the Bell Science machine's SMC EZ 10/100 network card and Silicon Integrated Systems' SiS5597 video chip. Red Hat 6.0 took both in its stride. The only issue we'd raise about the installation — a general Red Hat problem that has nothing to do with the Bell Science hardware — is a potential black hole for

▲ THE INITIAL INSTALLATION USES A SERIES OF CHARACTER-BASED DIALOGUE BOXES. THIS SCREEN OFFERS A CHOICE OF TOOLS — RED HAT'S OWN DISK DRUID OR THE REGULAR FDISK — FOR ESTABLISHING YOUR PARTITIONS

Any Linux-based operating system is a must for the user who wants to know what's really happening in computing today. Red Hat's offering leads the pack

beginners that was present in earlier Red Hat releases and still hasn't been put right. Very briefly, the problem is that towards the end of the installation routine you're offered a choice of two locations where you can install the all-important LILO bootloader. You might think /dev/hda5 (in this case, the Linux root partition) would be a good choice, particularly on a dual boot system,

because of Windows' proclivity to 'repair' the master boot record (MBR) at /dev/hda if it doesn't recognise it. Installing LILO on /dev/hda5 would certainly keep it clear of Windows, but unfortunately this is a 'logical partition', a subdivision of an 'extended partition' (in this case, /dev/hda2).

Unfortunately the standard DOS MBR doesn't know how to jump to a logical partition, so putting LILO there is a dead cert for a failed boot.

A better place for LILO in these circumstances is the boot sector of the extended partition, /dev/hda2, but the installation routine doesn't offer this option. You can fix this pretty easily by going into geek-mode, switching virtual consoles and editing /etc/lilo.conf by hand, but the Linux novice won't know that.

The Linux kernel has been able to make use of dual processors for several years now, and the Celsius comes with a regular Intel EtherExpress Pro 10/100 network card. So the only problem we



◀ **THE UNCLUTTERED, CLASSIC DESIGN OF THE DEFAULT GNOME DESKTOP. THE LAUNCH BAR AT THE BOTTOM SHOULD BE FAMILIAR TO WINDOWS USERS, WITH THE GNOME FOOTPRINT TO THE LEFT STANDING IN FOR THE 'START BUTTON'**

the network using a standard web browser. Another specifically Gnome-aware tool, **gnorpm**, is a graphical

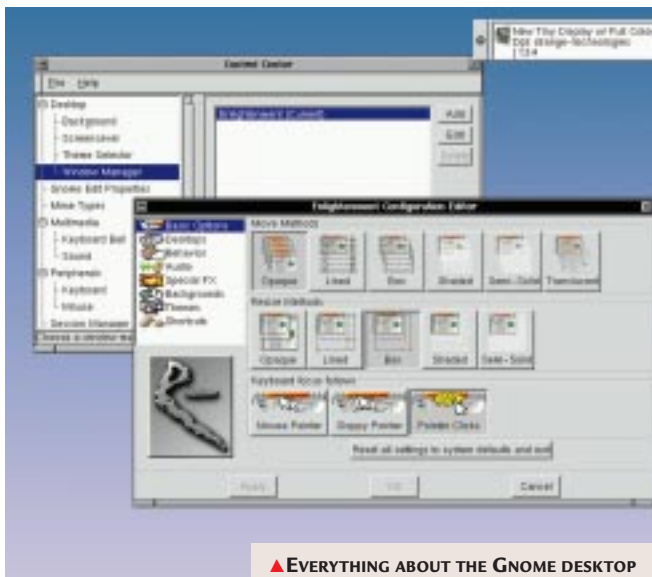
anticipated on this machine was with the high-end Diamond Fire 4000 Pro video card, discouragingly listed in the hardware compatibility guide as 'unsupported'. All this means, it turns out, is that the more esoteric features of the video card's Evans & Sutherland 3DPro chipset are inaccessible to Linux. As a high-class 2D graphics card capable of resolutions of 1024x768x16, the hardware works splendidly with the standard SVGA X server.

Red Hat 6.0 is set up by default to offer a choice of using KDE or the Gnome desktop. KDE is by now fairly familiar, but this was the first time we'd had the chance to run Gnome. It comes with its own set of applets, like the SlashApp and the Desktop Pager, and will of course run standard X Linux applications like StarOffice (one of many commercial applications bundled with the Red Hat Official distribution).

You can change the configuration of everything you set up during installation, either in the traditional Unix way by hand-editing text files, or by using the new graphical tool, **linuxconf**. This has the additional feature of being web-aware, enabling an authorised system operator to change, for example, the behaviour of the sendmail mail server from anywhere on

way of managing RPM (Red Hat Package Management) packages, now a standard way of controlling the installation and deinstallation of software. Like **linuxconf** it still has a few rough edges: for example, it will show you which packages are installed, but unlike Caldera's (alas now abandoned) Glint, it can't list just the as-yet-uninstalled packages available on the CD-ROM. It can only show all the packages available on the CD-ROM, leaving you to guess what you have and have not installed.

The Red Hat 6.0 official boxed version with two guide books,



▲ **EVERYTHING ABOUT THE GNOME DESKTOP IS CONFIGURABLE. CONFIRMED NEXTSTEP USERS LIKE THE LAUNCH BAR ON THE RIGHT, AND CAN EVEN CONFIGURE THE WINDOW FRAMES TO LOOK LIKE NEXT. THE TEXT BOX EMERGING FROM THE NEXT ICON IS A SEMI-LIVE TICKER OF HEADLINES FROM THE GEEK WEBSITE [HTTP://SLASHDOT.ORG](http://slashdot.org), AUTOMATICALLY UPDATED EACH TIME I CONNECT TO THE INTERNET**

Installation and Getting Started, and 90-day support is a bargain as an industrial-strength operating system, but hardly cheap by Linux standards. The \$85 US price has been translated

into roughly that many pounds over here, making this three-CD set well over twice the price of the equivalent SuSE 6.0 five-CD set. You're paying chiefly for the printed manuals and the support, and this pricing seems to suggest that Red Hat is steering you towards the \$40 no-support version you can only buy from the Red Hat website. Called Red Hat Linux Core, this comes with the full three-CD set and the *Installation Guide* only.

Experienced Linux users have a distinct edge here, because they will probably only need the no-support, no-manual, no-bundled-software version which comes on a single CD, obtainable here in the UK for £2.00 plus postage and packing. Beginners might prefer to buy this, supplemented by, say, a pair of books from O'Reilly: *Running Linux* and *Linux in a NutShell* <www.ora.com> for a total outlay of around £50.

CHRIS BIDMEAD

PCW DETAILS



Price £86.00 (£73.20 ex VAT). Includes delivery, but see above for some alternative pricing.

Contact The Linux Emporium
01491 837010 www.redhat.com

Good Points Powerful, easy-to-install Linux distribution with a choice of the very latest GUIs.

Bad Points Boxed version is expensive. Some install pitfalls for absolute beginners.

Conclusion The addition of Gnome to the choice of GUIs is a distinct advantage over Caldera 2.2 or SuSE 6.1, but essentially they're all Linux. Any of these is a must for the user who wants to know what's really happening in computing today.

System Requirements Any machine that runs Windows 95 (and many more besides) should be able to run Red Hat 6.0. Minimum memory requirement is 16Mb (4Mb at a pinch, 32Mb recommended) and 150Mb of disk space (1Gb recommended if you want to install everything). There may be some incompatibilities with the very newest hardware like 3D video cards — check the Linux Hardware Compatibility How-To at <<http://metalab.unc.edu/HOWTO>>.

Adobe PageMaker 6.5 Plus

Small-scale DTP

Easy-to use **desktop publishing** package that will suit first-timers and upgraders alike.

We opened our *Reviews* section this month with a look at InDesign, Adobe's attack on Quark XPress's section of the page layout market. We've also got our hands on PageMaker 6.5 Plus, which is aimed fairly and squarely at luring users away from Microsoft Publisher and other smaller-scale DTP packages.

It's not surprising, therefore, that this latest version of the already popular package includes filters for importing Microsoft Publisher and Quark XPress 3.1-3.32, which is a refreshing change — most packages use a proprietary format and refuse to talk to the competition. While InDesign may be more suited to laying out books or magazines, PageMaker is no slouch, being able to handle anything from a single-page flyer to a 999-page document.

To get novice or first-time users going straight from the box, Adobe has done two things. First, the Getting Started guide has been written in a chatty, easy-to-follow way, and includes not only software instructions but also tips on the effective use of clip-art, colours and fonts. Second, PageMaker opens by default to show the template selection palette — 300 page outlines covering everything from letterheads and invoices to business cards and envelopes. It's also bundled with 5000 photos and clip-art images, organised into a searchable library window.

Unlike the clip art supplied with many DTP packages, this is vector art produced using Illustrator, making it scale cleanly and accurately while retaining sharp edges, which would not be possible using the single-resolution images supplied with many competitor products. It's also a format that makes colour separations easy to define, and one that can be edited in-house for a personalised look.

Two generous freebies thrown in are PhotoShop 5 LE, a cut down version of Adobe's industry standard graphics package that now features layers like the full-scale product on which it is based, and Acrobat Distiller, so you can export your publication as a PDF file for net or



▲ THE FAMILIAR PAGEMAKER INTERFACE HAS BEEN REVAMPED

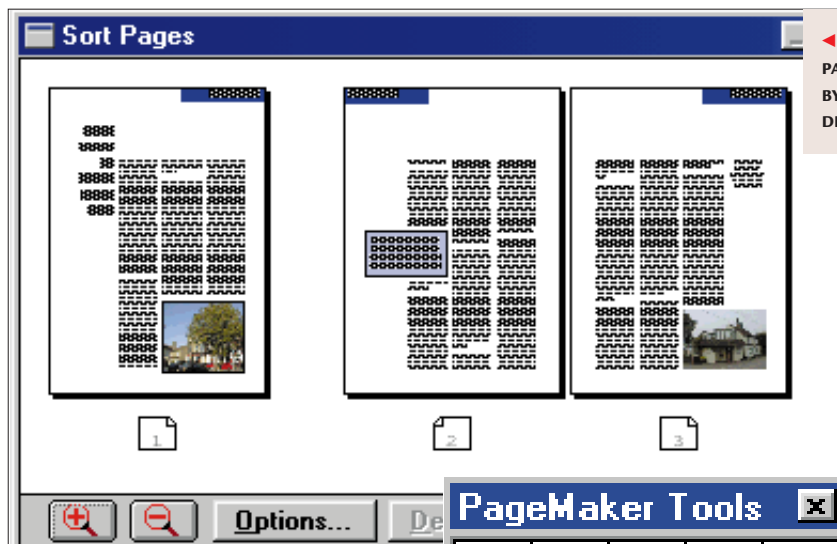
CD publication in this almost universally accepted format. It uses the latest Acrobat format, version 4, taking advantage of PostScript Level 3 coding for super-smooth characters and graphics. It also includes the option of exporting in HTML as a web page, although in our tests the results it produced were not particularly impressive.

That said, it should be remembered that this was never intended to be a web design package, and anybody buying it for that purpose is rather short sighted.

One feature that puts this product way ahead of many of its competitors is its dynamic use of styles, each of which is a collection of attributes including font faces, sizes and colours, and even the language you're using. Once a style has been applied to a



► CIRCULAR IMAGE FRAMES, BUT A RECTANGULAR TEXT FLOW



section of text, many DTP packages change the characters to that style and leave it there. PageMaker remembers the style that has been applied, and if you change that style at a later point it will dynamically change all of the text to which it has been applied, rather than forcing you to go back through your work and change everything again manually.

It also allows each style to have a 'followed by' style attribute defined, so that when the user hits return, it switches to the next specified style. This is particularly useful where a headline may always be followed by a subheading, saving the user having to switch manually.

Although images can now be dropped into circular or multi-sided polygon shapes rather than just squares, we were disappointed that doing this did not cause the text to flow tight around the border, but rather follow a rectangular path instead, which somewhat dilutes this impressive effect. Up to 256 master pages can be defined for use as templates in your publication.

Adobe has also recognised that where a set of facing master pages has been defined, some users might want to apply only one half. This is now possible, by holding Alt while clicking the page to be applied. The facing page will then be left blank. At any point in the production process, users can

rearrange the order of their pages simply by dragging them from their original positions in the overall document, making it easy to insert full-page adverts in a magazine, or inserts in a

multi-page letter or dissertation.

It also includes a variation on the Auto Layout function found in InDesign. Once a document has been designed on a specific paper size, the media can be changed and PageMaker will do its best to rearrange the content to fit the new format. In our tests this worked particularly well when changing from portrait to landscape format and vice versa, but the finished document always needed a little tweaking.

Another time-saving device is the PhotoShop-esque use of layers. Most

DTP packages expect the user to 'Send to Back' or 'Bring Forward' page elements from an arrangement menu, but this can be a laborious time-wasting task.

The layers concept effectively presents a cross-section of the page, allowing the user to grab on to a particular layer with the mouse and drag it up and down the

REARRANGE
PAGES ON-THE-FLY
BY DRAGGING AND
DROPPING

stacking order. It is possible, of course, to place more than one object on a layer, and for this reason the conventional menu-

based rearrangement options remain, but their effect is confined to just the current layer.

This accelerated way of working also makes it possible to temporarily make individual layers invisible — hiding text while underlying photographs are worked on, for example. It also means that, as with InDesign, you can create a multi-language document, placing each language on a different layer, and turn each language 'on' and 'off' as appropriate for each print run.

In older versions of PageMaker, right-clicking would toggle between 100% and full-page views. This has now been replaced so that a right click brings up a context-sensitive menu, duplicating many of the palettes that it would otherwise be necessary to keep open, thus saving on valuable screen real estate. Zoom controls remain close at hand though, with 100% and full-page buttons on the new toolbar.

In all, PageMaker 6.5 Plus is an impressive product that builds on the success of its previous incarnations. Adobe has obviously thought long and hard about the improvements it could make without losing the essence of a product that is already hugely successful and familiar to so many devotees. First-time DTP users will find this a great tool to get started with, while there should also be enough new features here to warrant existing users upgrading to this latest version.

NIK RAWLINSON

PageMaker is able to handle anything from a single-page flyer to a 999-page document

PCW DETAILS

★★★★★

Price £351.33 (£299 ex VAT)

Contact Adobe 0181 606 4000

www.adobe.com

Good Points Generous bundle. Easy to use. Easy to follow Getting Started guide.

Bad Points Rectangular text flow boxes around irregularly shaped page elements does not allow for smooth flowing of text around edges.

Conclusion Improves on an already successful product. Great for the first-time user. Worth upgrading for.

Big Red Zeddex

Big-value PC

A small form factor PC with a **TFT flatpanel** screen, this is a budget option for a niche market.

Over the last fifteen years or so, electrical appliances such as personal stereos, mobile phones and hi-fi's have got progressively smaller. So it seems odd that in that same period of time, aside from the notebook, the desktop/tower home computer has essentially remained the same size. The invention of the TFT flatpanel screen removed one of the size barriers a few years ago, but until recently, the standard beige box was king.

Small form factor PCs are still looking for their niche in the market. Aesthetically pleasing, they fit well in an environment where looks are important, but to many people they are let down by their limited upgrade potential, and price.

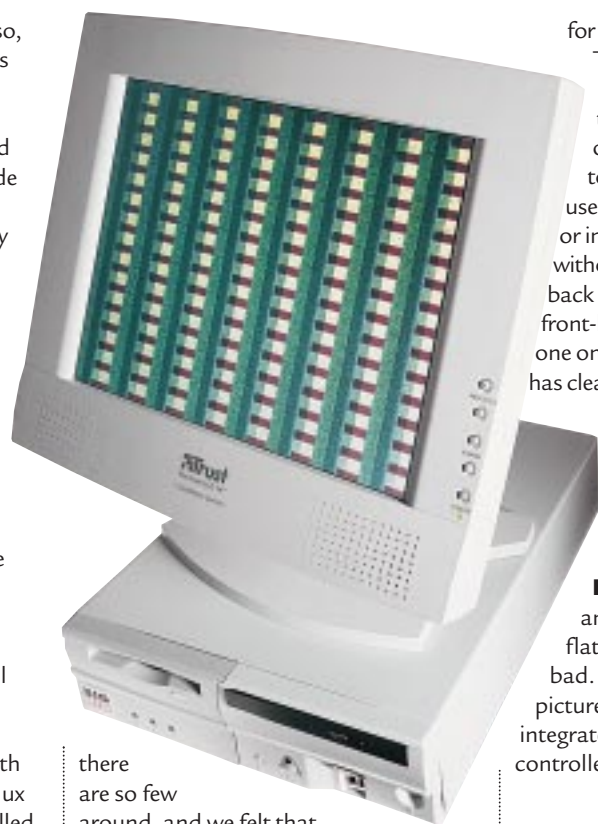
This offering from Big Red

continues the theme, offering a small form factor PC with a TFT flatpanel screen. Unusually, the Zeddex is optionally twin bootable, coming with both Windows 98 and Red Hat's Linux 5.2. If you opt to have Red Hat installed but shun the offer of installation CDs, Big Red will even do this for you for free.

This essentially sets its stall out as an office network machine, and the inclusion of a 10/100 network card built-in on the motherboard confirms this. So, as an office machine, you might also expect that the Big Red should be approachable and not too fiddly in the event of something going wrong.

Unfortunately, the manual was generic and not specific to the model, and the limited documentation disappointed us.

In addition to that, having looked under the bonnet, we struggled manfully with the case for several minutes before we managed to get a smooth fit. It's difficult not to compare one small form factor PC with another, especially as



there are so few around, and we felt that in this case, in terms of case design and build quality, the Big Red fell a little short of the Compaq reviewed in July's PCW.

Big Red has plumped for a Celeron 333MHz processor instead of a Pentium II or III, with the latter being more popular, at least in business machines. With 64Mb of SDRAM and a Seagate 6.4Gb UDMA hard-disk drive, the specifications are

fairly entry-level. We ran the usual tests on it, SYSmark 98 and 3DMark 99 Max, and the results were average for a system of this type. Graphics are supplied courtesy

of an on-board AGP ATi Rage Pro 2x, and audio, also on-board, uses a PCI Yamaha DS-XG. Upgrading is limited, at least internally, with just one shared PCI/ISA slot (used by the modem) and one PCI slot free on the Intel 440ZX motherboard, although you have to expect this if you opt

for this sort of compact computing. There is also one spare DIMM for memory upgrades. Externally, the inclusion of two USB ports on the front of the case was a nice touch, one which enables you to use a USB keyboard and mouse, or indeed any other USB device, without having to reach round the back of the case. As well as the two front-loaded USB ports, there is also one on the back of the PC. Big Red has clearly gone for the USB option: its hot-swappable and plug-and-play nature is definitely appealing, and it's a lot less space hungry than a serial port (of which there is one.)

Flatpanel TFTs are all the rage, and although this is neither the flattest nor the sleekest, it isn't too bad. The OSD is easy to use and the picture is fine: the Trust also has integrated speakers, with the volume controlled by the on-screen display.

JIM HARYOTT

The Zeddex offers a small form factor PC with a TFT flatpanel screen

PCW DETAILS

★★★★

Price £1173.82 (£999 ex VAT)

Contact Big Red 0181 245 2456

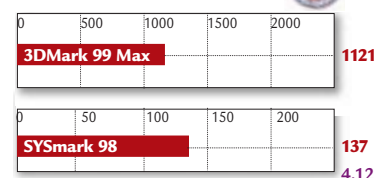
www.bigred.co.uk

Good Points Size. Great price.

Bad Points Build quality. Poor documentation.

Conclusion The Big Red Zeddex is excellent value, but slightly let down by the build quality, upgrade potential and lack of documentation. But as a niche product aimed at a niche market, it's a definite budget option.

PERFORMANCE RESULTS



Creative 3D Blaster Savage 4

A 2D/3D graphics card that will run anything the dedicated gamer cares to throw at it.

Graphics cards come and go with alarming regularity, fuelled by rapid technological advances and the insatiable

hardware appetite of the gaming fraternity. Just when we stopped swooning at 16Mb of memory becoming the rule rather than the exception, along comes the 32Mb graphics card.

The 3D Blaster Savage 4 is one of the latest releases from Creative, boasting S3's new 128-bit Savage4 processor. With newer and more high profile chips such as nVidia's TNT2 and 3Dfx's Voodoo 3 also flooding the market, it has a lot to live up to. We ran the usual 3DMark 99 test on the Savage 4, but it was interesting to note that the performance, although fairly impressive, was not up there with the Voodoo 3 or TNT2 chips. But if price is a



consideration, then you could do worse than the Savage 4. At £99 including VAT it's a gamer's alternative, and it has some other

nice features too, most notably the inclusion of S3's texture compression technology (S3TC.) Put to the test on Sierra's recent hit Half-Life, the extra detail and definition was pretty impressive. With 32-bit colour, dual texture pipelines and a 300MHz Ramdac, it is sporting some pretty up-to-date technology, although it's only AGP 2X, whereas the motherboards of the near future will be supporting AGP 4X. For DVD users, the Savage 4 supports features like motion compensation and colour-space conversion.

The Savage 4 was never meant to be top of the range — that accolade, in this range, goes to the recently released 3D

Blaster Riva TNT2 — but, with the option of both PCI and AGP versions, and a £90 price difference, it's clearly going to appeal to those on a tighter budget.

JIM HARYOTT

PCW DETAILS

★★★★★

Price £99 (£84.25 ex VAT)

Supplier Creative Labs 01245 265265

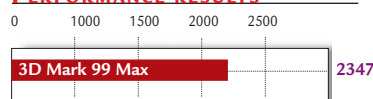
www.creative.com

Good Points Price. Texture compression. 32Mb of RAM.

Bad Points Not the fastest card about. AGP 2X.

Conclusion The Savage 4 may not be the fastest card in the graphics-card pack, but it will happily run anything any current game throws at it, supporting both DirectX and OpenGL. As a 2D/3D card, it is good value and a fair performer.

PERFORMANCE RESULTS



Windows 98 SE

The Windows 98 Second Edition contains updates and the all-new Internet Connection Sharing.

Windows 98 has morphed into Windows 98 Second Edition. It contains minor alterations, some updated sections, and one new addition that will particularly suit internet users, of which more in a minute.

Second Edition packages all of the Windows 98 bugfixes shipped to date together with Internet Explorer 5, Outlook Express, DirectX 6.1, NetMeeting 3, Windows Media Player 6.2, lots of new hardware support, and the all-new Internet Connection Sharing (ICS) service. The Year 2000 fixes are timely, while the hardware bugfixes for USB and ACPI support will be most welcome to users whose USB devices occasionally drop off the map or who sometimes find their ACPI machines becoming comatose under Windows 98.

New support for high-speed internet connections via cable modem and ADSL will appeal to those lucky enough to have



a cable modem or access to the trial of BT's high-speed ADSL internet connection. And they're a good fit for the Internet Connection Sharing service, the only truly new feature in Windows 98 Second Edition. ICS allows a group of networked Windows PCs to share one internet connection.

Operating like a software router, ICS supports modem connections too, but it's best to use a faster digital connection such as ISDN or BT Highway if you want

more than one person to be able to surf the web at the same time. You won't need to buy Windows 98 Second Edition unless you set your heart on ICS, as virtually every other component can be downloaded from Microsoft's website.

Windows 98 SE can be ordered on CD, either as an upgrade for Win95 and Win3.1, or as the Windows 98 Second Edition Update for current Win98 users. SE will also be making its way into the food chain through pre-installs on new PCs.

TERENCE GREEN

PCW DETAILS

★★★★★

Price Full version: £160.98 (£137 ex VAT);

Upgrade: £85.69 (£72.93 VAT)

Contact Microsoft 0345 002000

www.microsoft.com

Microtek ImageDeck

What's the point of a scanner that you **can't connect** to a PC? Well, it leaves us baffled.

Microtek seems to be following Hewlett-Packard's lead in attempting to wrap peripherals in fluffy consumer-friendly packages. The ImageDeck is a strange beast, a standalone 'Scanning Appliance' that needs no PC, and in fact can't be connected to a PC for use in conventional fashion at all. It has a printer port for using the unit as a direct copier, as well as integrated floppy and 100Mb Iomega Zip drives for saving scans. The packaging makes great play of the fact that no PC is required to use it, but if you haven't got a PC, what are you going to do with the saved scans?

The ImageDeck is controlled by an array of front-panel buttons and a three-digit numeric LED display. For this price we'd have expected a more informative



dot-matrix LCD. With its inability to preview scans, the only options you have as far as scanning area goes are Letter, A4 and Auto. Auto mode works well enough, but if you need to scan a particular area of an A4 document, you're out of luck.

Maximum optical scanning resolution is 600x600dpi, and quality is perfectly adequate for the kinds of job for which the ImageDeck is intended. It's supplied

with Caere PageKeeper standard and OmniPage LE as well as Ulead PhotoImpact. Scans are transferred to the PC via floppy or Zip disk.

There's no escaping the feeling that the ImageDeck is a gimmick, and with its high price and limited functions, it's impossible to recommend.

DAVID FEARON

PCW DETAILS



Price £469 (£399 ex VAT)

Contact Microtek 01908 317797

www.microtek.nl

Good Points Reasonable scan quality. Auto scan size works okay.

Bad Points Can't be connected to a PC. No ability to preview scans. Three-digit display has limited functionality.

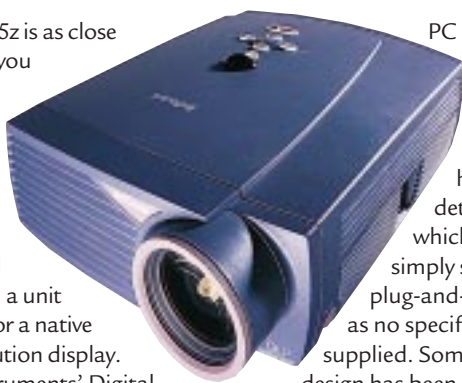
Conclusion For a scanner, operating independently of a PC is more of a handicap than an advantage. It's too expensive for what it is, and frankly, we can't see the point.

InFocus LP435z projector

Great remote control and intuitive auto settings in a **sleek and discrete** portable package.

The InFocus LP435z is as close to portability as you would want to come without losing essential features or the quality afforded by other projectors. The presenter on the move receives a zoom lens and remote control facility in a unit weighing a mere 3.4kg for a native XGA (1024 x 768) resolution display.

Adopting Texas Instruments' Digital Light Processing technology provides, among other benefits, brightness measured to typically produce 1000 ANSI lumens; meaning, in effect, that you will no longer need to dim the lights during presentations. Initial setup is a breeze, much assisted by the Cable Wizard, allowing connectivity to a variety of input systems through its multi-adaptor functionality. Switching on your



PC after the projector is connected and powered will ensure a hardware detection to which you can simply select a default plug-and-play monitor as no specific profile is supplied. Some inspired design has been spliced with practicality to provide glowing settings buttons, an adjustable leg for up to a 16-degree angle of projection, and a rear-placed speaker for token sound. A 400:1 contrast ratio ensures the image quality is bright and rich with up to 16.7 million colours, projected without banding or grain effects. However, if you choose to project at a slant horizontally or vertically to the screen, you have no correctional

facility for any distorted parallelogram effects. Granted, you would mostly project perpendicular to your screen, but you might wish to ceiling-mount the unit at a larger than average mounting angle, and for almost £5000 this correction facility should be available.

IAN ROBSON

PCW DETAILS



Price £4935 inc VAT (£4200 ex VAT)

Contact In Focus UK 0181 213 2100

www.infs.co.uk

Good Points Intuitive auto settings for display. Excellent remote control functionality.

Bad Points Lack of keystone correction (for parallelogram effects). Noisy cooling fans.

Conclusion A beautifully projected image with intuitive setup in a sleek and discrete package priced accordingly.

Tax 99 vs Which? TaxCalc Revenue software

We compare two packages designed to help you complete your tax returns.

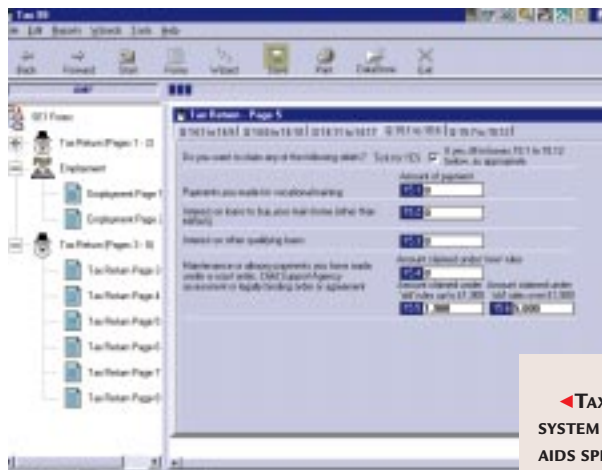
If there is one time of the year postmen dread more than Christmas it must be the days immediately after 5 April when they are laden with A4 size packages wrapped in slippery polythene from the Inland Revenue. We look at two applications that may one day make this a thing of the past.

Tax 99 has a few minor annoyances. In the employment section, for example, it asks for the age of the company car instead of the date of registration. Presumably, this means on 5 April and not the date on which the form is completed but it could be misleading if the car is approximately four years old. Which? TaxCalc is more precise, asking if the car was four years old or more at the end of the tax year.

There is, however, one potentially misleading section in the TaxCalc package, and users must be careful to read the help screens when calculating car vbenefit and care fuel benefit if the vehicle was not available for the whole year. Tax 99, on the other hand, asks only one question, 'How many days was the car available?', eliminating any

misunderstanding.

Both packages contain all the sheets you need to complete the tax return and as



◀ **Tax99's**
SYSTEM OF TABS
AIDS SPEEDY
NAVIGATION

both are recognised by the Inland Revenue, there is no need to transfer the data onto the return produced by the Revenue. TaxCalc produces a high-quality colour return that looks very professional compared to the black and white version produced by Tax 99.

But while Tax 99 produces the whole report, including supplementary pages with just one command, TaxCalc produces only the main report and you then have to select the others pages manually. These pages should really have been printed automatically, as they contain information and are obviously required.

Both packages feature a navigator but Tax99 also has tabs on each section referring the user to the actual question numbers on the Revenue's return. This is particularly helpful if you need to refer

to the Tax Return Guide supplied by the Revenue.

In most instances, the help screens provided are adequate. However, there is a discrepancy in Tax99's help on questions 15.5 and 15.6 regarding maintenance payments. The input screen correctly shows the threshold for 15 percent tax relief under the 'old rules arrangement' at £1900,

whereas the help screen has not been updated from the 1997/98 figure of £1,830.

Overall, we found the Tax 99 package is easier for the beginner to use and it has some nice additional features such as a calculator, interest calculator and a Self Assessment diary. Because of the possible

confusion over the company car benefit calculation and the possibility of underestimating the tax liability on TaxCalc, we felt a

little more confident about the return prepared using Tax 99. Apart from this, the TaxCalc version gives a much more professional look, with the colours and format following the Inland Revenue version exactly.

SHEILA FRANKLIN

▼ **A**
PROFESSIONAL
LOOK IN INLAND
REVENUE COLOURS
FROM TAXCALC



PCW DETAILS

★★★★★

Tax 99

Price £24.99 (£21.27 ex VAT)

Contact SB Publishing 0161 630 7000

www.sbpublishing.co.uk

Good Points Specifically relates all questions to the numbers on the Inland Revenue return, making it very easy to use.

Bad Points Some inaccuracies in the help information.

Conclusion A well-designed package that should provide all the assistance necessary to meet the Revenue's requirements.

★★★

Which? TaxCalc 99

Price £29.99 (£25.52 ex VAT)

Contact IDP 0990 084201

www.idp.co.uk

Good Points Creates a professional-looking document.

Bad Points Supplementary pages could be forgotten as they have to be selected for individual printing.

Conclusion An end result that is pleasing to the eye but not quite so user-friendly.

Clik! Drive Plus

You can store a surprising amount on this **tiny disk drive** for desktop and digital camera owners.

Iomega is a big player in removable storage. From the lowly Zip 100 to the data-gobbling voracity of the Jaz 2, the company has something for almost everyone. And with the introduction of Clik!, Iomega aims to remove that 'almost'.

Clik! media are diminutive disks no bigger than an after-dinner mint. But their size belies their capacity: a Clik! disk won't retch until it has gorged itself on 40Mb of your files and documents. However, before you can start feeding them, you'll need to buy a drive — and the Clik! Drive Plus is the flagship model, aimed at digital camera-owning notebook and desktop PC users.

It comes in several parts. The drive itself is pocket-sized, and connects to a



you to zap the contents of either a SmartMedia or CompactFlash card over to an inserted Clik! disk. Since the Clik! Drive Plus also includes a rechargeable battery, this particular feature should appeal to digital camera users — bought

PC via the parallel port. Pop a Clik! disk into this and you can read and write data at an average transfer rate of around 600Kb/s — not blistering, but fast enough to fill a disk within a minute. Piggy-backing the drive when required is a flash memory card reader, which allows

in quantities of 10, Clik! disks cost just £7.99 a piece, compared to the £50 or so a 32Mb flash memory card would cost.

Finally, although Clik! disks are tiny, they are surprisingly sturdy. They are encased in rigid metal and each comes in its own tough plastic case, rendering them pretty much immune to knocks.

SCOTT COLVEY

PCW DETAILS

★★★★★

Price £249.00 (£211.91 ex VAT)

Contact Iomega 0800 973194

www.iomega.com

Good points Compact, sturdy disks; cheap storage medium for digital camera owners

Bad points Drive quite costly; rather sluggish performance

Conclusion The Clik! Drive Plus is a tad on the expensive side, but the Clik! concept is so good that it just has to catch on.

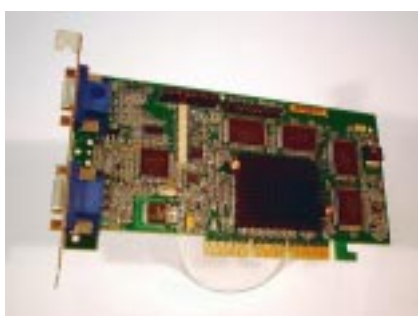
Matrox Millennium G400

Vibrant colours and dual display should make this **3D graphics card** popular with gamers

Early 3D products from Matrox were no match for rival 3Dfx's Voodoo accelerators and its G200 cards still lack the performance required by today's top titles. The Millennium G400 is the company's latest attempt to get back to the front of the PC graphics scene.

Based on Matrox's new G400 processor, the Millennium boasts either 16Mb or 32Mb of memory and resolutions of up to an impressive 2056 x 1536 pixels. True 32-bit colour is available in all modes, twinned with an improved version of the company's VCQ (Vibrant Color Quality) system for colour rich images. The card is optimised for AGP 2x and 4x, and renders scenes three times faster than its predecessor.

A 'DualHead' display option lets you connect two monitors or a monitor and



TV. You can split applications across two screens, or show DVDs to your kids on the telly while you get on with your work.

The G400 can handle textures up to 2048 x 2480 pixels in size. This compares favourably with rivals (and is better than Voodoo3 cards), and could provide a vast improvement in image quality in games and multimedia titles. Matrox has also incorporated environment bump-mapping, essential for producing realistic environments such as hills and water effects.

Of course, all this is nothing without real world performance and in our Labs tests the G400 outclassed both Savage 4 and TNT2 cards. But while the G400

produced high quality images, 3Dfx's Voodoo3 chip still has the edge in terms of frame rate.

CHRIS CAIN

PCW DETAILS

★★★★★

Price 16Mb £116.32 (£99 ex VAT) 32Mb £151.57 (£129 ex VAT) 32Mb Max version £186.82 (£159 ex VAT)

Supplier Matrox 01753 665500
www.matrox.com

Good Points Solid, stable and vibrant images; handy dual display option

Bad Points Tested 16Mb version still slightly slower than equivalent Voodoo cards

Conclusion Well-rounded, feature rich; will be a popular choice with PC gamers.

PERFORMANCE RESULTS



Magix Music Maker Pro

Sound manipulation

Even amateurs will find it easy to **create harmony** with this internet-compatible package.

Making music on your PC has become progressively easier over the last few years. Many of the packages on the market, however, tend to compromise on features in favour of ease of use, simply so that they can claim they will make you a master composer in one sitting. The challenge then, is to create a program that retains a simple interface, while making more complex sound manipulation possible.

With its pioneering track record (no pun intended) Magix claims it has risen to this challenge with each product in its range. The company has gone on to provide a more professional application, aimed at the home user and the professional alike.

With Music Maker Professional, the user gets a complete solution for multimedia production, incorporating sound design, video production and streaming internet content. The accompanying manual is surprisingly thin, although clear in its explanations and written in an amateur-friendly style.

Using up to 64 tracks on the digital arranger, you can create professional output and achieve studio quality sound. It is an easy package to get to grips with, although as there is so much it can do, you have to be prepared to set aside a few hours for a full exploration of what you can produce.

Even applying advanced effects to sounds is easy with this package. The interface is set out in a similar fashion to a word processor, with drop-down menus laid out at the top displaying the program options. There is also a colour toolbar, which allows you to colour code each track, which helps to maintain order throughout a project.

With its massive database of samples — audio, graphic and video — there is enough style variation to suit the broadest range of tastes, whether that's hip hop, high hat, or honky tonk, break beats, Bach or the Backstreet Boys.

But in spite of the library being so massive — it is spread over 14 bundled



◀ **THE MAGIX** INTERFACE HAS DROP DOWN MENUS, AND YOU CAN COLOUR CODE YOUR TRACKS.

importing your own videos.

Unfortunately, most of the clips we looked at were quite obviously someone else's home videos, so our completed productions ended up looking like a feeble attempt at

CD-ROMS — it is quite easy to determine the type of sample you are looking for, as they can all be matched by number. A sample with the number '1' in its name, for example, will match any other sample containing the number '1', whatever key that sample is in. This helps to ensure harmony throughout, so even if you are tone deaf you can still make beautiful music.

Magix seems to have thought of everything where sample naming is concerned. The names of the audio objects tell you the instrument or type of sample, the key/pitch, and the format of that file. For example, accgte1.wav would be an audio file holding an acoustic guitar sound in the key of E. The program recognises the formats WAV, MPG, RA, MP3 and ASF (for internet use) and AIF (a format used primarily by Apple Macintosh computers). To incorporate your compositions smoothly into a web site, Music Maker Professional also supports NetShow, and QuickTime formats.

Importing videos is done simply by dragging and dropping the chosen video from the video file into your project. You can also choose whether or not to incorporate any audio sound that may come with it, although in testing we had trouble locating the sound.

You can apply a number of special effects to these film clips, as well as

being rock'n'roll. You would do far better to import your own. The dance video, too, looked low budget.

There is also a MIDI-Integration option, which lets you load, arrange and play about with MIDI files in exactly the same way as you would with other files, although you cannot edit them. There is actually a separate Magix product dedicated to using MIDI.

Despite a few shortcomings, Magix Music Maker Professional certainly contains many hours worth of fun and play time, as much for the idle user as for the music professional.

HELEN FORTGANG

PCW DETAILS



Price £369 (£314.04 ex VAT)

Supplier MAGIX Entertainment 0181 968 3666 www.magix.net

Good points Royalty-free sample library; wide variety of good quality sounds; very easy to use; internet compatibility.

Bad points High price, disappointing video samples; probably not wholly suitable for the serious studio professional.

Conclusion Although pricey, this package is worth the investment and saves spending even more on studio equipment.

System requirements Pentium 166MHz, 32Mb RAM, 50Mb free hard disk space, 16-bit sound card, CD-ROM drive, Windows 95

Film camera VS Digital camera

It's the perennial chestnut: the digital camera versus the film camera.

Not so long ago it was a foregone conclusion, with film winning easily in terms of price, versatility and quality, leaving digital to claw back an ounce of respect from technology enthusiasts.

So have times changed? Does digital stand a chance in the great battle against analogue? Should we be comparing them at all? Well, with megapixel digital cameras now the norm and high-end models boasting double the resolution, we felt that digital was ready to hold its head up and be pictured.

■ The contenders

Digital cameras are like 3D graphics cards in that as soon as you think you've worked out which one's the best, another arrives to challenge its supremacy. So saying, for this comparison we've decided to choose a relatively aged model that is, wait for it... as much as a few months old.

Representing digital cameras is **Canon's PowerShot Pro70**, Editor's Choice in our group test in the May issue. Higher-resolution cameras have since been released, but for my money none can match the Pro70's handling, style and features at the price. It also happens to be a model with which I'm familiar, having used it since that

group test to photograph many products for the pages of *Personal Computer World*. Surprised to hear that? Perhaps this could be fair sport after all.

The analogue representative also comes to us courtesy of Canon. We have decided to pitch the Pro70 against the classic **EOS-5 SLR**, which was unveiled at Photokina in October 1992 and has been carried around the world by this writer for the past four years.

Those familiar with the EOS-5 will know that it's an amazing camera with a pretty much unrivalled feature-set unless you want to spend serious money on a

top-of-the-range EOS-1.

From the point of view of style, weight and build, it might have been fairer to compare the Pro70 with an entry-level EOS SLR or even the Canon APS SLR. We chose this pair, however, because they share a similar position in their respective ranges and, in analogue versus digital years, are probably about the same age. So, point by point, let the battle commence.

➤ Round 1: first impressions

Both are clearly Canon cameras with the controls, right-hand grip and overall styling looking very similar. The Pro70 looks a little plastic and the EOS-5 certainly feels more solid in the hand, so the first point goes to analogue.

Remarkably, each device weighs about 650g without battery and media, but upon closer inspection that turns out to be without a lens on the EOS. So along with being a little smaller, the Pro70 earns itself two points. *At the end of round one, it's 2-1 to digital.*

➤ Round 2: features

A camera is essentially just a box which holds a

sensor behind the most vital component of all: the lens. The Pro70 is fitted with a zoom that is equivalent in 35mm coverage to a 28-70mm lens operating at f2.0 to f2.4. Not bad, but you can't remove it and fit a different one.

The Pro70's lens may offer a decent macro facility but you simply cannot compete with the variety of lenses available for a 35mm SLR — Canon offers almost 50, ranging from 14 to 1200mm. From fisheye to extreme telephoto, macro to zoom, nothing comes close to a 35mm SLR. *So, 'nol points' to digital.*



▼ CANON'S DIGITAL Pro70

As a point of interest, the reason you can't simply fit an EOS mounting to a digital camera and access the full range of lenses is because the imaging CCD is much smaller than 35mm film at the focal plane. Consequently, even the widest-angle 35mm lens would produce only a narrow field of actual coverage on a CCD. In order to match the coverage of a 28-70mm lens on its tiny 0.5in CCD, the Pro70's optics measure a mere 6-15mm.

The camera may be just a box, but we all love gadgets. Both cameras boast self-timers, autofocus and exposure, along with exposure compensation controls. The Pro70 also features an aperture priority mode, although with shutter priority and other modes in addition, the EOS wins.

The EOS-5 also boasts a small but quite capable pop-up flash — a feature missing from the Pro70, although it does have a standard Canon hotshoe and a small torch-like illuminator.

In terms of available shutter speeds, the EOS wins again with a range of 1/8000-30 seconds, compared to the Pro70's still respectable 1/8000-1/2 second. We've decided not to award any points for the EOS's eye-control system, as that is really only showing off.

When did you take that picture? The Pro70 easily incorporates the date and time into the image file, whereas to achieve this, the EOS requires an optional back. Even then, it ruins the image by printing it straight onto the film. *Despite this, the EOS wins by a landslide. 4-1.*

➤ Round 3: media

What about the image media? The Pro70 can handle two CompactFlash cards and comes with one 15Mb card, while the EOS swallows 35mm film cartridges. In terms of choice, there are loads of different 35mm film stocks

Does digital now stand a chance in the great battle against analogue?



▼ **ANALOGUE OFFERING: THE EOS-5, ALSO FROM CANON**

cameras handle? While the Pro70 has been designed to feel familiar to 35mm SLR users, there's no beating the EOS-5. It just feels right, and firing off shots with the motor drive is immensely satisfying. There's something about the sound

of a shutter firing, and of film winding on, that gives you the same feeling as the sound of a car door shutting: you can spot quality at once.

In terms of motor drives, the EOS-5 can effortlessly fire off five frames per second. In comparison, the Pro70 can muster four per second but only in 'small' mode. In raw, uncompressed mode it really turns into a studio camera as you must wait for control after having taken a picture. *So, in terms of response and handling, the EOS is easily two points up.*

But then the digital camera plays its trump card: you may be blissfully firing away with 35mm, but you'll also be blissfully unaware of anything going wrong until it's too late. The Pro70 boasts a 2in colour LCD display — a polysilicon one at that — for instantly previewing images. There's even PAL video output to a television or VCR. You can't beat digital in this respect, nor can you complain about power-hungry screens; the Pro70 also has a battery-free optical viewfinder. If we're being picky, however, the Pro70's viewfinder comes nowhere near the EOS-5 in terms of accuracy and coverage.

And on the subject of batteries, it's quite tricky to consistently measure lifespan when you have a screen and motorised zoom on the Pro70 and a flash on the EOS-5. All I can say is that you'll need to replace the battery in the Pro70 considerably more often, so it's

fortunate that Canon supplies a rechargeable version. *Final score in this round is 3-2 to analogue.*

➡ **Round 5: speed and image cost**

You've taken your pictures and now you want to use them. Starting with a 12 x 8in A4 print, I got my 35mm film processed and the enlargement made at Jessops in London in five hours, for \$5.49 (there's an additional £6.99 charge for one-hour film processing).

Alternatively, I could have plugged my Canon into my PC, downloaded the desired image and had it printed on an Epson Stylus Photo printer in half an hour (cost: about £1.50). OK, I'd need my mains-powered PC and printer handy, but it's still pretty nifty. It allows me to do some retouching and it operates outside office hours — besides which, Lexmark produces an inkjet printer which can take memory cards directly, without a PC as go-between. Incidentally, anyone extracting large images from memory cards may want to dispense with excruciatingly slow serial cables and look into some kind of faster USB or SCSI card reader.

The speed to screen is even more decisive with a digital camera — simply connect and upload it free of charge in seconds or minutes, depending on its size. 35mm requires processing

and subsequent scanning — still potentially quick, but incurring the cost of processing and the purchase of the scanner.

So, nowhere near digital. The Pro70 even came with basic photo-retouching software.

Aha! But what about the full set of postcard prints? This is where 35mm remains unrivalled — well, for now, anyway. Watch out for increasingly sophisticated digital-savvy photo labs on your high street in the near future, geared up to banging out your holiday snaps. *The score is now 2-1 to digital.*

➡ **Round 6: image quality**

The Pro70 has a maximum resolution of 1536 x 1024 pixels — that's 1.68 million in total, and sufficient for an A4 colour inkjet print. In the pages of *Personal Computer World* we successfully printed images from this camera as large as 5in across, and that's pretty impressive in a professional repro environment.

But even with the new two-megapixel

available, but broadly speaking we'll call it a draw, as software can easily take a colour image and make it negative, black and white or particularly grainy. In terms of sensitivity, however, the Pro70 can operate only between a range equivalent to 100 to 400 ASA, and when it starts getting really dark the CCD chip becomes quite noisy. As 35mm films are easily available, from 50 to 3200 ASA, the EOS wins a point without even resorting to push processing.

When it comes to loading the media, however, CompactFlash wins over 35mm every time: it's sturdy and simply slots in, compared to fiddling with 35mm leaders. Digital, of course, wins again when it comes to re-using media — something you don't want to do with film unless you're after a ghostly dual-exposure effect. On the other hand, you can buy an awful lot of film for the price of one £69 15Mb CompactFlash card.

When it comes to capacity, the Pro70 can squeeze 181 images on its standard 15Mb card, but that's at half resolution and not the highest quality. At full image size and fine quality, you're looking at 39 images; in raw, uncompressed mode, as used in this magazine, you'll get only seven images. Unless you have an exotic roll-film back, 35mm comes in a maximum of 36 exposures, but they're cheap enough that you don't have to worry about capacity. We've decided to be fair, though, and award digital this point thanks to overall versatility in image size and capacity. *The final media score is 3-2 to digital.*

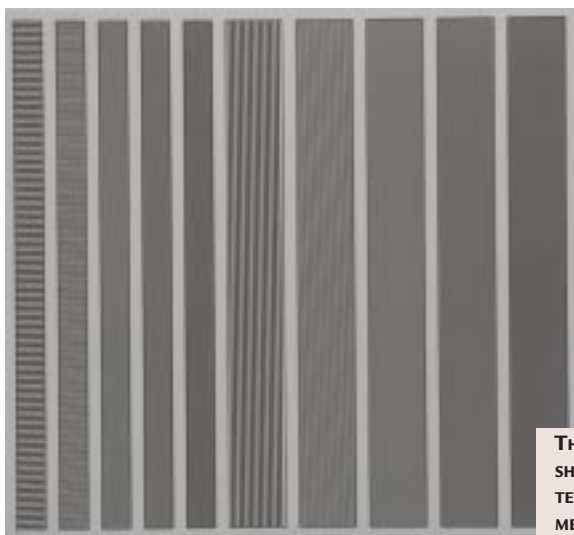
➡ **Round 4: Taking pictures**

So you've loaded your media and are about to take some pictures. How do the

Watch out for digital-savvy photo labs on your high street, soon



▲ A PHOTO OF THE HONG KONG SKYLINE, BUT ONE THAT IS VIRTUALLY IMPOSSIBLE TO TAKE WITH A DIGITAL CAMERA. THIS IMAGE WAS PHOTOGRAPHED BY THE AUTHOR WITH A VERY WIDE 24MM LENS, ON FINE-GRAINED 50 ASA FUJI VELVIA FILM, USING A LONG 60-SECOND EXPOSURE ON AN EOS-5. ALL THREE OF THESE CONDITIONS WERE IMPOSSIBLE TO REPLICATE WITH THE Pro70



detail missing. So, let's just say that 35mm wins this one.

Incidentally, pundits have speculated that since two-megapixel is sufficient for an A4, or even A3, home colour inkjet print, it's unlikely that mass-market digital cameras will be designed with higher resolutions.

THESE STANDARD TEST PATTERNS SHOW HOW THE DIFFERENT TECHNOLOGIES BEHIND EACH METHOD OF PHOTOGRAPHY FARE AGAINST EACH OTHER. NOTICE HOW SLIGHT MOIRÉ, EVIDENT IN THE DIGITAL PATTERN [TOP], IS ELIMINATED WHEN USING FILM [BOTTOM]



Round 7: cost

Again, this is an easy one. At the time of writing, the Pro70 carried a price tag of £999, while the EOS-5 with an equivalent zoom lens came in at £599 (both inc VAT). Another point to analogue in this final round.

Conclusion

So, the winner in this Head to Head review is analogue by a surprisingly close 13 points to ten. But that doesn't necessarily mean it's always the better choice.

Quality, features and handling are gradually nearing those of 35mm on each generation of digital camera, and they will always be the only choice in certain environments. The well-known

cameras available, digital cameras are still miles away from achieving the quality of 35mm film. Consider the resolution of most 35mm film scanners: 2700 x 4050 pixels. I recently had a 35mm frame of Fuji Velvia digitised on a drum scanner at well over 5000 pixels wide — that's approximately ten times finer than the Pro70 — and there was still

advantages of uploading images easily onto the web, or quickly onto the front page of a newspaper, are real and valued applications for a digital camera. I took studio photos of products at PCW's office with the Pro70 and within five minutes had them in a Quark XPress layout: not only quick but cheap, too, incurring no film processing or repro scanning charges.

Similarly, for ultimate quality, or if you really want a full set of snaps, then a 35mm camera should be at the top of your list. The gap between technologies may be narrowing and the boundaries increasingly blurred, but the choice between an analogue or digital camera still boils down to what you intend to do with your pictures.

GORDON LAING

• Check out my website for a variety of 35mm photos taken with an EOS-5 and scanned using a Nikon CoolScan II. You'll find it at www.glnow.com.

• For digital pictures taken with the Pro70, check out the 3D graphics cards group test in PCW's June issue, plus three of the products in that month's Gadgets spread.

PCW DETAILS

Canon PowerShot Pro70

Price £999.99 (£851.06 ex VAT)

Canon EOS5 plus 28-105mm

Price £599.90 inc VAT (£510.55 ex VAT)

Contacts

Canon 0121 666 6262 www.canon.co.uk
Jessops 0116 232 0033 www.jessops.com