reviews

This month sees a host of important new releases fighting for space on the pages of a packed *Reviews* section. How could we start with anything other than Hewlett-Packard's impressive **JORNADA?** Taking two already established ideas — that of a notebook and the Windows CE operating system — and putting them into one smart unit has produced a first-class flyweight with impressive battery life. And just as we were going to press, **MICROSOFT MONEY 99** Financial Suite and a beta release of **INTERNET EXPLORER 5** became available. We lift the lid on these two prestigious products to see if it's worth dumping your earlier versions and stepping up to the new breed of accounts and browser applications. Elsewhere this month, **CANON** and **MICROTEK** fight it out in the ultimate battle of the scanners, **CREATIVE LABS** creates an impression with the **BANSHEE** graphics card, and **ADOBE IMAGESTYLER** gives your dowdy web graphics a makeover. We investigate the joys of hot-desking with **BT'S EASICOM** and keep our accounts in order with **PASTEL PARTNER 5**. Check out our new **HEAD TO HEAD** feature as the Jornada and Acer's TravelMate battle for briefcase space. As ever, we like to hear from you, so if you would like to see two products go head to head, email your ideas to me direct.

NIK RAWLINSON, REVIEWS EDITOR
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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 Windows 95/98 and NT are the SYSmark tests from BAPCo. In all our performance graphs, larger bars mean better scores.

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Ratings

★★★★★ **Buy while stocks last**
★★★★ **Great buy**
★★★ **Good buy**
★★ **Shop around**
★ **Not recommended**

Hewlett-Packard Jornada
Next-generation notebook

A Windows CE notebook that takes an alternative approach to mobile computing.

As an alternative to PalmOS and Psion's Epoc, Windows CE has had a rough ride so far. Main criticisms include sluggish performance and an overly graphical front-end that isn't practical on low-resolution screens. But now, out of the mist rides Hewlett-Packard's new contender, the Jornada. It's the first machine to run Windows CE Professional Edition, codename Jupiter, which now supports VGA and SVGA screens. We tested a pre-production prototype; it will be available in the UK in the first quarter of 1999.

The Jornada measures just 9.7x7x1.3in and weighs in at a feather-light 2.5lbs. It sports an STN (super twist nematic) 640x480 screen and has the general feel of a notebook, complete with proper trackpad rather than a touchscreen. Where it differs is in its lack of floppy, CD-ROM or hard drives. The absence of drives has a three-fold advantage: higher reliability, lower power consumption, and more space for the battery. The Lithium-Ion power pack consequently takes up nearly half the volume of its case. Power consumption is further reduced by the StrongARM SA-1100 CPU, which runs at 190MHz but consumes little power. Hence battery life is long enough to save you constantly fretting about it. HP claims up to 10 hours and our tests pretty much bear this out. Ten hours is long enough to work continuously for a full day, or use it for a week or so intermittently. There's also the option of an extended battery, the same size but with 50 percent extra capacity. The lack of drives, however, means that you have to rely on RAM, and there is only 16Mb for both system use and storage: you'll need to manage it carefully.
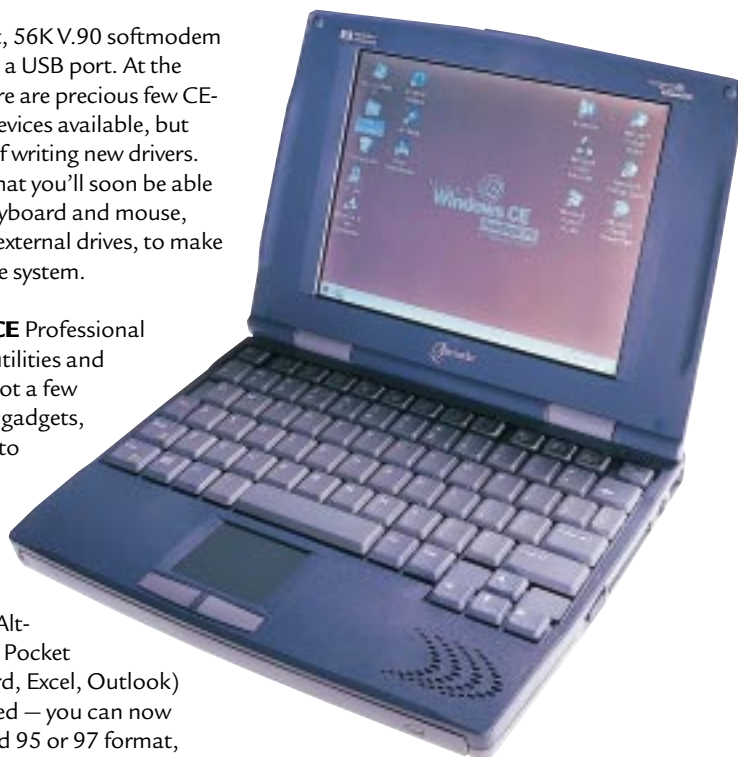
Looking round the edges at the ports, there's a Type II PC Card slot on the left side and a Compact Flash slot on the right. The back is far more interesting:

Battery life is long enough to save you fretting about it

a VGA output port, 56K V.90 softmodem and — wait for it — a USB port. At the time of writing there are precious few CE-compatible USB devices available, but it's only a matter of writing new drivers. What it means is that you'll soon be able to connect up a keyboard and mouse, and possibly even external drives, to make it into a standalone system.

With Windows CE Professional comes enhanced utilities and applications. It's got a few more desktop-like gadgets, such as the ability to choose your Windows colour scheme, and you can even switch between applications with Alt-Tab. The standard Pocket Applications (Word, Excel, Outlook) have been enhanced — you can now save in native Word 95 or 97 format, for example. Pocket PowerPoint has a particularly useful new feature that you can use in conjunction with the VGA output: it can be configured so that the LCD shows your presentation notes alongside a reduced version of each slide, while the VGA output displays only the presentation at up to 1024x768 resolution. There are now limited editing facilities: you can set up a simple title slide, and change the slide order.

A brand-new addition to the family is Pocket Access. This allows database viewing, editing and creation but only supports tables and queries. Connecting via the softmodem and starting up Pocket IE3 shows that the StrongARM provides enough processing power to make web browsing feasible: Pocket IE3 supports frames, JScript and cookies, so most sites work as well as they do on a desktop machine. Pocket Outlook still has no facility for logging in to POP3 mail servers that require secure password authentication, so if you have a

Microsoft Network account you are, ironically, stuffed.

We've left the best bit till last. Those who have been constantly frustrated at the abysmal quality of the keyboards on CE devices need worry no longer. The Jornada's keyboard is superb, and allows practically full-speed touch-typing within a couple of minutes.

DAVID FEARON

PCW DETAILS

RECOMMENDED
PERSONAL COMPUTER WORLD

★★★★★

Price £849 (£723 ex VAT)
Contact Hewlett-Packard 0990 474747
www.hp.com
Good Points Superb keyboard. Great battery life. VGA screen resolution. USB port.
Bad Points Only 16Mb RAM, and augmenting it will be expensive.
Conclusion We loved the Jornada, but you'd need to think carefully about going for this rather than a real sub-notebook at a similar price.

Microsoft Money 99
Pound watcher

Software that keeps an eye on all your outgoings well into the new millennium.

In the USA, both Intuit and Microsoft launched the '99 versions of their personal finance packages some months ago. However, in the UK Microsoft stole the lead in this thriving market at the end of October. Money 99 was announced in both a Standard version and the full-featured Money 99 Financial Suite, which is reviewed here.

A major objective of Microsoft for personal finance software is to integrate short-term transactions and account management with long-term planning. If you enter or change data in one area, Money 99 Financial Suite automatically updates all other relevant areas. This minimises data entry, maximises consistency and integrity, and, most important of all, delivers some powerful new features. You'll encounter one example on first running the program. Money 99's Personal Profile interview establishes basic facts about your financial aims and these can include your spouse or partner if you wish. Money 99 then recommends how you can use the program most effectively, with links to relevant areas.

Another impressive feature is the Lifetime Planner. Using your personal profile and other account data, this helps you to achieve long-term goals: children's education, retirement, another guppy for the aquarium. Providing you're diligent

▶ **BASED ON THE RESULTS OF YOUR PERSONAL PROFILE INTERVIEW, MONEY 99 MAKES CERTAIN RECOMMENDATIONS ON HOW YOU CAN MAKE BEST USE OF ITS MANY FEATURES**

about entering pertinent data and keeping it up to date, such monetary milestones should then be based on your financial status. It would take lengthy assessment to check whether Money 99 gets its sums right, but Microsoft claims that Lifetime Planner and other Money 99 features have been endorsed by the Independent Financial Advisors Association.

With your 2020 round-the-world trip confidently planned, what about today, this week, this month? Money 99 Financial Suite is pretty strong here, too. For a start, basic navigation and control is good, based on the new browser-style interface introduced in Money 98. This now has an enhanced Home Page, with two main purposes. First, it's a launching pad to the program's other nine main sections: Accounts, Bills, Online, Investments, Planner, Reports, Money Manager and Categories, plus Money's Help system. But it's also a customisable summary of your personal finances, current news and web links.

Another fundamental aim underpins Money 99 Financial Suite: to complement local PC hardware and software features with online services. For example, Money 99 Financial Suite will use a new web site, moneyeXtra.com, to help manage personal investments. The PC will provide the local storage and preparation of an

With your 2020 round-the-world trip planned, what about today?

integrated portfolio; the web will provide rates, mortgage opportunities, share prices and dynamic links to other relevant information. Microsoft intends this to be the top personal finance site in the UK, but it was not up and running in mid-November at the time of our review, so we'll have to wait and see.

Online access to financial institutions could become a key buying criterion for this application. Money 99 Financial Suite now lets you connect to seven leading UK banks for downloading statements, transferring funds and paying bills, with more banks anticipated soon. If you're running a small business or are self-employed, then you'll welcome the new Invoicing section. This now includes full Sales Ledger with payment tracking, aged debt report, and support for Avery labels and pre-printed stationery.

There's still scope for user interface improvements such as a forward navigation button and variable font sizes, and the Help system has some surprising omissions. But overall this latest offering is great value for your you-know-what. The latest version's greatest strengths lie in the long-term planning areas.

TERRY PINNELL

MS Internet Explorer 5

BETA

Just browsing

Paul Smith takes the IE5 beta version out for a test drive, and likes what he sees.

Ignoring the political and social implications that web browsers, in the light of the ongoing Department of Justice case, seem to engender, we thought we'd give you an insight into the technical aspects of Microsoft's recently launched beta of Internet Explorer 5, with a view to answering two questions that anyone outside the courtroom would think important: is it any good, and should I install it? If you're busy and must dash, I'll get straight to the point: yes and yes. Run along now.

Everyone else can have a more considered view. As it happens, the IE5 beta is a remarkably stable product, considering this is its first wide exposure. But then, IE5 is much less of an upgrade of version 4 than that was over IE3. It concentrates on more thoughtful implementation of some of the good interface ideas in IE4, as well as adding support for new or proposed World Wide Web Consortium (W3C) standards, than on radical performance improvements or greater (or is that dreaded?) OS integration. We tested it under Windows 98 and NT4 (SP3).

You'll find that IE5 looks almost exactly the same as IE4, with the exception of a new Go button at the end of the Address box. While this won't be of use to many current net users, new ones are often puzzled by the non-standard obligation to hit Enter after typing in a URL. Start typing an address, however, and you notice a new and significant feature, AutoComplete, part of IE5's adoption of IntelliSense. Type in any part of a web address and AutoComplete will not simply complete it in the clumsy in-box manner of IE4, but will drop down a list, culled from all your Favourites and History lists, of all likely matches. It will also present you with a search option for that term. AutoComplete extends to forms as well:

instead of having to repeat your name, address or password each time you register for a site, AutoComplete can cache these and remind you of them. For those sharing machines, this can be configured and cleared easily. There is also AutoCorrect, which will fix "htpp"-type typos and replace backslashes with forward ones.

IE5 introduces horizontal Explorer bars. Like the vertical Search and History bars (themselves improved with multiple views and options), the new bars allow you to download mini-browsers that remain on your screen even when you change pages: they work like in-browser ticker tapes.

My favourite improvement is the ability to download whole pages, not just the text. This is a massive leap in usability over IE4, but it still doesn't handle sub-pages (except through subscriptions), nor can it handle multi-mode images such as those triggered by mouse-over events. Another favourite is the improvement in

The IE5 beta version is a remarkably stable product

Security settings. You can now create a list of trusted and restricted sites and give those groups their own security levels. Under the hood, you'll also find some improvements. The IE5 team promise significant performance gains, particularly in tables with data binding. The new fixed-length table could be a boon for layout designers, with the added advantage of progressive rendering; current browsers need to download the whole table before showing it. Other Cascading Style Sheet (CSS) improvements include the fixed

and relative positioning for every HTML element, exposure of the Print object, and dynamic properties that respond as a function of other properties.

▲ **IE5** PROVIDES BETTER ADDRESS-COMPLETION, AND NEW FEATURES SUCH AS THE EXPLORER BAR AT THE BOTTOM

As for the beta's stability, we had very few problems. Installation was a breeze, compatibility seemed strong and the only problem we encountered was some occasional problems with some Java sites under NT. Oh, and if it's any help, reverting back to IE4 works perfectly. We tried this and found ourselves restored to the original settings we had before. But we now use IE5 regularly and recommend you think about doing the same, particularly if you're a Netscape user. With IE5, the gap between the browsers is growing.

PAUL SMITH

PCW DETAILS

★★★★

Price *Free*
Contact *Microsoft 0345 002000*
www.microsoft.com
System Specification *Windows 3.1, 95, 98 or NT.*
Good Points *Adds and improves on IE4's usability features.*
Bad Points *Still a beta.*
Conclusion *Stable (and improved) enough for all but the most beta-shy.*

Gateway G6-350
Compact and bijou

This mini-tower makes maximum use of space. The result? A feature-packed PC.

Gateway 2000 has provided PCs in all shapes and sizes in the past, but nothing could have prepared us for the endearing, squat system supplied on this occasion. The G6-350 is available with a standard 200W power supply in an ATX tower or desktop case with various component configuration options. The third case choice, the option under review, is an ATX mini-tower with a 90W power supply. Our tests proved that any initial concerns about the reduced capacity power supply were unfounded.

The insides of this machine were almost as impressive as its attractive casing. A powerful 350MHz Pentium II is tucked away under the micro-power supply; this could make upgrading the CPU a little more difficult than in a machine with the standard two-clip squeeze afforded by the Pentium II casing. Of the two DIMM slots parked close by, one is filled with a 64Mb memory module running at the full 100MHz front-side bus speed. Upgrading memory with just one more 64Mb DIMM should be ample for the future needs of most users, but if not, it will support up to a full 512Mb. Graphics arrive courtesy of STB's 8Mb NVidia Riva 3D AGP chip placed directly onto the motherboard, scuppering any thoughts of a future upgrade through an AGP path. We were glad, therefore, that the STB NVida Riva is a first-class choice of graphics processor. Sound has been pinned down with Creative Labs SoundBlaster Audio PCI 64V in the form of an on-board chip. Although these aspects have been provided on-board, it is worth noting that disabling various hardware components through Windows and slotting in your preferred choice is always an option. What this design provides is three spare PCI slots for dedicated 3D accelerators, DVD hardware decoders and so forth, so that future ventures with higher-end multimedia devices are not curtailed. There's still room to install a 56K modem into the PCI half of the final shared bus slot for a much improved performance over the slower ISA version.

A 6.4Gb Quantum hard drive should suit most needs, but users opting for the Full option in games installations for faster execution may be a little disappointed with the lengthy installation times — this drive has a spindle speed of up to just 5400rpm. This 5.25in-sized hard disk screwed to the top of the casing is just thin enough to allow use of the spare 5.25in bay for another full-height drive.

Hiding this cute little fella would be a crime

With such limitations on space, Gateway has managed to squeeze in a comparably high-performance machine, tidy and with reasonable enough access to allow the end-user to enhance it to suit their own particular needs. It is packaged into an unobtrusive box for tucking into the corner of your study, although we can't help feeling that hiding this cute little fella would be a crime.

It doesn't stop there. A 17in own-brand monitor quite capable of supporting a crisp 85Hz refresh rate at a resolution of 1024x768 should suit any GUI user or games player. Finally, as far as hardware is concerned, an Epson Stylus Colour 440 printer is included, which can produce high-quality prints of up to 720dpi. A wide variety of software is included, ranging from Microsoft Home Essentials to a collection of arcade and educational titles, enough to get the first-time owner up and running.

This is a high-quality, well thought out and built machine from a company that can extend its after-sales services to a one year on-site warranty and a further two years parts and labour.

IAN ROBSON

PCW DETAILS

★★★★

Price £1,291.32 (£1,099 ex VAT)
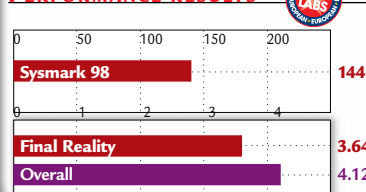**Contact** Gateway 0800 552000
www.gateway.com/uk
Good Points *Good performance from a well-specified machine.*
Bad Points *No option to upgrade through the AGP path.*
Conclusion *Consideration has been given to the intended user to provide an excellent package for the asking price.*

PERFORMANCE RESULTS

VNU LABS
EUROPEAN · EUROLABS · EUROPEAN · EUROLABS

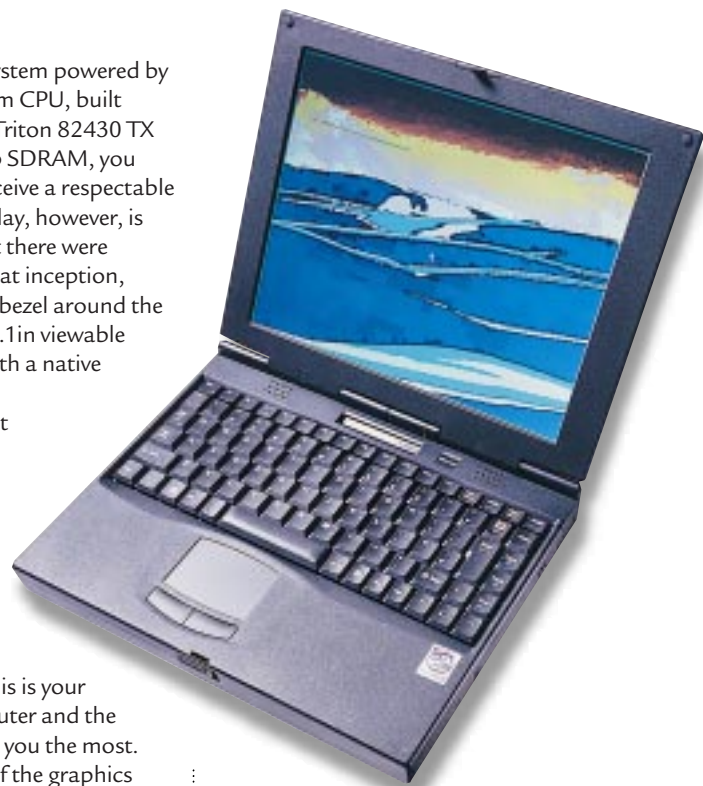|	0	50	100	150	200	
Sysmark 98						144
	0	1	2	3	4	
Final Reality						3.64
Overall						4.12

ANR Neutron MMO
Selection box

ANR has produced a good-value notebook whose sum is greater than its parts.

The Neutron MMO is something of a hybrid in manufacturing terms, with a screen made by IBM, the chassis and motherboard from Compal and a Toshiba CD-ROM drive. In short, nothing in this notebook is actually made by Advanced Notebook Research (ANR).

The ANR brand was established over a year ago by the mail-order company, Tech Direct. The idea was to purchase separate notebook components and oversee the assembly in order that Tech Direct might produce an end product at a cut-down price. This production method is nothing new, and its popularity has grown among purchasers and vendors. The hardware has been carefully chosen to produce a durable, functional piece of equipment, but if the unlikely occurs and you have a problem, then after-sales would be your next port of call. Thankfully ANR adopts a no-fuss policy that extends to waiving all charges for courier collections and deliveries, with at least the equivalent replacement notebook being offered if more long-term attention is needed to repair the user's own.

This fairly impressive kit has been packaged in a truly rugged manner

For an entry-level system powered by Intel's 233MHz Pentium CPU, built around Intel's Mobile Triton 82430 TX chipset and with 32Mb SDRAM, you can expect and duly receive a respectable performance. The display, however, is the first indication that there were budget considerations at inception, with almost a full-inch bezel around the screen leaving just a 12.1in viewable diagonal on the TFT with a native resolution of 800x600. Quibbling over that lost inch is less meaningful, however, when you consider that the bright and even quality of the display smirks at the failings of some larger-screened notebooks. After all, this is your window into the computer and the one part likely to affect you the most. That said, the quality of the graphics displayed is constrained by the 2Mb video memory, although if you intend to use the unit as nothing more than a temporary workstation, this should prove to be ample.

The MMO's keyboard certainly looked good, but we were disappointed at its occasional lack of response when a key was pressed. This rather let down the supporting glide-pad acting as the pointing-device option, one of the most accurate we have come across, with a 100 percent response rate to a firmer tap acting as a double click. The standard storage option is limited to a 2.1Gb Toshiba E-IDE hard disk, but this is one of the few components where upgrading is an option; with just the loosening of a couple of screws, the disk can be prised out. This particular model also gives users the option of increasing the memory allocation to a maximum of 144Mb.

The 24X CD-ROM and the floppy drives are interchangeable, although we feel that users would be better advised to make do with the CD-ROM's parallel port connector and use the internal slot for an optional DVD drive instead. Enthusiasts of the more popular multimedia aspects of DVD will be sorely disappointed, however, with the restrictive display and sound offered by this notebook. Only a few titles currently take advantage of the increased capacity of DVD, but users can expect this format to prove more popular in time; you'll just have to be patient.

The full complement of standard notebook components includes two Type II PC Card slots and ports for infra-red and USB connection. This fairly impressive kit has been packaged in a truly rugged manner with a quality of build that is so often lacking in competing vendors' products. The Neutron MMO suffers from a distinct lack of design flair, with the only frill being a rather handy battery-level indicator, but with Lotus SmartSuite 97 and Windows 95 pre-installed it provides everything the average user will need to get going straight from the moment they open the box.

IAN ROBSON

PCW DETAILS

★★★

Price £1,175 (£999 ex VAT)
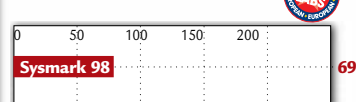**Contact** Dabs Direct 0800 558866
www.anr.co.uk
Good Points *Rugged build with quality display.*
Bad Points *Small storage capacity.*
Conclusion *A faithful tool for the budget-conscious.*

PERFORMANCE RESULTS

	0	50	100	150	200	
Sysmark 98						69

Mitsubishi Diamond Pro 900u

Cut-glass graphics put the sparkle into this flawless monitor.

In recent times Mitsubishi has earned a reputation for building high-quality monitors; the company is one of the major suppliers of CRT tubes for the TV and monitor industries. Like Sony, Mitsubishi uses Trinitron technology, in which the screen curves only horizontally while remaining flat along its vertical axis, minimising curvature and enhancing the overall sharpness of the image.

Mitsubishi is aiming its new Diamond Pro range at high-end users and graphics professionals for whom colour fidelity and image quality are a necessity. The Diamond Pro 900u fulfils this role in many ways. It has a small grille pitch varying between 0.25 and 0.27mm at the centre and edge, respectively, producing sharper images. It can sustain an impressive refresh rate of 75Hz at

of 1280x1024 the refresh rate increases to 85Hz. Mitsubishi claims that its NF (Naturally Flat) technology provides better image quality than normal shadow mask and aperture grille monitors, and this came through in our

Display Mate tests. What was even more impressive was the consistency of colour reproduction throughout the entire breadth of the screen. The monitor incorporates an anti-glare filter to reduce eye strain and a USB downstream port mounted on the front bezel. The Diamond Pro 900u's controls are easy to access, and the on-screen display is available in six languages. Overall, the Diamond Pro 900u is an excellent choice for the demanding professional.

AJITH RAM

PCW DETAILS

★★★★

Price *£528.75 (£475 ex VAT)*
Contact *Mitsubishi 01707 276100*
www.mitsubishi.com
Good Points *Excellent picture quality. Easy-to-access controls. Anti-glare filter.*
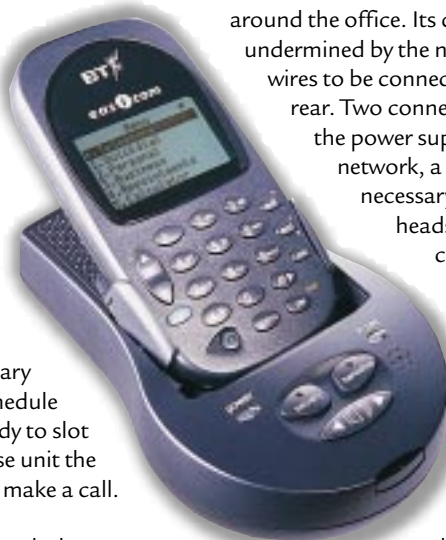**Bad Points** *None.*
Conclusion *A versatile monitor for the demanding user at an attractive price.*

BT Easicom 100 and 150 PC

A fully functional Filofax on a hands-free phone.

BT has combined a hands-free phone and a detachable personal organiser to create the Easicom 100. It's supposed to make hot-desking a reality by allowing you to carry your personal contacts, diary and appointment schedule around with you, ready to slot into any available base unit the moment you need to make a call.

The Easicom 100 is a sleek, compact unit. The base unit is half the size of a standard telephone and the organiser looks like a slimmed-down mobile phone. Unfortunately, the organiser doesn't double up as a headset, so all calls from the Easicom will be broadcast

around the office. Its dinky footprint is undermined by the need for up to four wires to be connected to the base's rear. Two connect the Easicom to the power supply and telephone network, a further two are necessary if you want headset privacy or to connect to your PC. The organiser stores up to 1,700 contacts, but they have to be typed-in using eight tiny buttons on the keypad, unless you invest in the Easicom 150 PC link. This connects the Easicom to a free serial port, and once installed, data can be entered on the PC and downloaded to the organiser or imported from other PIMs. One thing to watch out for is a

conflict with any Psion or PalmPilot software on your PC. When we tried to connect our Easicom and PC we had a communication error, which was only solved by uninstalling PsiWin. BT admits to having similar problems with PalmPilot software.

URSULA TOLAINI

PCW DETAILS

★★★

Price *£79.99 (£68.08 ex VAT) for Easicom 100, £34.99 (£29.78 ex VAT) for Easicom 150 PC link*
Contact *BT 0800 374283*
www.bt.com
Good Points *Compact footprint. Pocket-sized, battery-powered organiser/keypad. Stores 1,700 contacts.*
Bad Points *Hands-free-only calls. Messy connection. Software conflicts.*
Conclusion *The Easicom 100 makes sure your contacts are always at hand, but hot-desking means buying extra base units and the hands-free phone puts an end to private calls.*

Flatbed face-off
Microtek *vs* Canon

It's a Mexican scanner standoff: Microtek's Scanmaker X6 vs Canon's CanoScan FB620P.

With scanner prices continually dropping, these two new units from Microtek and Canon represent the upper echelon of affordable flatbeds. Both are priced at just under £200 including VAT, which is more than four times what you could expect to pay for the absolute cheapest units now available. This is great news for the consumer: £200 will now buy you very impressive performance.

The price range is one of the few areas of similarity about these two units. Different design approaches give the Canon the feel of a high-end consumer device, while the Microtek has the air of a unit intended for the professional on a budget. The differing philosophies are marked by the physical appearance and build of the two. The Microtek has a hefty metal chassis and an outer case that, although plastic, is very solid. In contrast is the petite, modern-looking Canon, the smallest flatbed we've seen. It's 3.5in shorter than the Microtek and about two-thirds the height.

The Microtek has one little touch that the Canon lacks: a button at the front that automatically activates the Scanmaker software. But it's the more traditional of the two when it comes to scanning technology: it uses a cold-cathode lamp to illuminate the document being scanned, so it needs a few minutes' warm-up time. The Canon, however, sports LED illumination, which means no warm-up and increased life. But so long as you switch the Microtek off when you've finished using it, the lamp should last pretty much forever.

Microtek's more professional design approach is evident when comparing interface and resolution specifications. The Canon has a parallel port interface, rated at 600x 600dpi, with 30-bit internal colour resolution and 24-bit output — a totally adequate basic spec for high-quality scanning. The Microtek, however, goes a little further. It has a faster SCSI interface (but no SCSI card), 600x1200dpi and scans internally at 36 bits, with the option to output at 36 bits. Scanning at the 36-bit level gives 12 bits for each colour channel, allowing over 68 billion possible colours if the electronics and CCD are of high-enough quality to resolve them. In practice, the real advantage is that more detail will be preserved after image manipulation.

Of course, all these specifications mean nothing unless they're borne out by real-world performance; both the Canon and the Microtek produced high-quality scans. Using standard colour and resolution test targets as well as photographs, detail reproduction was pretty much equal between the two. But the Microtek had the edge with its colour accuracy. Its output demonstrated greater linearity when reproducing a graduated greyscale; the Canon's scans were slightly biased towards darker shades.

▲ **THE MICROTEK SCANMAKER X6: SOLID AND MEATY**
▼ **BIT OF A SWEETIE — THE CANON CANOSCAN FB620P**

Both units have fully featured TWAIN drivers and standalone scanning software, including photocopier-type utilities for use with a printer. The Canon comes with Ulead's iPhoto Express for photo retouching and Caere's Omnipage LE for OCR. Microtek beats it with iPhoto Express and PhotoImpact as well as Omnipage LE and Recognita for OCR and Documagix PaperMaster for document management.

These are both excellent scanners. There's no doubt that the Canon is the more desirable and the one to go for if you're lacking desk space and a SCSI card. But if you're looking for that bit extra in terms of scan quality and the speed afforded by a SCSI connection, the Scanmaker X6 has the edge.

DAVID FEARON

PCW DETAILS

Microtek Scanmaker X6

★★★★

Price *£175 (£149 ex VAT)*
Contact *Midwich Thame 01379 649200*
www.microtek.com
Good Points *Hefty build. SCSI interface. Slight edge on scan quality over the Canon.*
Bad Points *No SCSI card included. Not as pretty or small as the Canon.*
Conclusion *A good buy for those with SCSI in their systems.*

Canon CanoScan FB620P

★★★★

Price *£186.83 (£159 ex VAT)*
Contact *Canon 0121 666 6262*
www.canon.co.uk
Good Points *Excellent quality. Super-small. Looks lovely.*
Bad Points *Parallel interface is a little slow. Software bundle not as comprehensive as the Microtek.*
Conclusion *The Canon is a great choice for the office user.*
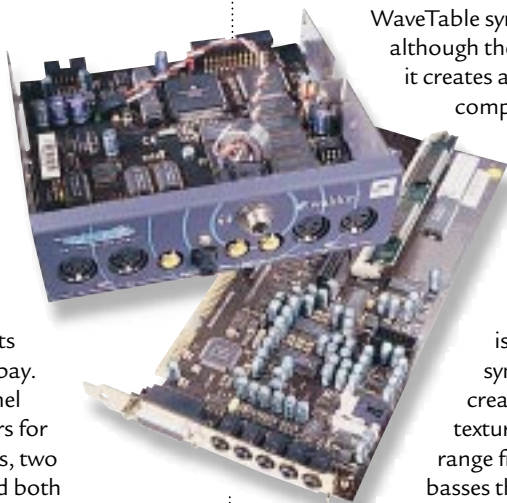
Waldorf microWAVE PC

Turn up the musical heat with this genuine synthesiser for your PC.

The microWAVE PC is an add-on synthesiser module for Terratec's EWS64 L and XL sound cards. Based on Waldorf's microWAVE XT (a professional rack-mounted synth, priced at £1,099), the unit fits into a 5.25in drive bay. Along the front panel there are connectors for two MIDI interfaces, two SP/DIF outputs and both optical and SP/DIF digital inputs.

So what's on the inside, then? Well, just a bunch of DSP chips. Not very interesting at first, but once you hear what they can do you'll be on the phone to Terratec saying *gimme, gimme, gimme.*

The microWAVE is essentially a WaveTable synthesiser, although the sounds it creates are not comparable to your average sound card: there are no pianos or electric guitars. This is a real synthesiser for creating real synth textures. These range from grungy basses through to dreamy, filter-swept analogue pads. The front-end to the system is a software package called microEdit. It looks identical to the rack-mounted microWAVE and provides access to every synth parameter via a series of knobs,

buttons and an LCD display. The synth delivers ten voices of polyphony and is good for up to eight simultaneous parts. That may not be a patch on some sound cards, but doesn't the old maxim say "it's the quality that counts"?

STEVEN HELSTRIP

PCW DETAILS

★★★★

Price *£500 (£425 ex VAT), £100 trade-in for your existing EWS64 XL front panel*
Contact *Terratec 01600 772111*
www.terratec.co.uk
System Specification *Windows 95/98, Terratec EWS64 L or XL.*
Good Points *Stunning sounds. DSP software updates. Every parameter can be tweaked with MIDI controllers.*
Bad Points *On-screen dials do not update after receiving MIDI controller data. Will not work with the EWS64S.*
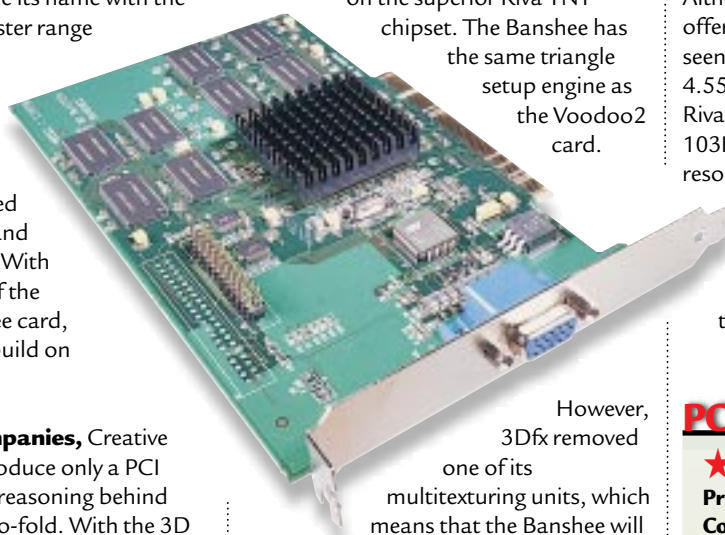**Conclusion** *If you've got an EWS64 L or XL and have £500 burning a hole in your pocket, get the microWAVE now.*

3D Blaster Banshee

Have a wail of a time with this PCI graphics card.

Having made its name with the SoundBlaster range of audio cards, Creative Labs entered the display market last year with its graphics cards based on the Permedia2 and Voodoo2 chipsets. With the introduction of the 16Mb 3Dfx Banshee card, Creative hopes to build on that success.

Unlike other companies, Creative has decided to introduce only a PCI Banshee card. The reasoning behind this seems to be two-fold. With the 3D Blaster Banshee, Creative hopes to attract users with slower, non-AGP Pentium systems who are planning to upgrade. The other reason is that (sensibly) the Banshee will not compete with Creative's own new AGP card based

on the superior Riva TNT chipset. The Banshee has the same triangle setup engine as the Voodoo2 card.

However, 3Dfx removed one of its multitexturing units, which means that the Banshee will run considerably slower than the Voodoo2 in games such as Unreal that use multitexturing. But as the Banshee has a higher fill rate of 100 million pixels/sec, this makes it faster in games that do not use multitexturing.

Although it's a PCI card, Creative's new offering is one of the fastest we have seen. With a Final Reality 3D score of 4.55, the Banshee is second only to the Riva TNT. The card threw an average of 103FPS in the game Incoming at a resolution level of 1024x768. Its 2D performance is also impressive. A copy of Colorific comes with the Banshee, which helps to adjust brightness depending on the ambient lighting.

AJITH RAM

PCW DETAILS

★★★★

Price *£99 (£82 ex VAT)*
Contact *Creative Labs 0118 934 4322*
www.creaf.com
Good Points *Fast 2D and 3D performance. Low price.*
Bad Points *No single-pass multitexturing.*
Conclusion *A good PCI card for those who want to upgrade.*

The safe option

Fast, reliable and cost-effective data backup on entry-level servers.

While the importance of backing up your data can never be stressed enough, the exponential increase in hard-disk capacities isn't making this task any easier. Although tape is the logical choice for data backup, the price of high-capacity tape drives can often be far more than the hard disks they are supposed to be protecting. The introduction of the DAT DDS-3 format alleviated this situation somewhat, as it increased tape capacity to a more respectable native 12Gb while the drives have now dropped below the £1,000 mark. However, DAT DDS-3 is not the only option, as Tandberg Data is keen to point out. Its latest SLR6 data cartridge drive is positioned to compete directly with DAT DDS-3 and offers an identical 12Gb of storage capacity on a single tape.

Traditionally, DAT has always been ideal for entry-level server backup; so what's so special about the SLR6? For starters it's substantially cheaper, with a bare internal version costing £594 — around £200 cheaper than the DDS-3 competition from Sony and Hewlett-Packard. The media is more expensive, but when you see a 5.25in data cartridge you'll understand why: it's built like a tank, making DAT tapes look positively flimsy. Finally, and more importantly, our tests showed the SLR6 to be around 50 percent faster than DDS-3 drives for backup operations.

The technology is substantially different: DAT drives use the same helical scanning system found in video recorders, whereas the SLR6 uses a fixed TF/MR (Thin Film/Magneto Resistive) head. The SLR6 media is likely to last longer as only a single internal capstan is used to keep the tape pressed against the recording head. To tension and align the DAT media, it must be manually threaded around multiple capstans.

To test the SLR6 we used a Dell PowerEdge 2300 server configured with dual Pentium II 400MHz processors,

The 5.25in data cartridge is built like a tank

256Mb of memory and running Windows NT Server 4. Storage was dealt with by a 9Gb Seagate Barracuda Ultra2/LVD SCSI hard disk. To get the best out of the tape drive and to avoid any contention with the hard disk subsystem, the SLR6 was connected to a dedicated Adaptec AHA-2940UW Ultra2 PCI host adapter card. To represent the average workgroup server we copied a 3Gb collection of documents, spreadsheets and presentations along with a liberal mixture of web-based data, video clips and graphics. To test the read and write capabilities of the SLR6 it was asked to secure the entire 3Gb of data, run a full tape-to-disk verification and then restore the whole lot back to the server. Backup software came courtesy of Computer Associates' ARCserve and Seagate's Backup Exec. For comparison purposes we also ran the same barrage of tests against two DAT DDS-3 drives, Sony's SDT-9000 and HP's DAT24.

For backup performance, the SLR6 demonstrated a best average speed of 112Mb/min with Backup Exec. Not bad, considering the native transfer rate is quoted by Tandberg Data at 72Mb/min. The native transfer rates of the HP and Sony drives are quoted at 60 and 72Mb/min, respectively, and neither drive managed to make any significant improvements on these speeds while securing the same data. During the read-based verification and restoration tests the SLR6 demonstrated a noticeable drop in performance, but still managed to stay above the 100Mb/min mark. The DAT DDS-3 drives held firm at their native transfer rates for both operations.

Clearly, the SLR6 offers a solid alternative to DAT as a backup solution for entry-level servers. It's much faster, substantially cheaper, and the data cartridges look and feel reassuringly solid. Tandberg Data also offers an external server-kit version for £837 which comes complete with all cables and a full backup software bundle from Seagate covering all major operating systems.

DAVE MITCHELL

PCW DETAILS

★★★★

Price *Internal - £697 (£594 ex VAT). External server kit - £983 (£837 ex VAT)*
Contact *Tandberg Data 01582 769071*
www.tandberg.com
Good Points *A server backup solution that's fast, cheap and reliable.*
Bad Points *Read operations are noticeably slower than when writing to tape.*
Conclusion *A cheaper and faster alternative to DAT DDS-3 for securing data on entry-level servers. Media build-quality is excellent.*

Sharedware
Double take

Here's a clever gizmo that allows two people to use one computer at the same time.

If you have ever thought that you needed an extra PC but found the cost daunting, then perhaps Sharedware is the solution for you. It's a variation on existing systems that allow users to connect an extra monitor, mouse and keyboard to an existing Windows 95/98 PC, thus allowing two people to use it at once.

The nerve centre of Sharedware is an ISA card, connected via cable to an external communications box, which in turn hosts ports to attach the monitor, keyboard and mouse, none of which are included with the kit. Windows detects the new hardware after rebooting and requests the drivers. One reboot later, everything is installed and ready to go.

The system is accessed through its own control panel, an icon for which is installed in the system tray. This gives the user access to the display properties of the secondary terminal — driven by an onboard Cirrus Logic chipset — that allows a maximum resolution of 800x600 at 24-bit colour. The control panel also allows the user to tailor the method of shutting down the PC (or killing off the secondary terminal) which is a clever idea as it stops one person from shutting down in the normal way and at the same time killing off the other user's tasks. Once the settings have been finalised, the second terminal can be launched. This task can also be set to happen as soon as the PC boots into Windows, allowing simultaneous usage to occur from the start.

Using both the real machine and the terminal together was initially impressive. Performing basic tasks such as copying files on the hard drive or using simple applications to, for example, type a letter in Word, did not seem appreciably slower than the speed at which it runs on a standalone system. In fact, at this point you could quite easily forget that you are sharing a PC with someone else. Further usage, however, showed up some sadly unavoidable problem areas.

Performing anything remotely processor intensive, such as graphical manipulation or a large print job, locks up the terminal: this makes it pretty much unusable until the task has been completed. The manufacturers claim that your kids can play games while you word-process, but you could only run the most basic of games to make this a reality. The manual does recognise that certain problems like this can occur, and it attempts to address them with a variety of tips.

For example, it advises enabling Windows profiles as this will allow each person using the PC to customise their own desktop and start menu, furthering the idea of each user running on their own machine. In the end though, there are some limitations users will have to come to terms with. They will have to decide where files are going to be stored and try not to run applications that will slow the machine down.

CD-ROMs also pose a problem. While two people can access the drive at once, it is not a practical proposition as these drives do not have the fast access times that hard drives enjoy. £175 for the base model (£275 if you also want the peripherals) seems a high price to pay when you consider that for the same money you could buy a second-hand Pentium PC which would not only do the same job, but would also be more reliable as it allows each user to work independently. It's a good idea, but only really suitable for the most basic of tasks.

DAVID LUDLOW

It's only really suitable for the most basic tasks

PCW DETAILS

★★★

Price *£205.63 (£175 ex VAT)*
Contact *Sharedware 01274 401010*
www.sharedware.com
Good Points *Could provide a cheap alternative to buying an extra PC, especially if only small tasks need to be performed.*
Bad Points *Can't compete against another fully fledged computer.*
Conclusion *A clever idea which, in practice, only really works for people performing the most modest of tasks.*

Adobe ImageStyler 1.0
Web site enhancement

Web site development can be easier than you think with this innovative graphics package.
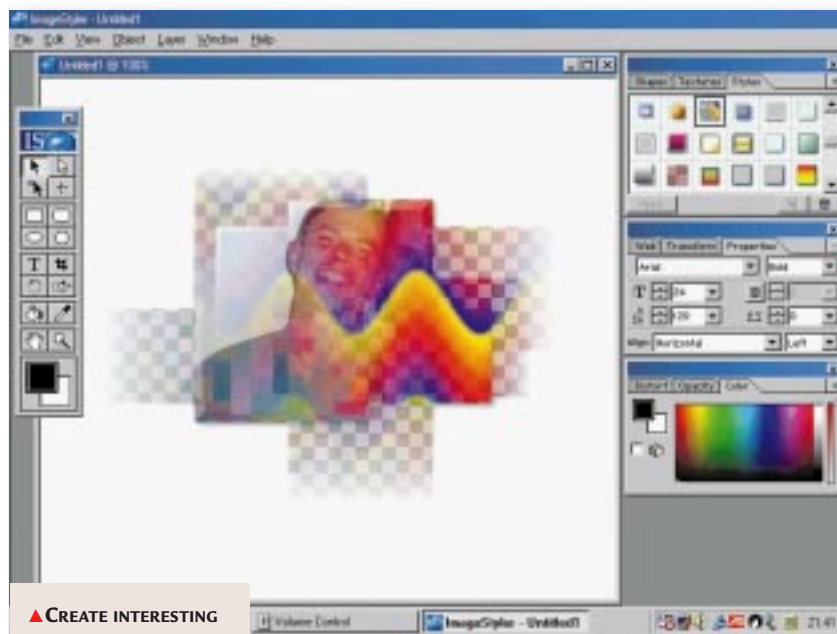
We were pleased to see Adobe's familiar interface taking pride of place in ImageStyler, a package designed to make web graphics production a doddle for the non-web professional. Rather than using "flat" images, it is based around the idea of objects. An object is anything from a shape to an image or a line of text. Each object can be edited in exactly the same way to generate spectacular effects.

With over a hundred styles from which to choose, ImageStyler provides the first-time user with plenty of scope. Each style is constructed of up to five textures, or patterns, on different layers. Once applied to an object, the object itself takes on the style. Copying a style places it on the Windows clipboard, so users can paste it onto further objects with a click of the mouse. To save editing time, objects can be linked. When a style is applied to any of the objects, it will be carried across all linked objects, dramatically reducing the amount of time a user needs to spend ensuring that all their graphics look the same.

ImageStyler handles shapes in a similar way. Once a vector shape has been created using the familiar drawing tools, it can be saved in a shapes palette and dropped into other documents. It can also be used as a matte, a part of the page which allows the image behind it to show through while obscuring the remainder. Alternatively, a line of text can be used as the matte source, giving the impression that the letters have been constructed from parts of the image showing through behind.

Creating JavaScript rollovers might once have been a problem, but no longer. Once the mouse-on and mouse-off states have been drawn, ImageStyler will write all the HTML code necessary to implement them in a browser. In much

▲ **CREATE INTERESTING MATTE EFFECTS WITH IMAGESTYLER'S SHAPES**

the same way that linking images allows the user to execute multiple style changes in one go, numerous rollovers can be created at once by selecting the objects required and applying the new mouse-over state to the group.

A major strength of ImageStyler is the way in which it handles ImageMaps. Most other packages require the user to finish working on their image before calculating the boundaries of their hotspots. However, because ImageStyler is object-based, it is the objects themselves that are defined as the hotspots and it is with these that each URL is associated. If the object is moved, changed or its size altered, then the boundaries of the hotspot move with it and any necessary changes to the HTML will be immediately implemented.

Users who already have a web site will be able to use the Batch Replace function to freshen its appearance. Graphical styles can be generated to replace formatting commands and the package will hunt through selected pages, finding any instances of tags and replacing the text to which they relate. Any HTML will be rewritten to accommodate the new graphics, and all tagged text will be imported and rendered as an image.

Once your masterpiece is complete, the Autolayout function will slice the image into manageable parts and write all necessary code to enable a browser to reconstruct it as a web page. This allows those parts of an image with solid colour coverage to benefit from the highest levels of compression without image-quality compromises.

NIK RAWLINSON

Makes web graphics production a doddle for the non-web professional

PCW DETAILS

RECOMMENDED
PERSONAL COMPUTER WORLD

★★★★★

Price Price £99.88 (£85 ex VAT)
Contact Adobe 0131 458 6842
www.adobe.com
System Specification Pentium processor, Windows 95/98/NT4, 32Mb RAM (64Mb recommended), 40Mb free hard-disk space, 256-colour display (24-bit colour recommended), CD-ROM drive.
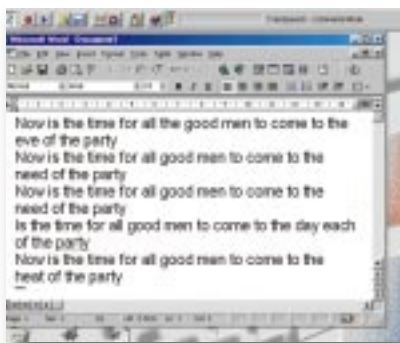**Good Points** Fast. Easy. Innovative.
Bad Points None.
Conclusion A must-have tool for amateur and even professional web developers.

Philips FreeSpeech 98

No-frills speech recognition software that does the job.

F reeSpeech runs under Windows 9x and Windows NT 4.0. Philips recommends a P200MMX with 64Mb to run it but we used a Pentium II 266 with 64Mb and found it sluggish. Following installation, FreeSpeech 98 appears as a taskbar. A green or red traffic light indicates whether you can dictate directly into the current active application — which was most of the

ones I tried. For its price, FreeSpeech 98 works quite well and correcting mis-recognised words is now handled better than before. Accuracy levels are respectable and, as ever, the more you train it, the better it gets. It's easy enough to use but nowhere near as sophisticated as its (admittedly more expensive) rivals. It offers none of the "smart" number formatting found in VoiceXpress or ViaVoice 98, so, for example, you have to say "pounds 45" rather than "45 pounds" . You must also explicitly switch modes to perform dictation, correction and "command and control" tasks.

I was supplied with the Philips SpeechMike (also available direct, priced £69.99 from www.speechmike. philips.com), a gizmo that harks back to the golden days of dictation machines. It's a handheld device comprising a microphone, speaker and trackball. FreeSpeech 98 is very "modal" and putting a button on the SpeechMike to change dictation modes is a good idea.

The Pro version offers more "tape-deck" controls. For those who are constantly leaving their desks, the SpeechMike is more convenient than a headset. But good though the SpeechMike is, it isn't perfect. The playback volume has to be set low in order to avoid feedback, documentation is non-existent and the trackball lacks decent mass.

ROGER GANN

PCW DETAILS

★★★

Price £29.99 inc VAT; £69.99 inc VAT for the SpeechMike)
Contact Philips Speech Processing 01206 755555 www.freespeech98.com
System Specification P166. Win95/98 + 32Mb RAM, or Win NT + 42Mb RAM. SoundBlaster-compatible sound card. Mic.
Good Points Basic speech product. Well specified. Reasonable accuracy. Good value.
Bad Points Unsophisticated. Modal nature breaks the workflow.
Conclusion Reasonable accuracy and features, but not as good as the market leaders.

Works Suite 99

A bumper bundle of the latest software product versions.

W orks Suite 99 is a software bundle that should easily take care of almost all your basic computing requirements. However, because it has become common practice for hardware manufacturers to throw in a big bundle of software with a new PC, it's difficult to imagine anyone rushing out to buy it. Nevertheless, be warned; if your PC is too old, it won't be able to

handle these brand-new programs. And, because Suite 99 is classified as an upgrade product, you'll have to already own Microsoft Works, Word or WordPerfect in order to purchase it. But if you're just looking to update your existing bundle, or you don't like what came with your PC in the first place, then Works Suite 99 is a good choice.

Works Suite 99 includes six individual products: Word 97, Works 4.5, Money 99, Encarta World Atlas 99, AutoRoute Express Europe 98 and Graphics Studio Greetings 99. This works out to about £20 per product, which is really quite a bargain. Word 97 is Microsoft's flagship word processor and has just about every function you could possibly wish for. Works 4.5 is made up of a calendar, spreadsheet, and database to help

▶ MAKE A VALENTINE FOR YOUR SWEETIE WITH WORD 97

PCW DETAILS

★★★★

Price £119 (£101.28 ex VAT)
Contact Microsoft 0345 002000
www.microsoft.com
System Specification Must already have a licence for an existing Microsoft product (check the version numbers carefully to make sure you qualify). P90 or higher, Windows 95 or NT 4.0 or higher, 24Mb RAM, between 354 and 469Mb hard-disk space.
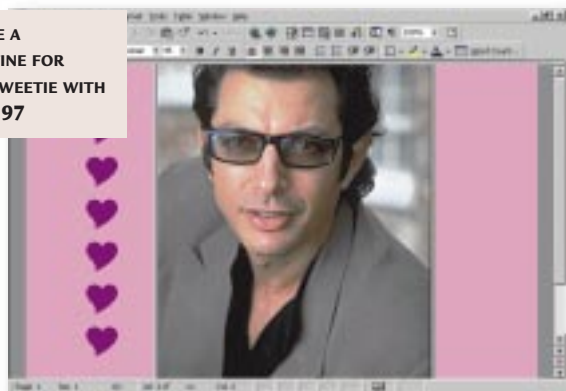**Good Points** An affordable way to upgrade to the latest versions.
Bad Points You may already own one or more of the packages.
Conclusion If you're a stickler for getting the latest releases, this is the best way to do it.

you keep track of addresses and other personal information. Money 99 takes care of the financial side of things, while Encarta World Atlas 99 and AutoRoute Express Europe 98 will let you know exactly where you are and where to go next. Finally, Microsoft also throws in Graphics Studio Greetings 99, a nice little program that lets you produce your own greetings cards, stationery, email "cards" and more. In short, Works Suite 99 includes everything but the kitchen sink, and for a nice price, too.
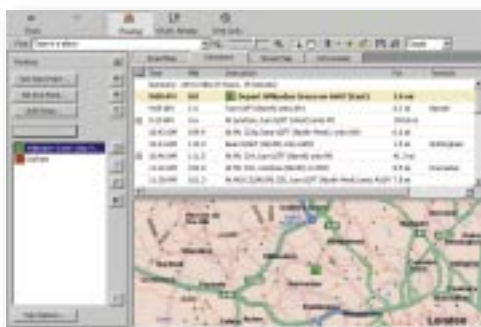
SUSAN PEDERSON

AutoRoute Express Great Britain 2000

A new version of Microsoft's on-the-road route finder.

Where do you want to go today? Microsoft provides the answer to that question with the newest version of its route-finder software. Using the latest, most up-to-date maps from Ordnance Survey, AutoRoute Express Great Britain 2000 purports to be the best mapping and route-planning CD-ROM in the UK. It certainly is comprehensive, but you'll have to spend a lot of time on the road to make it a worthwhile buy. Apart from the new and improved maps, the software also contains some useful new features to make it easier to plan your journey. The Snap-Routing function allows you to edit your route (to avoid roadworks, say) by simply dragging and dropping it to a new area. The route length is then instantly recalculated.

Users of the last version will also notice that Microsoft has now plumped for a web-style browser interface. This style works especially well with a wheel mouse, allowing you to "roll" over an area with ease. A zoom slider is also included to make it easier to focus on a particular area. Pocket Streets for Windows CE allows you to export maps to palmtops, which can be handy when you're wandering around an unfamiliar city. The package also includes restaurant, sightseeing and hotel information from a variety of travel guides to help you decide what to do while you're on the road, as well as web links for more information on various destinations. If you spend a lot of time travelling by car, this package is probably a worthwhile purchase.

SUSAN PEDERSON

Steinberg B Box

Almost five grand's worth of drum kit here — Bah-boom!

Audio software has come a long way indeed over the years and is gradually replacing the need for expensive sound equipment altogether. Steinberg's latest product is a virtual, pattern-based drum machine. Working with standard .wav files, B Box can play back up to eight instruments simultaneously and comes equipped with samples from 15 classic drum boxes. These include the Linn 9000, Roland CR78, TR-808 and TR-909, and the more obscure Simmons SDS 5. Put another way, there's the equivalent to five grand's worth of kit included here. B Box is not limited to these sounds alone though, as it enables you to customise drum sets and import your own samples; up to 20 samples can be grouped in a single bank.

If you have worked with drum machines before, the look and feel of B Box will be familiar. The 16 buttons along the lower half of the screen represent the 16 steps, or semi-quaver notes, in a musical bar, and instruments are selected by clicking on their respective channels. Each channel has a volume fader and switches for mute and distortion. In the Edit menu there are options to pan instruments using random or linear fades. Other goodies include the shuffle slider, which enables you to apply different grooves, and the ability to stream patterns off to disk as a stereo .wav file. In use, B Box is a doddle to use but does not provide the flexibility of a sampler, whether it's software based or on board a sound card.

STEVEN HELSTRIP

Mathcad 8 Professional
Power tool

This renowned computational program is now even better, with many new features.

Most professional scientists and engineers will know of Mathcad, a tool for the production of technical reports, incorporating mathematical computations with relevant documentation. With a user base of over one million worldwide, MathSoft's flagship product is serious stuff.

A Mathcad worksheet is a portable, live, mathematical object. Typically, the formulas needed for a project, together with the values and ranges of the parameters/variables, are entered via the keyboard and sub-menus of appropriate toolbars. Equations can be solved symbolically via the Maple engine, or numerically, and the results plotted. The worksheet is a freeform document consisting of repositionable text, maths and graphics regions. It is live, in the sense that when a formula or parameter is changed at any particular position, the consequences ripple through subsequent sections. This includes the updating of numerical results and the re-plotting of graphs. In text mode, Mathcad acts as a word processor to annotate the calculations and, if required, to provide a document of a quality suitable for publication or presentation.

So what's new in version 8? First, the mathematical function base has been incrementally improved and vectorised, along with a significant upgrade to the solve block facility. In particular, there is a new linear programming solver — I'm surprised it wasn't there before. Under the heading IntelliMath is the smart formatting and conversion of units, and the new automatic selection of solution method and numerical integration technique. Fortunately, this can be overridden. The three-dimensional graphics option has been completely updated, based on the OpenGL engine. You can create multiple objects in a

single plot, with any of a number of formatting options, then rotate and zoom in real time for alternative perspectives. As far as document production is concerned, there have been a number of improvements. Headers and footers can now include bitmap images, bulleted and numbered lists, full f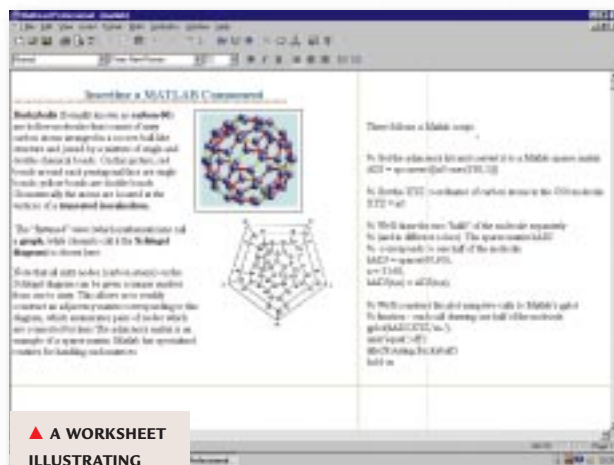ont support, and export in HTML for web publication. For the security-conscious, the facility to lock areas of a worksheet against the accidental altering of computational results has been extended to the collapsing and password protection of sensitive parts.

Mathcad cannot do everything by itself and it is acknowledged that, for some tasks, users often exploit more specialised software: a spreadsheet for the creation and storage of large data sets or a dedicated numerics or statistics application for computational work. In version 7, the functionality of Mathcad was extended by providing for the insertion of such applications as specialised OLE objects, called components. Applications explicitly supported as components now include Excel, Matlab, and two of MathSoft's own packages: Axum, for the production of more sophisticated graphics, and S-Plus, for statistics. Furthermore, using the MathConnex environment, very complicated systems can be built from several components and controlled in a visually interconnected way.

The main user guide has been slimmed down considerably without much real loss. And, there is now a reference manual of functions and

The 3D graphics option has been completely updated

▲ **A WORKSHEET ILLUSTRATING THE INSERTION OF A MATLAB COMPONENT**

operators, but for the more advanced features, particularly MathConnex, I still find the user-guide cryptic and the online sample files inadequate. On the other hand, there is the excellent web-based resource called the "Collaboratory", which is an archive of contributed downloadable worksheets. It also hosts a lively email-based discussion forum.

Considering the job it does, there is no competitor to Mathcad. There are mathematical and statistical packages which are more powerful computing engines, but none are as flexible as this latest incarnation of Mathcad. Particularly useful is its spreadsheet-like "what if" facility for experimenting within a live document. It's fun to use, too.

NIGEL BACKHOUSE

PCW DETAILS

★★★★

Price £464.13 (£395 ex VAT). Upgrade £175.08 (£149 ex VAT)
Contact Adept Scientific 01462 480055
www.adeptscience.co.uk
System Specification Pentium 90 or higher, Windows 95/98/NT (4.0 or higher), 16Mb RAM, 30Mb hard disk, CD-ROM drive.
Good Points The spreadsheet-like "what if" facility. Excellent 3D graphics.
Bad Points It is too easy to overlap adjacent parts of a worksheet. Inadequate documentation and examples of advanced features, such as components.
Conclusion Mathcad 8 Professional is an easy-to-use, powerful, technical tool — sums really can be fun!

Pastel Partner 5
Accountable software

More features at a lower price than the others — put a smile on your accountant's face.
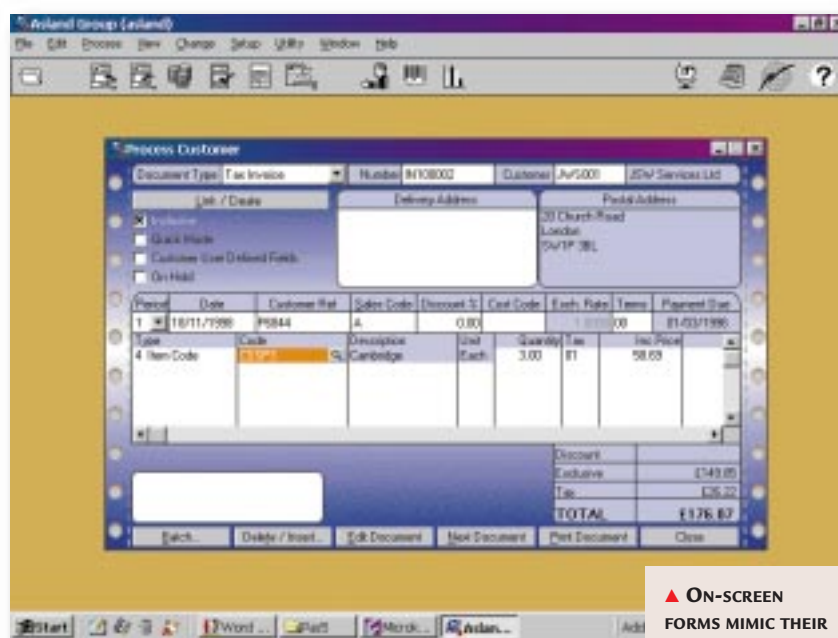
Compared with products from Sage and Intuit, Pastel Partner is a relatively unknown accounting package. Nevertheless, its publisher is keen to let it be known that it has over 100,000 users worldwide. It's truly good value for money, offering features which competitors can only include in packages costing several times the price.

Pastel is available in different editions, depending on the features required. The Bookkeeper edition (£299 ex VAT) offers the basics but users wanting a stock database, purchase orders, sales orders and quotations will need the Accounting edition (£649 ex VAT). In addition to the Accounting edition's facilities, manufacturing and point-of-sale functions can be added. All these facilities are available for £849 (ex VAT). Even so, this keeps Pastel Partner well inside the budget price range of accounting software.

Each edition allows you to do the books for as many separate companies as you like. Up to 40 users can be set-up on the software, and if corporations opt for a multi-user licence for Partner, up to 40 operators can use the software over a network at any one time. Multi-currency support is also built into the package, which is remarkable for the price band.

Version 5 introduces greater support for the internet. Purchase orders, quotations and so forth can now be emailed, and reports can be exported in HTML format. Wizards have been added *en masse,* simplifying the package for beginners, and external documents such as those produced in Word or Excel can now be linked to customer or supplier records.

Traditionally, accounting software has been designed so that data, once entered, cannot be altered, requiring the use of separate credit notes to make corrections. Although this can help prevent employees from fiddling the

For medium-sized businesses, Pastel is an attractive package

books, many users find it irritating. Pastel arguably offers the best of both worlds, allowing two types of data entry: batch and online. With batch entry, users can type in, say, a group of invoices and later bring them up on the screen to make corrections. Once they are happy with the entries, they can choose to upload them to the rest of the program. Online entry, however, means that transactions, having once been entered, are permanently stored.

Entering the data itself is quick and easy and it is a very simple process to produce a quote and then later convert it into an invoice. Pastel Partner has desktop publishing facilities built-in, so attractively designed invoices and other documents can be created, doing away with the need for pre-printed stationery. Labels can be printed from customer and supplier databases and these databases can also be mail-merged into other programs. Unlike many accounting packages, Partner does not have end-of-month routines, so users can add-in mislaid invoices from previous months. It will calculate VAT returns, too,

▲ **ON-SCREEN FORMS MIMIC THEIR PAPER-BASED EQUIVALENTS**

providing a totalled report of a VAT quarter's transactions. The user interface is straightforward. Keyboard shortcuts make the mouse practically redundant and enable quick data-entry. The windows mimic their paper-based equivalents and version 5 has a redesigned System Navigator which provides quick access to the program's features.

For medium-sized businesses, Partner 5 is an attractive package. Small companies which need neither multi-currency nor multi-user facilities might do better to consider Sage or QuickBooks. But if you're after a more powerful package, you won't go far wrong with Pastel.

ALEX SINGLETON

PCW DETAILS

★★★★

Price *£351.33 to £997.58 (£299 to £849 ex VAT) for single-user versions.*
Contact *Pastel 0161 630 7000*
www.pastel.com
System Specification *Windows 3.1 or later, 8Mb RAM.*
Good Points *Multi-currency and multi-company support.*
Bad Points *No paper tutorial.*
Conclusion *Ideal for medium-sized businesses.*

Impulse Organica
Act on it

Easy creation of complex, curved models. A serious tool for the 3D modeller's arsenal.

If you have ever used a 3D modelling package in an attempt to design an object from scratch, you will appreciate that it is far from easy. The limitation of constructing a three-dimensional object on a two-dimensional surface means that it's easy to get confused and it's hard to visualise the finished object while it is being designed.

Conventional modelling tools are usually based around additive primitive modelling. For instance, to construct a table, you start with a primitive object like a cube, squash it until it's very thin, then put narrow cylinder primitives at each corner for legs. But using normal primitives to make objects means it's hard to produce models with smooth curves, and once a model has been designed, it's more or less impossible to alter curvature and profile.
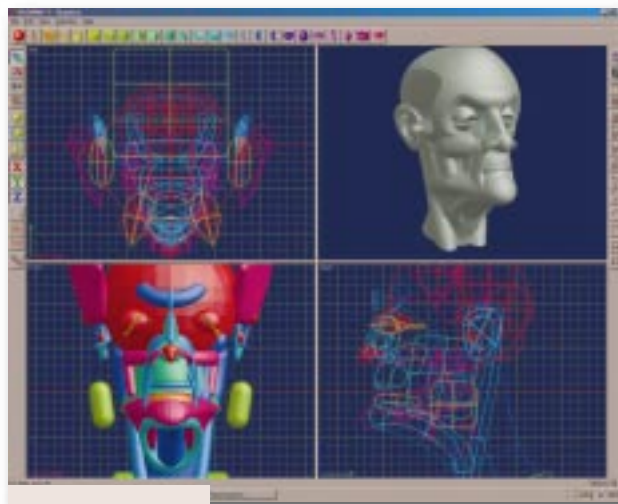
Organica claims to be able to solve the problems of producing natural-looking objects. Its modelling method is best described as a cross between NURBS and metaball schemes. NURBS (non-uniform rational b-splines) are characterised by frame objects, created by the user, which the computer then fleshes out to create a curved object.

Metaball or "blob" modelling works by using primitives which are attracted to each other, like drops of water: two metaball objects will tend to merge into

each other, giving a nice Plasticine-type effect. Organica manages to combine these schemes. You can select from a total of 25 primitives, ranging from the standard cubes and cylinders to wedges, sphere sections and pipes. Once you have more than one primitive in a scene, they will tend to locally attract each other, so the interface between two intersecting objects is naturally smoothed. This makes it possible to create amazingly sophisticated-looking objects with just three or four primitives. And, because each primitive placed by the user is a NURBS-like framework with the application itself generating the polygons, the detail level can be altered at any time. This allows you to work with low-resolution objects for speed, then globally increase the polygon count for final exportation to a fully-fledged renderer. As well as the blending together of object geometry, you can do the same with colour. Objects have both a mesh strength and colour strength attribute, which controls how strongly they're affected by other objects in the vicinity.

Organica has some impressively innovative features for ease of use. One of the best is the colour-coding of axes. When an object is selected, its "poles" are coloured red, green and blue for x, y and z, respectively. So, when applying operations such as stretching, which is done via a slider control, it's easy to see the direction in which the object will be stretched; you just select the appropriately coloured slider.

▲ **ORGANICA'S INTERFACE IS REFRESHINGLY STRAIGHTFORWARD**

The interface is extremely clean and straightforward. Almost all the available functions are represented by the three toolbars which flank the screen. There is a range of deformations applicable to each primitive, including stretching, shearing, tapering, twisting and bending. Objects can be grouped together and given a hierarchy, but that's about as far as features go.

The simplicity of Organica is both a strength and a weakness. It's a very focused tool, purely dedicated to one style of modelling. In contrast, most 3D design packages have a stack of features ranging through face, edge and vertex editing, to Boolean operations, finite element simulation and rendering engines. The only concession Organica makes is with its simple animation facility, letting you render to an AVI file. The basic idea is that you create your objects and export them to an animation and rendering package. To this end, you can export in DXF, 3DS, LWO and IOB formats.

Organica's online manual makes great play of its ease of use and the fact that it's fun to play with. There's no doubt that this is true, but really, it's only of any use to those with a *serious* interest in 3D modelling — the software price alone takes care of that.

DAVID FEARON

Organica has some innovative features for ease of use

Cakewalk Pro Audio 8
Music maestro

Professional music software with even more muscle to create spot-on sounds.

Since the early days of PCs, Cakewalk has been one of the mainstream products in music software, constantly providing state-of-the-art features. In addition to the usual MIDI sequencing and music notation tools, Cakewalk has been offering digital audio support since version 4. Taking advantage of the newer Pentium processors and DirectX technologies, later versions added high-quality stereo, real-time, audio effects such as reverb, chorus, parametric EQ and delay/echo.

This latest version offers notable additions especially suited to the professional user. The number of audio tracks has been increased from 64 to 128, and the number of effects which can be applied to each one is now 256 — if you can afford the hardware to handle it. Furthermore, these effects now use 32-bit floating point processing. Version 8 also brings you the ability to work with professional sound quality, using 24-bit and 96kHz audio. These sound specifications give you between one-and-a-half to twice the quality of CD audio (if one can make a direct analogy between numbers and sound quality). For these sound specifications you will need a 24-bit audio card but Cakewalk also supports 16-, 18-, 20- and 22-bit audio cards.

...one of the best music programs on the market

Cakewalk's user interface has had a facelift, too. A new addition is the Console View designed to simulate a professional mixing console. It provides a single window from which you can control your projects such as recording tracks, applying processing effects, creating sub-mixes, and automating volume and panning levels. Powerful editing features include monophonic audio-to-MIDI conversion, Remove Silence, Fade/Envelope and Crossfade, Quantize and Groove Quantize, Extract audio timing and Reverse audio.

▶ **PROFESSIONAL SOUND REPRODUCTION WITH CAKEWALK PRO 8**

StudioWare panels give you remote-control access to studio gear such as mixers, effects units and synths. A 256-bank MIDI System Exclusive Librarian enables you to store synthesiser settings and sounds on your PC.

Special facilities to prepare music and sound for the internet include the conversion of audio files to the RealMedia streaming format. Other features enable you to open AVI, MPEG or QuickTime movies in a video playback window, edit their sound and re-save them. Users can synchronise sound with frame accuracy, allowing them to compose a music score for a video.

Cakewalk Application Language (CAL) incorporates programming attributes to automate operations or create entirely new editing functions. The MIDI FX plug-ins are a new feature which enable non-destructive, real-time MIDI effects such as Arpeggiator, Quantize, Delay/Echo, MIDI Filter, Transpose and Velocity Scale to be applied.

The program now includes sophisticated music notation facilities for editing and printing musical scores, and you can prepare either individual parts or a conductor's score. You enter the music directly into the notation window using the mouse, or convert it to musical notation from a performance you have played-in from a keyboard. Furthermore, you can notate up to 24 staves per page, with guitar chord grids, percussion notation, lyrics, title, composer name, expression text, hairpins, pedal markings and enharmonic spellings. In addition to printing, a special window can display lyrics in sync with the music to help singers perform a song. Vector-based audio mixing displays lines on top of audio waves for graphical editing of automation data, and a number of other features include custom layouts, templates and tutorials.

With all these features, you have nearly everything you need to record and edit a musical performance on your PC and to create a final mix for cutting a CD. Cakewalk 8 is certainly one of the best music programs on the market.

PANICOS GEORGHIADES

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System Specification Windows 95, Pentium 120, 16Mb RAM, Win95-compatible sound card and/or MIDI interface. Printer and MIDI instrument (optional).
Good Points Full-featured. Digital audio effects. Automation language.
Bad Points For the dedicated musician only.
Conclusion Top-of-the-range music recording, editing and performance software.