

Enter the 550MHz PIII

Intel was set to debut a 550MHz Pentium III at \$744 last month despite reports of overheating problems, *writes Mike Magee*.

Bulk price of the 500MHz PIII was set to fall from \$637 to \$482, and the 450MHz from \$411 to \$268.

The PII is near the end of its life — later this year Intel will bring in 0.18 micron PIII Coppermine chips. The price of the 350MHz PII has been

Intel peps up StrongARM as NatSemi quits high end.
See page 28

held steady at \$163, while the PII/450 will cost \$268 and the PII/400 \$193. The PIII/450 now costs \$268.

● AMD is working on a Slot B version of its K7 which will make it mechanically, if not electrically, compatible with Intel's Xeon. The move pitches the K7 against the Xeon and will make it swappable with Compaq's Alpha.

The cat's whiskers?

Fujitsu claims to have re-invented the mouse. It believes that this model combines the best of the touchpad and the traditional mouse. It will be available in high street shops but the price is yet to be announced.

Phones and web go free in battle to corner e-trade

High-street electronics store Tempo is offering **freephone off-peak web access** in the latest round of an increasingly frenzied battle for a corner in an expected e-trade boom.

Net use in Britain has shown a classic exponential increase since Dixons launched its fee-free FreeServe access last year.

A National Opinion Poll survey reckoned one in five people in Britain had access at the end of last year — and the number was increasing by 10,000 a week.

Signs are that the net has at last broken out of the vicious circle where it had too little content to attract mass use, yet too few users to attract the content. All this is before digital TV, likely to web-enable just about every TV set, takes off in earnest.

BSkyB, fearing competition from cable firms [see below], is offering a 'free' set-top box for digital satellite TV sign-ups, and free web access with reduced phone charges. Banks, papers and stores are jumping on the bandwagon by branding access offers.

X-stream, which kicked off fee-free access in Britain last year, offered 0800 access for two months in March. But Tempo's Screaming.Net, available from its stores, is the first with a permanent offer. Users get 0800 access from 6pm on Friday to 8am on Monday and from 6pm to 8am for the rest of the week. They have to register with partner LocalTel which offers calls at ten percent below BT prices. Tempo claimed 25,000 users after only a week.

AOL cut its monthly charge to just under £10 in response to free services, and is said to be considering an 0800 deal. Even BT is getting in on the act, trialling a free voice-call service subsidised by audio adverts, which should prove just as viable as a data link. A similar service called Freedom, backed by Energis, is set to launch this summer.

Much recent investment has been made in the fond hope that once users log on to a host site, they will stay there. They do so now in surprising numbers, but whether this will continue as users gain experience is an open question.

Search-engine Lycos, which fronts Screaming.net, is taking no chances. It has signed up US web community builder Tripod to start a UK version of its successful 'pods'. These are communities of interest (as in 'peas in a pod') where like-minded users can interact. Tripod co-founder Bo Peabody said: 'We know how to create sites people want to come back to.'

An awful lot of money is riding on claims like that.

CLIVE AKASS

● Boom clogs lines — page 39



Cable net launches at £40 a month

N^TL has finally begun the rollout of its **cable-based web service** offering speeds up to 512Kbit/sec — eight times faster than an ISDN line. It is charging a flat £40 a month, which is likely to set a benchmark price for rival services. Users have to buy a £150 3Com cable modem.

Phone-line rental will cost an extra £8.87 a month. NTL is one of Britain's big three cable companies, covering

about 25 percent of homes.

The other two are sure to launch a similar service soon.

Cable line capacity is shared by others on the loop, but 512Kbits/sec is a conservative view of likely data rates. But the fact that the line is always on is as important as the speed, as it enables all manner of 'push' services.

The challenge to ISDN is not as great as it might appear, as the speed is guaranteed only

on the local loop. ISDN speeds are guaranteed point-to-point.

Easynet last month launched a £49.99 a month satellite-based access which offers downloads at up to 400Kbits.

Now a company called Tachyon, using the same Eutelsat satellite, is offering two-way links in three levels of service up to 2.4Mbit/sec for between \$450 and \$1,200 a month.

www.ntl.com; www.tachyon.net;
Easynet 0845 333 4000



3D spectacles

German vendor Elsa claims that these glasses for playing 3D games rival the realism of holography. The £54.99 glasses are available in high-street stores and by mail order. They communicate with the host PC via an infra-red link and will work with most graphics cards, although Elsa only supports its own. *Elsa 0118 965 7755*

short stories

COMPAQ SLATED

Compaq laptops are under fire again, writes Jo Pettitt. Their prices and reliability have stabilised but they are 'out of the competition' on support, delivery time, availability and configuration, US analyst TBR says in a report. It rated Dell as top vendor, followed by IBM and Toshiba.
● Ousted Compaq chief Eckhardt Pfeiffer's payoff will be as much \$300m with stock options, according to reports.
(Top dog loses head — p46)

RIVAL JAVA GROUP

Microsoft and HP have joined a new Java consortium to rival Sun, which they say seeks too much control over the portable language. The new J Consortium evolved from the Real Time Java Working group, formed by the two companies last year.

Chairman Wendy Fong said the aim is to create specifications that can be submitted to a consensus-based standards body.
(Sun sidesteps ISO — p30)

NT 'UNSAFE FOR TRADE'

Windows NT should not be used for hosting e-commerce and other security-sensitive applications until late 2001, says a Gartner analyst.

Neil MacDonald told an NT conference in Palm Springs: '[NT] is fine if it's behind a firewall, but ... when it's on the internet outside the firewall, the probability of facing a sophisticated attack is 99.999 percent.'
(Massive beta rollout — p31)

PIRACY WARNING

The new Civil Search Warrant which came into effect in April, will help speed up action against illegal use of software in business and boost the number of prosecutions, says the Federation Against Software Theft.

All change on the desktop as major upgrades ship

Three major software upgrades and an important beta trial have been launched in what amounts to a **revolution at the desktop**.

Least of the launches is the new Special Edition of Windows 98, which adds features such as shared web access. More important was the sending to 670,000 testers of a full-featured late beta of Windows 2000, a.k.a. NT 5.0 [see page 31 for more on this].

Microsoft also began shipping Office 2000, and Lotus finally released the delayed Notes Release 5.0. These upgrades bring into the

web age suites which between them run at least nine in ten offices worldwide. Both now use the web's *lingua franca* HTML native, rather than a bolt-on as in earlier releases.

The Lotus Domino R5.0 server now enables access to all features from a browser, which means that companies no longer need to install Notes clients on all machines. It also facilitates remote access.

Office 2000 allows users to collaborate on a document via a browser. But Release 5.0 goes further in the integration of its collaborative environment.

It is also big on Knowledge Management — a new Lotus buzz-phrase. This treats knowledge, including that in brains, as a major resource to be run and used as well as possible. Significantly, Microsoft has started using the phrase.

Lotus claims that since it was taken over by IBM, the number of Notes users has risen from 5m to 34m.

The Premium, Standard and Small Business editions of Office 2000, which hit the shelves on 8th June, are priced at £669, £569 and £439 (inc VAT).

● See Point of View — page 28

Unwired office

Nokia has developed a series of devices giving staff wireless access to a network as they move around a building.

The devices, launched at Network + Interop in Las Vegas, include PC Cards and wall-mounted radio-access units which support up to 30 users. Pekka Lundmark, senior vice-president of Nokia's wireless communications unit, said: 'This will unwire our offices.'

LINDA LEUNG

NT book saves crash biker

A motorcyclist who crashed on his way home from an NT Core Technologies course was saved from serious injury — by his Microsoft textbook.

Olu Afolabi was sent flying through the air after his Yamaha VMAX was in collision with a BMW. And he says it was the MSCE course book in his rucksack that protected him from the full force of the impact. 'I'm lucky to be alive. God knows what would have happened if I hadn't had that book with me,' said Afolabi, 32, from Chiswick, west London.



'No, Carruthers, that's not what I meant when I said I wanted a bulletproof system'

short stories



► **RICOH DOES AN HP**
Ricoh is expanding its office range to answer all business printing needs. New products include fast mono and [above] colour Aficio printers with robust paper handling and network utility software.

Ricoh 0181 261 4000

► **3GHz PROCESSOR**
An Intel chip codenamed Northwood will clock 3GHz at release, say sources. It will be one of the IA 64 range of processors due to launch next year.

► **PROTEK EXPANDS**
Devon PC maker Protek is setting up a chain of high-street outlets called Electra World following a successful pilot in Exeter. The first will be concessions within the Bewise clothes chain.

NatSemi slims for device war

National Semiconductor, owner of Cyrix, has pulled out of PIII-class processors, leaving the market to AMD and Intel. It is **selling the rights** to its MII processor and most of its stake in a 0.18 chip plant at South Portland, USA.

AMD was rumoured as we went to press to be one of two possible buyers. IBM, which has made and sold Cyrix chips under its own brand, was not expected to bid.

The sale leaves NatSemi staking its future on its roadmap, outlined in *PCW News* last month, for the Cyrix Media GX range — x86 clones which

integrate audio and graphics functions and are popular in the burgeoning cheap PC market. NatSemi plans a range of specialised versions for task-specific appliances.

NatSemi is gambling that many device designers will opt for well-tryed x86 chips with their wealth of applications and software tools. Ironically, this could pitch them against non-x86 chips from Intel, which is boosting by up to three times the performance of its StrongARM chips. These use a core from UK-based ARM.

New versions, shipping from early 2000, will clock from 150MHz to 600MHz and run

from 185m to 750m instructions per second (MIPs) while drawing less than half a Watt.

This gives them less than a tenth the battery drain of the most frugal Pentium. MIPs are a poor way to compare alien processors and are no longer quoted for Pentiums; but an early Pentium Pro ran around 300MIPs.

Herman Stehlik, NatSemi's European marketing manager, said both ranges would find a market. 'StrongARM will be found in low-power devices like PDAs. Our GX chips will be used in set-top boxes and web access devices.'

Several operating systems, including Epos, JavaOS and CE, support StrongARM.



Sign of the times

Keith Roberts, charming communications director at Interlink, could hardly have chosen a worse person to whom to show his new \$69.99 ePad kit, for signature capture and recognition — my scrawl is so erratic, I'm often asked to re-sign cheques. The pad repeatedly (perhaps wisely) rejected me as suspect. Roberts says the production version will fare better: we'll try it and see. *Details at www.interlinkelec.com.*

CLIVE AKASS

POINT OF VIEW

First-class letters

A curious feature of the past two decades of IT has been the way fax took off long before the simpler email. Software vendors are largely to blame.

There is absolutely no reason why you should not be able to write a letter in your word processor, stick on an address and send it at the push of a button.

You can do this with fax from any program capable of printing — but not with email, certainly not in Office 97, without special programming or getting deep into routing slips and swapping into Outlook.

This goes way back. A big selling point of the market-leading WordPerfect of DOS days was that it supported any of hundreds of printers at a time when each application had to provide its own drivers. But it boasted not a single modem driver to facilitate mailing.

I tackled WordPerfect executives on the subject and got no satisfactory

reply. Eventually I wrote a devious set of macros which made up for the lapse (they were, incidentally, the basis of the first big article I wrote for *PCW*).

A decade on, Microsoft has seen the light. Facing the prospect of easy-to-use task-specific appliances, it is talking simplicity [see page 31], and the new Word 2000 can be used directly as a mailer.

The fact remains that for 20 years Microsoft and other software houses have made a hash of this fundamental task because they are more interested in flogging expensive, complex messaging systems to corporates. It's the kind of thing that gets computers a bad name.

I love Word 2000's multilevel clipboard and HTML savvy. It is supposed to be file-compatible with Word 97, avoiding

a gripe with earlier upgrades, but I have to say that it baulked at my old macros. I am persuaded that this was a quirk of my PC, which is haunted by the ghosts of programs reviewed in the past. I'd be glad to hear your upgrade experiences, good as well as bad.

I dislike the way each new document now acts like a new instance of Word. Microsoft may have a point in saying this will help new users keep track, but it clogs up the task bar and you have to minimise each window separately to get at the desktop — or learn to use the taskbar shortcut [left].



IBM says Europe is 'behind' in its take-up of subnotebook-style CE mobiles. Given the fact that most cost only a few pounds less than a fully-fledged Windows 98 notebook, could it be rather that Europeans are ahead in thinking they are overpriced?

Clive Akass



on why it took email 20 years to challenge fax

16Mbit IR woos PC at last

Infra-red links at 16Mbit/sec, **four times faster than the current top speed**, should be available next year, according to the IR Data Association (IRDA). Its new VFIR (Very Fast IR) specification will help the technology hold its own against USB and emerging Bluetooth links.

More to the point for many users is another new IRDA agreement which should consign to history one of life's great mysteries: why vendors stick IR ports on virtually all notebooks and yet give them little or nothing to talk to. Nearly every new motherboard now packs I-R, needing only a \$2 transceiver

to become usable. Yet few PCs are sold with an I-R port.

Add-on ports have been outrageously expensive, at one time costing more than a TV set complete with I-R control.

PCW has been given various excuses (with off-the-record hints of in-fighting) but one reason was that there has been no standard way to mount a desktop I-R link.

A specification for this has now been agreed by an IRDA committee. It says first that, because most PC boxes sit under a desk, the port should hang on a dongle rather than be mounted on the front.

And it specifies a cable that links the motherboard's IR

pins to a standard plug on the rear panel, or more likely a backplate. The idea is that PCs will be sold with this plug so that users can add I-R easily and cheaply if they wish.

But Kenning Yeh, head of IR specialist Actisys, warns that many board makers do not fully implement or test IR sub-systems because they're so little used. This creates a Catch-22: users won't ask for I-R unless it's fully supported; and it won't be globally supported until users ask for it.

The good news, says Yeh, is that I-R prices should fall by at least half.

CLIVE AKASS

...as the USB gets a 20x speed boost

The new USB 2.0 spec, which will increase the speed of the port to up to 20 times the current 12Mbit/sec, should be in draft form by September.

The new port, which will also run USB 1.0 devices, will supersede version 1.0 from late next year according to USB prime mover, Intel. The top data rate will be between 120Mbit and 240Mbit/sec. This is equivalent to early 1394 (Firewire) ports and will allow USB to drive a greater range of devices, such as video cameras.

But 1394 data rates are now pushing beyond 800Mbit/sec and the two ports are likely to coexist — 1394 is more expensive.

It seems that USB 2.0 will not upgrade one of the big disappointments of USB 1.0: the 5v line which was effectively IT's first standard DC power supply.

This has the potential to eliminate the need for all those mains adaptors. But the maximum current of 500mA, which may have to be shared between several devices in a chain, is sufficient for only the most frugal of peripherals.

CLIVE AKASS

CFII slots into a more complex world

Mobile specialist Xircom has shipped its first product for the Compact Flash II slot, which looks like becoming to small devices what the PC Card slot is to notebooks.

Buyers of this £89 (ex VAT) Ethernet card have the best of both worlds, as it comes with an adapter that also allows it to be used in a PC Card slot. A GSM-link CFII card is due to ship this Autumn, with a modem following before the end of the year. Xircom plans a wireless modem card for next year.

The first designs will run only on Windows CE mobiles of a type Xircom believes will see massive growth over the next five years.

CF slots are following the pattern of the PC Card slot which also began as purely for memory. But the market has been complicated



now by a proliferation of formats: SmartMedia, Sony's memory stick, and the tiny MultiMedia cards (MMC) used in the Nokia 9110.

Joachim Rupp, Euro marketing manager at Hitachi, which has just launched a 16Mb MMC, said each might find its niche, 'but even Sony doesn't seem to be using the memory stick.'

Xircom 01256 332552; Hitachi www.hitachi.co.jp

IBM links small devices to big DB2 databases

IBM is to make its market-leading DB2 database system easily accessible by handhelds and other small mobiles. The move is being spearheaded by Janet Perna, general manager in charge of DB2. It was she who instigated the revamp, despite initial opposition from some factions within IBM, of the powerful but unwieldy command-line-driven DB2 version 4.0.

Version 5.0, launched in 1997, had a transformed user interface which made it

easier to drive than Microsoft's SQL Server. The next version, due to ship in the next couple of months, will have enhanced scalability, a Java-stored procedures builder, and remote debugging.

A version called DB2 Everywhere will run on Windows CE, PalmOS and, shortly, EPOC-32 devices. Perna said: 'We've got it so small that it has a fingerprint rather than a footprint — something in the order of 50Kb. We keep

it so small by utilising the native file system of the device ... We add some basic SQL- Select, Insert, Update Delete — then for the synchronisation back to the server we use IBM Mobile Connect.'

A sister product, DB2 Satellite Edition, will run initially on Windows NT and Windows 9x, with the delivery of the server-side tools being on NT and AIX.

MARK WHITEHORN

● News Analysis — page 40

PCW writers report on the navel-gazing and impending changes in

JAVA

Gung-ho Sun keeps a tight grip

Sun is sidestepping the ISO standards body in a bid to get **Java accepted as an international standard.**

Critics have said that Java can never be a truly open standard while the company retains control, and indeed Sun admits it is unhappy with the level of control the ISO expects. The Java specification has been under consideration for two years by an ISO technical committee called JTC1.

Alan Baratz, president of Java software at Sun, said JTC1 decided it should be responsible for what it described as the 'maintenance' of Java. 'We initially understood that this meant minor changes to Java, but it became clear that JTC1 meant the ongoing evolution of Java, and that this was unacceptable.'

Sun will instead submit the specification to a European Computer Manufacturers Association technical committee which will agree a

draft standard by October, and vote on it in December. 'The standard can then be submitted to ISO for fast-track adoption,' said Baratz.

The move followed a Java symposium in Paris, which Sun used to try to talk up Java's future. But the event was overshadowed by the paucity of thin client hardware and software.

Executives admitted that a second-generation version of the Javastation thin client [pictured above], planned for early this year, has no definite shipping date — though Sun will launch a range of client devices this year.

Sun remains gung-ho about Java. New president Ed Zander said that once the net gathers speed, it will have as much of an impact as the invention of the telephone.

He claimed: 'It's no longer

a Sun product ... the investment that other companies are making in Java, far exceeds Sun's.'

Zander believed the number of Java coders would triple by 2002 and outnumber C++ programmers. In fact, like Microsoft with NT, Sun faces a shortage of Java coders.

Gartner Group research director Daryl Plummer predicted that the Java shortage would reach around 50 percent of demand by 2001. And he

said Java's focus was changing from simple client-based applets to mission-critical server code. He said: 'Java will become the most popular programming language and platform technology for network computing applications through 2003.'

Sun needs developers to create the vast array of software that will make Java ubiquitous and generate licensing revenue. But, as Plummer points out, this puts it head-to-head with Microsoft, which has strong development tools like Visual Basic. **JO PETTIT**



iPlanet takes off

Sun launched its iPlanet software which allows users access to firewall-protected networks from anywhere, via a Java-enabled browser. The remote user appears to be working. It is said to create a virtual workspace identical to the user's office environment. Mark Tolliver, general manager for the Sun-Netscape alliance, said iPlanet offers more flexibility than rival products, and provides the same security as a virtual private network (VPN).

Hotspot accelerator comes along... late

Sun has shipped its Hotspot technology for optimising Java performance — more than a year late.

Hotspot, which Sun claims will **double the speed of Java applications**, was originally developed by Longview Technologies, which Sun acquired two years ago. Sun hyped the technology at the JavaOne conference two months later, promising to ship it later that year. But the product kept slipping, and vendors including IBM and Microsoft started developing their own equivalents.

The long delays in shipping Hotspot have caused Sun embarrassment. Ron Rappaport, an analyst with Zona Research, said Hotspot would be welcomed but that 'in mid-1999, it's more evolutionary than revolutionary,' and added: 'Performance remains a key issue for Java. This is a product that [Sun] needed to ship.'

Hotspot is available for free download from www.sun.com. Version 2.0, which offers a claimed 30 percent extra performance, will be available this summer.



Web phones, like this one from IBM, are the network computers of the future, according to Sun's chief technology officer Greg Papadopoulos. He predicted that consumer technologies will begin to pervade offices during the next five years, with voice and data networks converging. Users will pay for access to a network but phone calls from that network will be free, like email, he said. Extranets and intranets will merge into the internet, with company firewalls disappearing — although they will protect individual servers.

two major software camps

WINDOWS

UPnP gains more ground

Microsoft's Universal Plug and Play (UPnP) initiative is gaining ground just three months after its announcement.

UPnP is widely seen as Microsoft's answer to Sun's Java-based Jini, which aims to allow appliances to be plugged into a network as easily as into the mains.

Vendors announcing their support at the WinHec conference included IBM, Gateway and Sony, bringing the total to 54. A UPnP showcase demonstrated prototypes in a home setting. UPnP has been criticised as PC-centric although it is based on the net's TCP/IP protocols and XML markup language.

UPnP support will be available for Windows 2000, Windows 98 and Windows CE by the end of this year.

DOMINIQUE DECKMYN
IN LOS ANGELES

Win98 reprieved with an upgrade

Microsoft has **ruddered out an upgrade to Windows 98**, having decided that the operating system is too young to die.

Windows 98 was originally due to be phased out in favour of a consumer version of Windows 2000, the long-delayed upgrade to its NT corporate operating system [see box, below].

Executives at last month's hardware-orientated WinHec conference said that compatibility concerns, particularly with games, were

a major reason for the reprieve [see 'Microsoft goes for the simple life', below]. The upgrade was expected to come out in the autumn, but its release seems to have been brought forward.

The new Windows 98 Second Edition (SE) will ship in new PCs and cost the same price as the old version. Existing users can upgrade for \$19.95 — a charge which, Microsoft claims, covers the cost of a CD, postage and packaging, and a book explaining new features. These

include the latest version of Explorer 5.0, NetMeeting 3 conferencing software, and the ability for several users to share net access.

There will also be improved support for Universal Serial Bus (USB), 1394, broadband connections and power-management, including an instant-on feature. A Windows 98 Service Pack which tweaks existing features, will be available free of charge from www.microsoft.com, where you can also order Windows 98 SE.

Win2k autumn release possible

A beta 3 version of Win2k went out last month to more than 430,000 users and 140,000 developers worldwide, in what should be the final phase of Microsoft's testing and evaluation program before the final code is released — perhaps as soon as the autumn. Jim Allchin, senior vice-president of Microsoft's newly formed Business and Enterprise Division, said: 'Hands-on

experience with the software is the best way for customers to evaluate Windows 2000 with their existing systems.'

At the WinHec conference, Microsoft demonstrated a 64-bit version of the operating system which will run on Intel's yet-to-be-released IA64 or Digital/Compaq's Alpha processors. It will be released shortly after the 32-bit version, Microsoft says.

Microsoft goes for the simple life

The reprieve of Windows 98 is a symptom of a **change in priorities** at Microsoft as the PC faces the challenge of simple, single-tasking information appliances.

The focus is now on ease of use rather than new features. Microsoft president Steve Ballmer (pictured, right) told last month's WinHec conference: 'We've got to get the consumer computing experience to the point where the computer just works.' Ballmer announced what he called the easy PC

initiative which, in conjunction with Intel, will seem to simplify the design of the PC.

The same thinking lies behind the next Windows 98 upgrade, due next year. This is not yet named, but is being referred to as Consumer Windows in 2000 and will be based on Windows 98 code. One feature to be included will automatically install and configure games when a CD is inserted.

Microsoft is also developing a series of utilities

called PC Health, which automatically diagnose and fix certain problems.

Consumer Windows will also use a new task-orientated user interface, **writes Cathy Everett from Palm Springs**. It will feature tasks like personal finances, teleconferencing and writing a letter, Microsoft VP Jim Allchin told a Gartner conference here.

He said: 'We can simplify the user experience by making it have a task focus without needing single-focus devices.'



MP3 under pressure from Audio 4.0

Microsoft has **backed off from early claims** that its MS Audio 4.0 compression provides better sound quality than RealAudio G2 and MP3. It now claims only 'equivalent quality' to MP3 and describes its streamed audio usage as 'FM stereo quality'.

MS Audio 4.0 files are indisputably around half the size of MP3, and include measures to prevent illegal copying and distribution.

Solid-state MP3 players have been limited by the fact that they cannot store an entire album. An increase to 64Mb of flash memory allows MP3 storage of around 60 minutes — but the MS Audio 4.0 format will effectively pitch these portable players against the dominant 90-minute cassette tape.

Neil McGuinness,

of Diamond Multimedia, which developed the Rio, the first commercially successful MP3 portable player, said he did not see MS Audio 4.0 as a threat. 'Diamond is actively involved in developing online music distribution through its participation in the Secure Digital Music Initiative. If MS Audio 4.0 becomes an adopted standard, then Rio will support it,' he said.

McGuinness, who was recently criticised by the Record Industry Association of America for promoting the insecure MP3 format, said the Rio's flash memory can be reprogrammed via a downloaded update to support

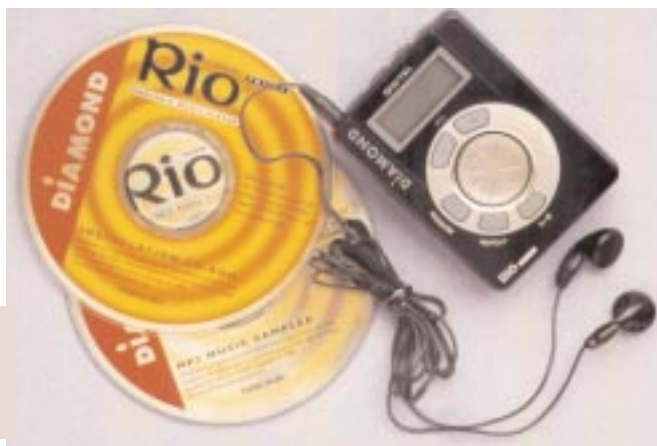
MP3 and MS Audio 4.0 formats, but to do this requires a PC.

Manufacturers continue to release portable MP3 players. Samsung's Yepp [see *Gadgets*, p70] complements its range of MP3 car stereos. Creative Technologies launched its rebadged Yepp as the Nomad.

Casio's new Cassiopeia handhelds will enable consumers to download and play up to four hours of MP3 and MS Audio 4.0. Apple's upcoming QuickTime 4.0 adds MP3 playback and streaming support.

IAN ROBSON

[ADDITIONAL REPORTING BY
JAN HOWELLS]



► **THE RIO IS NOW BEING SOLD BY PREMIER (01992 634652)**

New boost for the BeOS

A new version of the multimedia-optimised Be operating system will be launched at PC Expo in June. BeOS 4.5, codenamed Genki, will include support for PC Cards, USB and 1394. It will also have a wider range of drivers for audio, video and graphics cards. But, more importantly, developers of major audio and video packages are expected to launch BeOS versions of their flagship products.

The BeOS, which costs only £50, has advanced multithreading and is designed from scratch to run multimedia programs

— unlike Windows, which is also encumbered by the need for backwards compatibility.

Jean Calman, VP for Europe, said some leading vendors may bundle the operating system with their products for users who want optimum performance. He said Be could also benefit from the Linux boom because Linux source can be compiled without change for the BeOS.

www.be.com
Computer Warehouse 0181 400 1298

Looking good

The strategy of the Emachines company, which **targeted first-time buyers with offers of very cheap PCs**, seems to have paid off. It shot into fifth place last month in retail sales, according to PC Data.

However, high-end Pentium III-based PCs have also managed to rack up 'respectable' sales. They accounted for nine percent of retail sales and helped raise average selling prices towards \$1,000 in March, just after the chip was launched. This is up \$50 on the previous two months.

The figures provide a speck of optimism for vendors who have been beating each other up with low-cost machines. Analysts say that PC unit sales are still growing at 15 percent, but prices are descending at a rate of ten to 15 percent.

► **Intel released the PIII** in February with a \$300m marketing campaign. The company has just cut prices on its 500MHz and 450MHz PIIIs by eight and 17 percent, so it must feel good about this fast start for the chip. Analyst IDC predicts that by 2002 more than 55 million handheld and notebook-style information devices will be in use — many by businesses.

► **The recent DemoMobile 99** show gave some hint of things to come. Palm Computing said that it is teaming up with Sybase to boost data synchronisation between corporate computers and the upcoming wireless-enabled Palm VII. It is also working with Aether Technologies to develop wireless applications for all the Palm devices.

Proxinet debuted software for translating web content for Palm and Windows CE displays. It translates web content on-the-fly and can thus be used for live web surfing.

Tim Bajarin



letter from **Silicon Valley**

short stories

GUARDED SPEECH

Voice encryption of a standard previously only available to the military and to diplomats will go on general sale if a Silicon Valley startup gets its way.

Starium's phones will be based on 168-bit Triple DES and 2048-bit Diffie-Hellman key exchange, as used by the US National Security Agency. Current commercial products use scramblers or 40-bit keys. Its handset, half the size of a PalmPilot, will cost less than \$100.

VIRUS-MAKER ACCUSED

A Taiwanese student has been accused of creating the CIH virus which last month wreaked havoc worldwide. Chen Ying-Hao was reportedly 'demerited' by his college after writing the virus and has been questioned by police. It is unclear whether he faces court action.

CIH is dangerous as it hits a PC's BIOS code. Paul Ducklin, research head at UK anti-virus company Sophos, said he knew of one small firm which lost all its data when its six PCs were hit.

SPAM ON THE MENU

The European Parliament has voted against a ban on spam. Instead, it voted for a system that requires junk emailers to clearly identify messages and give users a chance to opt out of email lists. A proposed ban on the practice of harvesting addresses from websites and newsgroups, failed to win support.

ACROBAT 4.0 SHIPS

Adobe's Acrobat 4.0 is now available for £149 (ex VAT) or £59 (ex VAT) to users of Acrobat 2.0 and above. The new version supports digital signatures and allows you to save web pages in Adobe's Portable Document Format. It also facilitates re-use of information within PDF files.

www.adobe.co.uk

HARDWARE

Acorn dies but legacy lives on

The Acorn Computer Group, the last British company to have developed its own desktop computer and operating system, is no more. The company has been bought by US investment bank Morgan Stanley and has been broken up to release its £300m shareholding in hugely successful spin-off, chip developer ARM.

Loss-making Acorn could not cash in the shares without incurring a massive tax bill. Morgan Stanley is using its purchase as a valuable tax loss, swapping Acorn investors' shares for ARM shares.

Set-top-box maker Pace Micro Technology acquired Acorn's thin client computing and traditional personal computer business, including around 30 staff, for just £200,000. Acorn closed its desktop computer division last Autumn, apparently for good.

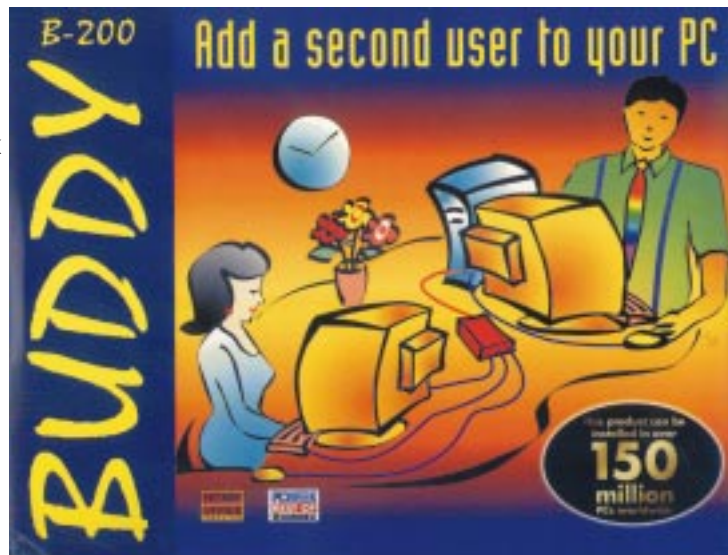
But its small yet vociferously loyal and enthusiastic community of users, dealers and developers eventually persuaded it to

maintain a lifeline for the Acorn computer platform, so its operating system and graphical user interface, RISC OS, has been licensed to a non-profit third-party company called RISC OS Ltd, set up by dealers and developers. Pace now controls this licence. At least four companies are currently designing next-generation hardware for RISC OS applications.

Acorn produced the BBC Micro, on which many first-generation UK users learned computing. And, back in 1983, it designed the ARM RISC processor, used by Acorn since 1987. In 1990, the ARM design team was spun out of Acorn to form ARM Ltd and the latter has since dwarfed its parent as Acorn fought a losing battle against Microsoft-based PCs in its primary market — schools.

Last year ARM was floated on the stock market and at current prices is worth more than £1bn.

IAN BURLEY



Buddy can spare you some dimes

How happy the couple on this box shot look. If you believe the vendors, this is because they've got two PCs for little more than the price of one. The Buddy is a kit consisting of an ISA card, cable and junction box into which you can fit keyboard and monitor. These allow two people to use a single PC and net link simultaneously. At £129.95 inc VAT it is cheaper than some rival products.

Eurotech 0118 981 0011

Ultra3 SCSI chip 'trashes rivals'

Advanced System's new dual-channel SCSI Ultra3/160/m chip, the ASC38C1600, is said to deliver twice the processing power of rival products. It can support a combined data transfer rate of 320Mb/sec.

Its two channels can be controlled by independent device drivers, and it supports RAID and cluster configurations as well as Ultra 3 applications requiring connectivity to

up to 30 devices. Backwards compatibility with Ultra2 (LVD) and/or legacy single-ended devices is offered as well as a flexible bus interface, allowing users to connect with any combination of 32-bit or 64-bit and 33MHz or 66MHz PCI.

The ASC38C1600 chip will be available for production in September, with the ASB Ultra160/M host adapter board following in October 1999.

Y2K bug-fix havoc

Still thinking the Millennium bug is all hype? Well, **you're in for a shock**, says a report from Y2K watchdog, Taskforce 2000.

The bug will start to wreak havoc well before 1st January and continue to do so long after — and many early failures will be caused by the very work being carried out to fix it, says the report, *Predicting Year 2000 Disruption*.

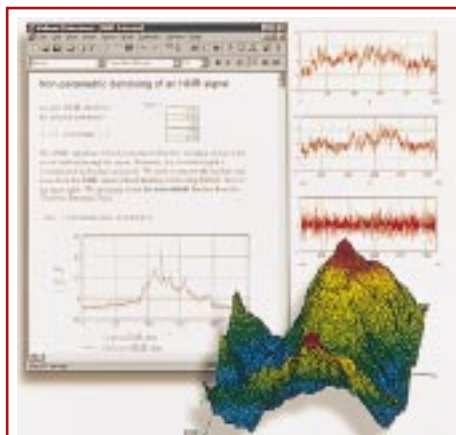
Deadline overruns and newly emerging problems will cause a build-up of disruption in organisations with insufficient resources available to tackle them. As few as one in ten failures will occur on 1st January. Others may not be apparent for months, by which time there will be 'huge amounts of corrupted data to sort out'.

In London, Action 2000 chairman Don

Cruickshank warned that no company can be sure it is immune from the bug; yet just one in two large businesses, and even fewer small ones, have made contingency plans to ensure business continuity.

● Virgin Atlantic will not fly its planes on 31st December, after customers indicated they do not want to fly on that night.

PAUL RUBENS



Wavelet analysis is moving into the mainstream with a new Extension Pack for Mathcad, available from Adept Scientific. The pack includes an electronic book explaining the use of wavelets, and giving examples. Applications range from signal processing to financial analysis.

Adept 01462 48055

AIM targets search engines for fine tuning

Put three Cambridge PhDs into multimedia architecture and the end product has to be pretty special, particularly if it solves the corporate headache of information overload.

Active Media Solutions, formed four years ago by Mohamad Afshar, John Bates and Giles Nelson, was one of the first companies to deploy complex database-driven websites in which information can be easily classified and searched rather than statically encoded as HTML.

Its innovative Active Internet Manager (AIM) is designed to ease the burden on the internet, intranets and extranets by targeting the rapid delivery of information. 'The sheer quantity of information, even in the environment of one corporation, is too much,' says research director John Bates, a comms lecturer at Cambridge University's engineering department. 'Search engines give too many hits, and web directories are too big to be of much use.'

He says that within a few years, the internet 'will be very active, with information becoming available in real time, in every area. Sensors and GPS devices will be in widespread use, transport systems and everything else will be on a network. Push technology, by sending full information to

everyone, is filling up the network, and slowing people down by delivering unfiltered information. Many people only want a certain topic at certain times. They want information pre-filtered, according to their location and the context.'

Active Media goes further than existing push products, most of which offer only limited filtering. 'What we offer is a method by which the customer registers their specific needs: defined topics for delivery at a certain time of day, to a particular location.'

Links to demonstrations are available on Active Media's website. www.active-media.co.uk

● **The Stanford Research Institute** (SRI), whose only non-US laboratory is based in Cambridge, is also working to reduce the amount of unnecessary dross we have to get through. Director Richard Sharman told a meeting of CHASE (Cambridge Hi-tech Association of Small Enterprises) that his centre has been working on information extraction for the past year.

'Trying to capture the "what, where and when" from a number of documents on the web ... can be very time-consuming. We are now able to

cull the information from a given set of web pages, mark it, comprehend it, decode it and highlight only the potentially interesting pieces of information you want from it,' he said.

Most SRI work in the US is initially for the US government, but elsewhere it's very commercial. One of Sharman's tasks is to exploit such intellectual property. SRI has tailored a language processing system which can be tuned to a task. So, if a corporate researcher wants to find which oil company made the greatest losses in Alaska in a certain period, all the related information from a database or the web can be processed using SRI's Highlight Information Extraction engine — a combination of linguistic and statistical methods.

One of SRI's strategies is spin-off technologies. Its speech recognition has been successfully used in applications such as the Charles Schwab telephone stockbroking service. Sharman is keen to find corporations and universities on this side of the 'pond' interested in working with, or licensing, SRI technology.

A trial of SRI's Information Extraction technology is available on the website at www.cam.sri.com.

Caroline Swift



continues her reports from **Silicon Fen**

Death of PC greatly exaggerated

A slow web means there's **life in the old PC yet**, says Tim Bajarin in Silicon Valley.

At last month's Spring Comdex in Chicago, I moderated a panel on embedded systems — the unseen miniature computers that control your washing machine or car. I probably should have called it Beyond the PC: How Embedded Systems Will Fuel The Growth Of Digital Appliances, because the panelists agreed that digital appliances and embedded systems are the next big growth area, and that the PC will be only one of many devices that connect to the internet.

IBM chairman Lou Gerstner, around the same time, told a reporter that the PC is dead. He was basically agreeing with the premise that digital appliances or networked devices are the future of our industry, albeit in a more dramatic fashion.

This point of view has caused quite a stir in Silicon Valley, especially among PC vendors who have a lot to lose if they don't read the trends and find ways to capitalise on the new demand.

Microsoft and Intel are left exposed, since no standards have emerged for the embedded processors and operating systems that will run these appliances. Indeed, the ground is level when it comes to creating standards. Of course, Microsoft will try to push Embedded NT and Windows CE, while Intel will market new processors such as StrongARM.

I agree that we will eventually see billions of digital appliances and

embedded systems dominate the world of network access points, but I'm not quite ready to pronounce the PC dead. In fact, I believe that it's about to rise in importance to business and consumers.

This is because of the way high-speed communications will develop. Telecomms officials boast that technologies like xDSL and cable modems will be able to deliver full-motion video to the average user very soon. But in fact, we're a long way from getting real broadband, say 10Mbit/sec, to even 10 percent of the US, let alone to the rest of the country or the world.

I now have a DSL line into my house, but because of where I live, I can only get about 360Kb/sec at this time. This is great if I'm the only one using DSL at any given time and am just moving basic text and graphics.

However, because of factors like high network traffic, and static that often drops data packets, I'm lucky to get 128Kbit/sec most of the time. This will apply to broadband deployment: there will be dropped packets, and the more people online, the lower the rate of access will be. So the idea of sending clean, full-motion video, even over large bandwidth, is questionable for the foreseeable future.

PC and entertainment people are therefore thinking more in terms of streaming media that uses the power of the PC to activate its content. By using various compression techniques, you



▲ **IBM's GERSTNER: 'THE PC IS DEAD'**

could pack a 3Mbit five-minute streaming media clip into only about 100K.

The user would just download the compressed file and play it at will. The high sound quality and great graphics would stem from the power of the processor and companion chips. If this scenario is realised, then powerful PCs, with 3D audio chips and the ability to handle 3D graphics and animation, may become more important, at least in the short term, than stripped down net terminals or low-cost PCs with minimal features.

Over time we'll see the deployment across the country of large broadband networks with the ability to deliver full-motion video. But from a market deployment and acceptance standpoint, the ability to deliver true full-motion video over the internet is a long way off.

I'm beginning to believe that the role of the PC, with its ever-increasing power and capabilities, will gain an even stronger position in the home and business, as applications and entertainment are created around streaming media. Then, as greater bandwidth becomes cheap and ubiquitous, we'll move directly from streaming media content to video-over-IP in the next five to ten years.

A third of US homes connected

Three new studies have been released recently, updating the number of US homes with personal computers and how many are accessing the internet. This is a major trend that many believe will grow to as many as 70 million homes with PCs by 2002.

50 percent of US homes have a PC, and one in three homes is connected to the internet, says a new study. The increase in PC ownership is largely due to low-cost machines, better connections, and a desire to log on.

The study by Odyssey found that one in

two PCs are running on Pentium-level processors and 31 percent are boasting 56K links. 'Faster modem connections and more powerful processors have enhanced the overall entertainment experience of PC households,' commented Odyssey president, Nick Donatiello.

A separate survey also released this week indicates that sub-\$600 PCs now account for around 20 percent of computers sold through retail stores, while computers priced between \$600 and \$1,000 account for 42 percent of the market.

short stories

...BY ANY OTHER NAME

So someone has already registered the .co.uk domain name you wanted? Fret not. Net Registrar has an answer: it is offering to register addresses ending in .uk.co. This not only offers new users the choice of all possible names, but may force .co.uk sites to register their names in the new form to prevent confusion. At £45 a throw, Net Registrar could be on to a good thing.

www.nic.uk.co



ANIMAL MAGIC

Whether you want to save the elephant, or simply want the bear facts, you should visit the new site of the World Society for the Protection of Animals, with over 200 pages of information.

www.wspa.org.uk



LEAF IT OUT

The Tree Council has celebrated its 25th birthday by launching a web site at

www.treecouncil.org.uk

DVD EXPRESS

A new site www.dvdplus.co.uk offers what it claims is the widest choice of Region 2 DVDs, games and hardware, claiming to deliver discs within 48 hours. The site is now offering a special deal on the controversial interactive DVD movie, Tender Loving Care.

SURVEY

Calls fail as web booms

A huge increase in net use in Britain has caused a **dip in the standard of service**, says a new report.

Nearly one in ten calls to access providers at peak evening hours in March failed to connect because of busy signals, failure to answer, failed log-ins and modem problems, says the benchmark report from Inverse Network Technology.

The 9.5 percent failure rate more than doubled in two months, from 4.1 percent in January. Call failure rates during business hours also rose, from 2.9 to 4.9 percent. Net usage in Britain is now among the highest in Europe,

with one in five of the adult population having access.

INT specialises in net metrics and service-management software. It gets its figures by making 3,600 calls over two weeks to each of the service providers it covers.

BTClick+ was the only provider to get a Triple A grade for business, evening and 24-hour service; it was followed by Virgin, which got A grades for business and 24-hour, and B for evenings. CompuServe, Netcom and UUNet were rated A+ for download speeds.

www.inversenet.com

Legal eagle on the web



Many legal actions could one day be settled on the web, with none of the parties involved having to set foot in court, according to the developers of a new online legal service.

Epoch Software's **Desktop Lawyer** creates legal documents, like wills and employment agreements, automatically after prompting users for information.

The document templates have been prepared by a team of barristers, and users can call on the services of a network of solicitors if they require further advice.

A version of the software has featured on PCW cover discs and uses Epoch's Rapidocs Assembler utility which, the firm says, can be used for the creation of other 'intelligent documents'.

Richard Cohen, whose brother Grahame founded Epoch, said it could even be used as the front-end of a fast-track system for settling small claims out of court — already being streamlined under recommendation in the Woolf report.

www.freeservice.com;
www.desktoplawyer.net

Game, data set and match

In the **database race**, Microsoft is losing even on its own ground. Mark Whitehorn reports.

Once, a database was simply a store of data. Yet in the past five years, the database market has been undergoing a major change as companies begin to make serious use of the data they hold. This has been not only in terms of querying that data: new tools and techniques have been devised which allow the data to be used to better business advantage.

These are described by the umbrella term 'Business Intelligence Tools' which embraces OLAP (OnLine Analytical Processing) and data warehousing, which together enable trends to be identified in historical data. Also gaining in importance is 'data mining', which can find unexpected correlations within large data sets.

An insurance company using data mining recently discovered that the biggest single cause of a specific class of insurance policy not being renewed was neither the price nor the level of cover. It turned out to be the disparity in age between the agent and the client. Before using data mining, the company had no idea that this was a consideration.

The use of databases to back-end internet e-commerce applications is also seen as vital for many firms, so it's not surprising that the market is growing. In 1998 the worldwide database market grew by 15 percent to \$7.1bn, according to preliminary results from Dataquest, and it's forecast to reach \$10bn by 2003.

Of course, nothing succeeds like success, so database vendors are keen to tell you that they are the major players.

For example, following the release of the Dataquest survey, IBM produced a fact sheet headed 'IBM Number One Choice for Data Management Solutions'. On the basis of the same figures, Oracle's press released was entitled 'Oracle trumps Microsoft in battle for NT database market share' and included the statement: 'Significantly, IBM's goal of becoming an open database supplier continues to be unsuccessful'.

Can these statements be reconciled, and what does Microsoft say? The database market splits into essentially three segments: 'mainframe', Unix, and Windows NT. There are three major players: IBM, Oracle, and Microsoft.

IBM dominates the mainframe market. If you have large quantities of data (and techniques like those previously described can generate extremely serious sets) then IBM has the kit and it has the software tools. IBM has also moved these tools down to Unix and Windows NT so, despite what Oracle says, IBM can and does offer excellent tools across the entire range of platforms.

However, it is having problems getting the same market share on those platforms.

Oracle can be said to be comfortably in control of Unix, given that the company holds over 60 percent of the market by revenue. Significantly, Oracle also dominates the Windows NT market. According to Dataquest, Oracle's market share here is 46 percent.

Given that Microsoft owns Windows NT, it comes as a surprise that Dataquest's



There's a lot of info on OLAP at www.olapreport.com, although access to it all will set you back £950 (ex VAT), which will also get you a printed report.

figures show that Microsoft's market share actually dropped by eight percent to 30 percent between 1997 and 1998. So, what does Microsoft say? Well, for a start, the Windows NT market is expanding rapidly (which explains how Microsoft's share of the entire market can increase as its Windows NT market share declines). In addition, as Microsoft is quick to point out, the figures for 1997-1998 do not include any sales for SQL Server 7.0.

SQL server is a much better product than 6.5, but crucially, along with all other Microsoft products, it is limited to Windows NT which has yet to demonstrate the same stability as operating systems like Unix. This is not vital for small, non-mission-critical applications, but e-commerce, internet and Business Intelligence apps demand a very high level of stability. As the Dataquest report highlights, these are the very applications that are likely to drive the database market in the coming years.

But that's all in the future. Where do the Dataquest figures leave us today? Well, Oracle may dominate two of the three markets, but the mainframe market is still so huge that IBM comes out as the overall leader with nearly one third of the market. Oracle is next with just under 30 percent, and Microsoft trails with just over ten percent. □

In 1998 the world database market grew by 15 percent

Database New Licence Revenue

World market share estimates

Company	1997(%)	1998 (%)
IBM	28.9	32.3
Oracle	29.4	29.3
Microsoft	9.9	10.2
Informix	4.8	4.4
Sybase	4.5	3.5
Others	22.5	20.3
Total market	100.0	100.0

Source: Dataquest

Porn-again web names



Sites which poach surfers by registering misspellings of popular web addresses face a **legal clampdown**. A number of test cases are in the pipeline against so-called 'typo piracy', practised mostly by porn sites.

Citicorp is suing Rafael Fortuny, who registered the name www.citibank.com, missing out the first full stop from Citibank's web address. Surfers who inadvertently missed out the full stop found themselves on the adult site www.clubanytime.com. Citicorp claims Fortuny has registered more than 50 names similarly close to those of well-known companies.

Paine Webber won a preliminary injunction against Rafael Fortuny after he registered the name

www.painewebber.com which took surfers off to a porn site.

Paine Webber is accusing Fortuny of trademark infringement. The disputed address is on hold, pending further court action. It also maintains that Fortuny is 'diluting' its name and trademark.

Some large companies are fighting the typo piracy war by registering domain names with obvious misspellings, in a bid to stop the trend. For instance, Gillette owns www.gilette.com.

The internet community and large corporations are watching the Fortuny cases carefully, as they believe they could dictate whether typo piracy will continue to haunt the internet or fade away.

JAN HOWELLS

THE NAME GAME

Cybersquatters who hoard domain names with a view to selling them for profit can expect a tough time from a new internet organisation. They are targeted in a series of proposals, from the World Intellectual Property Organisation (WIPO), which were due to be discussed late last month by the new body, the Internet Corporation for Assigned Names and Numbers (Icann). Icann has been set up to manage the transition of the domain name system from US government control, to the private sector.

Compaq cuts off its head

Compaq was confirmed last month as the world's top PC seller, with healthy growth figures only days after its chief executive, Eckhard Pfeiffer, was ousted amid claims of a downturn in the PC market.

The first sign of trouble came when Compaq, also citing competitive price pressure, warned that its profits would be less than expected. In fact, Compaq sold 3.5 million PCs over the year, an increase of 10 percent, and first-quarter profits were \$281 million, or 16 cents a share — less than expected but not remarkably so, given the costs of last year's mega-merger with Digital.

Problems with integrating Digital's global operation

are probably what led to Pfeiffer's resignation, together with that of his chief financial officer, Earl Mason — both almost certainly forced.

The problems are most apparent in the server market, where Intel-based and Digital Alpha-based Compaqs are competing. Peter Lemon, senior research manager at IDC, said: 'The company is now very much Digital versus Compaq — PCs versus other technologies. And Pfeiffer was very much a PC man. The margins just aren't there in PCs any more.'

He said Compaq needs to rethink its strategy. 'It doesn't have a good handheld story; on the server side it's better but lacks focus; the PC side has been hit hard by Dell.



▲ PFEIFFER: HIS RESIGNATION COMES HOT ON THE HEELS OF COMMERCIAL SUCCESS FOR COMPAQ

It also failed to go full throttle with Alpha.'

But new acting chief executive, Benjamin Rosen, said Compaq's strategy was 'fundamentally correct'.

VNU NEWSWIRE

Short stories

NEW PRESARIOS

Compaq's convulsions [this page] overshadowed the launch of its new Presario home PCs. All come with 56Kb/sec net connectivity, though only software for paid-for access is bundled. All models include soft Yamaha wavetable sound, an easy-access internet keyboard, and ultra DMA drives. Prices start at £699 inc VAT for the Presario 5166 using a 333MHz AMD K6-2, to £1,299 for the 5296 which boasts a 17in monitor and 450MHz PIII.

Compaq 0845 270 4000

IRIDIUM FALLS

The ambitious Iridium project to provide global satellite links has announced astronomical losses of \$505 million for the first three months of this year on revenue of just \$1.4 million. Its 10,294 subscribers are far fewer than expected and shareholders have filed a class action claiming Iridium and key partner Motorola issued misleading statements about achievable numbers. Iridium chief executive Edward Staiano has quit the company. Iridium blamed a shortage of handsets and trained staff, but analysts cite high prices, slow penetration into key markets like Europe, and cheaper alternatives.

ANDREW CRAIG

Profits dip as sales boom

PC sales are buoyant, but the trend to cheap PCs is hitting profits, analyst IDC says.

Demand in Western Europe pushed sales in the area up by 15.9%, though Russia's economic crisis held up sales in Eastern Europe. Compaq's leading world market share

of 14.5% is down 0.4% on a year ago, according to analyst IDC. Second-placed Dell was 2.2% up at 10%, ahead of IBM's 8.9%.

The figures [left] for UK sales for the first three months of this year, show Compaq's leading share in this country as even higher at 17.2%, with IBM and Dell neck and neck at 8.9%.

Vendor	Q1 1999	Share(%)	Growth (%)
Compaq	1,318,646	17.2	26.0
IBM	684,153	8.9	31.6
Dell	680,221	8.9	46.9
Fujitsu	459,429	6.0	46.0
H-P	449,372	5.9	6.7
Others	4,057,959	53.0	7.5
Total	7,649,780	100.0	15.9

£5m boost for Jones

Intrepreneur Bob Jones has good reason to smile. He has persuaded Schroder Ventures to put £5 million into marketing and developing the NetPilot web access box made by his company, Equinet. It's designed to provide instant web access to small networks, complete with firewall. It also acts as a web server. The current model costs around £2,000 but the price is expected to drop by as much as 50 percent. An initial market for the box has been schools.

Equinet 0870 608 1520



PALM AID

Documents To Go, which synchronises and views files of major office suites for the PalmPilot, is available for \$39.95 at

www.dataviz.com/docstogo

BAG IT

Brownbag Memorymate, a freeform text retrieval database manager, is available for a 120-day trial from <ftp://209.150.138.180/pub/memshare.exe>.

Details are at

www.soft-shop.com

GAMES NEWS

Game fur a laugh



▲ NO TIME FOR A CAT-NAP IN THE FAST AND FURIOUS FURBALLS

Bizarre Creations is developing a game called **Furballs**. The release date hasn't yet been announced, but the game is rumoured to be a 'third-person-cartoon-action-puzzle-adventure-shoot-em-up'. Further details are due to be published after the annual E3 gaming exhibition in May. Check out the home page at www.furballs.com.

Electronic Arts is launching a new game to coincide with the start of the 1999 cricket World Cup. **Cricket World Cup 99** is tipped to be the most accurate and realistic cricket game to date. It will feature three player modes, ranging from entry-level Pick-up-and-Play with one-button bowling and batting, through to full Captain mode. The players are based on a series of motion-captured images derived from over 600 cricketers moves performed by the former England one-day cricket captain, Adam Hoolioake. The price of Cricket World Cup 99 is yet to be announced.

Creatures is back again. For Creatures 2, Mindscape Entertainment has announced the launch of an add-on kit for those adorable little animals. The kit is priced at £14.99 and will include three brand new Creatures, plus a Creatures 2 update patch.

We'll soon see the release of Ubisoft's new 3D first-person action experience of biblical proportions. **Requiem: Avenging Angel** takes

the holy battle between Heaven's chosen soldiers and Hell's fallen demons to new extremes. The player takes the role of Malachi, a loyal angel, blasting through futuristic settings, meeting other characters, and developing angelic powers like possession, flight, blood boil and the ability to turn enemies to salt <www.requiem.co.uk>.

Acclaim's May release is not for the fainthearted. **Shadow Man** is set against a backdrop of Voodoo mythology. Players take on the role of Mike Leroy, an English literature graduate turned hired assassin. He has the ability to cross over to the world of the dead, where he becomes Shadow Man, an immortal voodoo-warrior with astonishing powers.

Shadow Man is a three-dimensional, third-person action adventure game which allows the player to take on the role of both Mike and his alter-ego. The game presents the player with increasingly difficult challenges laced with increasingly sinister themes, as you seek out and examine all manner of items and documents ranging from prophetic Voodoo texts to FBI serial-killer profiles, to gain the clues to solving this adventure. Look out for a review in *Screenplay* soon.

ETELKA CLARK

● In *Screenplay* this month (p265): *Turok2*, *Midtown Madness*, *X-Wing Alliance*, *TOCA 2 Touring Car*, *Jimmy White's 2: Cueball*, *Swing*.

Top 10 products

Last month

Peripherals

1	56K PCI modem Lucent	DYNA	1
2	Stand Bi-Di printer 1.8m	Belkin	2
3	Umax Astra 1220P scanner	UMAX	4
4	IEEE 1284 A-B 1.8m CABLE3	Belkin	3
5	ScreenBeat Top 25W spkrs	Logic3	-
6	S/Blaster Live! Value PCI	Creative	7
7	2-way IDE cable (3-pos)	Belkin	8
8	Umax Astra1220U USB-scan	UMAX	9
9	56K V90 voice/fax external	3COM	5
10	Pressit CD labeller	TraxData	-

Windows software

1	Textbridge V9.0 mailer	Scansoft	-
2	MS Student Office Pro 97	Microsoft	1
3	MS Office Pro 97+Books u/g	Microsoft	4
4	Windows 98 u/g CD	Microsoft	5
5	MS Exchange Cal Pup Mailb	Microsoft	-
6	Norton Anti-Virus V5 Std	Symantec	10
7	MS Office97 Stand V/Comp	Microsoft	9
8	Norton Systemworks V2	Symantec	-
9	MS Exch V5.5 Molp A Clac	Microsoft	7
10	Viruscan v4 classic	Net Assoc	-

DOS software

1	Turbo Pascal v7 DOS Educ.	Borland	4
2	Turbo Pascal v7	Borland	5
3	NetWare V5 server + 5-user	Novell	-
4	NetWare S/S V5 u/g 5-user	Novell	-
5	NetWare 4.11 25 add. lic.	Novell	-
6	NetWare 25 UR u/g SBS	Novell	-
7	LapLink v5	Traveling	-
8	Novell 3.12-4.2 5-user lic u/g	Novell	-
9	NetWare 5 50 client u/g	Novell	-
10	NetWare 5 u/g server 25-user	Novell	-

CD-ROMs

1	Star Wars: Behind The Magic	Activision	5
2	South Park Screensaver & Utils	Telstar	4
3	Dancing Baby Screensaver	Guildhall	3
4	James Cameron's Titanic Expl	Fox Int	-
5	Dance Ejay 2	Fast Trak	6
6	Encyclopedia Britannica Deluxe	Acclaim	-
7	Rave Ejay	Fast Trak	8
8	Mavis 9	TLC	-
9	Encyclopedia Britannica Std	Acclaim	9
10	Cosmopolitan Makeover	TLC	-

Games

1	Championship Manager 3	Eidos	1
2	X-Wing Alliance	Lucas Arts	2
3	Jimmy White's Cueball	Virgin	4
4	Call To Power: Civilisation	Activision	5
5	Grand Theft Auto: London	Take 2	3
6	Rollercoaster Tycoon	Microprose	-
7	Half Life	Sierra	-
8	Requiem: Wrath of Fallen Angel	UbiSoft	-
9	Simpsons: Virtual Springfield	Fox Int.	-
10	Baldur's Gate: Sword Coast	Interplay	-

Games and CD-ROM charts supplied by HMV. Others from Software Warehouse.