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Happy millennium for the bug that just refuses to die

Survivalists slunk sheepishly from their Y2K havens at the New Year after the millennium bug's bark proved worse than its single inadequate byte. Britain's Y2K watchdogs must have known before the millennial rollover they were on a hiding to nothing: damned if the worst happened; damned if it didn't.

Sure enough, when global catastrophe failed to materialise there were claims of an expensive hype. Critics contrasted Russia's estimated £125m spend with the billions spent in the US – ignoring the fact that £125m is a lot in a near bankrupt, low-wage economy and the US had a lot more to spend money on.

Also cited was Italy, ranked

with Honduras for its preparedness. The head of Italy's Y2K commission was quoted as saying: 'Italians generally don't plan.' But Italians aren't stupid, either, and you can bet they put critical systems through their paces. (Italy provided one of the best Y2K stories. A man in Florence, fearing global collapse, withdrew over £2,000 on New Year's Eve – and was promptly mugged).

A true audit of the Y2K bug would be impossible. Much of the spending was on systems that needed updating. Bug-hunters did talk up and make money from the problem; but so does the anti-virus industry – and so it should.

The bug caused just 67

'significant' problems across the world in the first week of January, according to one estimate. One military satellite and seven nuclear power stations were hit – not seriously, but giving a hint of what might have happened.

An unchecked Y2K bug could have caused a catastrophe big enough to justify any precautions. It was a real threat, and it still is.

Robin Guernier, head of the independent Taskforce 2000, pointed out that 35 per cent of problems were expected last year and five per cent at rollover. That leaves 60 per cent, most no more than irritations, to come. The next big panic – p25
The last big hype – p20

Telewest unveils unmetered surfing

One of Britain's big two cable firms is offering a cheaper rival to BT's unmetered Surftime net access.

Telewest customers can get unlimited access for £10 a month from 14 February. This includes service-provider charges from Cable Internet, which is to get a new front end from Microsoft's MSN.

Telewest's 'Surfunlimited' offer is part of an aggressive deal to wean people from BT to cable. Calls to fellow cable users are free and national calls cost from 1p off-peak to a maximum of 3p a minute.

BT Surftime will charge £6.99 for unlimited weekend access, £14.99 all-week off

peak, and £34.99 at any time. This excludes ISP charges.

Surftime will be sold through ISPs using BT lines. BT is hammering out a deal with phone watchdog Ofcom and other parties to provide rival telcos such as Energis a level competitive field.

Telewest's offer refers to its standard phone lines. It expects to start rolling out set-top boxes with cable modems this spring; standalone modems will be on offer by the summer.

A £40-a-month cable modem service is already available from NTL in Surrey, Hampshire and Glasgow. It will roll out to other areas,

probably starting with Nottingham and the Midlands, over the year. A spokesman said NTL is likely to offer unmetered dial-up but no date has been set.

Both NTL and Telewest are also trying out ADSL services based on standard phone lines. They will use BT's 'local loop' – the line between the subscriber and the local exchange – when it is opened up to competition next year. This will allow them to offer services to businesses, few of which have cable connection, and to homes outside their franchise areas.

Surfunlimited 01705 714209
www.bt.com; www.ntl.com



Many investors have identified Britain as a potential major hub in the emerging wired world. Among them is Globix, a US company that has set up a purpose-built data centre in London. Pictured is the control room at the high-security centre, sitting on a 1.8Gbits/sec backbone and housing critical ecommerce servers.
www.globix.com

POCKET PC

Ailing CE brand gets out of hand

Microsoft has dropped the label Windows CE for its next-generation handheld platform in a bid to boost the operating system.

The Pocket PC brand will be used to describe both the handheld hardware and its operating system – a modified version of Windows CE 3.0, codenamed ‘Rapier’.

Analysts said the rebranding is a bid to mask the Windows CE brand, which has not sold as well as expected. Intel snubbed CE in favour of Linux for its new web boxes (see p28).

Microsoft says the change

will help reduce confusion over Windows CE, which is used in numerous different environments including industrial machinery, cars, games machines, set-top boxes and palm-sized PCs, according to Dilip Mistry, marketing manager at Microsoft UK.

But senior Gartner Group

analyst Michael Gartenberg said: ‘CE has become a bit of a liability for Microsoft... It certainly hasn’t been associated with success.’

He added: ‘This is clearly CE’s last chance. If this next iteration fails, then CE’s future in this type of device will be questionable.’

Gartenberg said that while

Microsoft has taken a lot of criticism for Windows CE, the hardware manufacturers should share the blame.

‘CE was hampered by very poor hardware design,’ he said. ‘Prices need to be lower, battery life longer and devices smaller.’

See Tim Bajarin, p38

ANDREW CRAIG, VNUNET.COM

Pocket PCs turn into mobile libraries

Microsoft is touting its latest Pocket PCs as multimedia players and eBooks. The devices will

include the latest Windows Media Player, as well as Microsoft Reader software with ClearType – which the company claims gives LCD screens the readability of traditional printed books.

It works by addressing the RGB components of each pixel (see left), something that is not possible with cathode-ray screens.

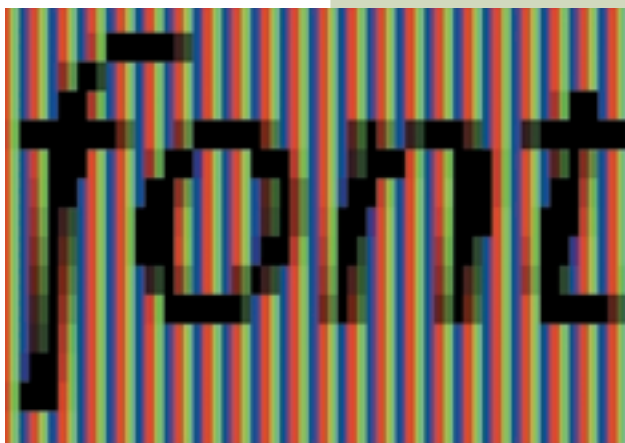
Microsoft showed off its first pocket eBook at the Consumer Electronics Show in Las Vegas. First production models are expected to ship in the first half of this year.

Dick Brass, vice-president of technology development at Microsoft, said: ‘The typical Pocket PC will be able to store hundreds of books, from today’s latest titles to long-revered literary classics.’

Thousands of titles will be available to Pocket PC users online. Microsoft Reader includes a copy-protection system designed to curb piracy.

Microsoft Reader will be available for Windows-based PCs and notebooks in 2001.

VNUNET.COM



Windows 2000 ready to hit the shops

Microsoft is gearing up for its biggest product launch for nearly five years. No-one expects the media impact of Windows 2000 on 17 February to match that of Windows 95. Win95’s uptake took even Microsoft by surprise – and it had spent £125m building it up (see Point of View, p20).

Win2000 is unlikely to sell even as fast as Windows 98 at launch, although it is undoubtedly more important. This is partly because it is not aimed at consumers, but many

companies are also holding back to see how others cope with any teething problems. IDC analyst Dan Kuznetsky believes most will wait until the bugs have been fixed. ‘This won’t be adopted right away,’ he said.

Vendors such as IBM, Dell and Hewlett-Packard, are providing hardware upgrades and technical support to help firms make the changeover.



There are four versions of Win2000: Professional – for the desktop; Server – supporting machines with up to four processors; Advanced Server – supporting up to eight; and (due in six months) Datacenter. Win2000 has had numerous setbacks, including a significant redesign and the results of a management reshuffle just over a year ago.

One big selling point is the

fact that notebooks, which were never happy with NT, can use Win2000 Professional.

This makes it easier for companies to use the same OS on mobiles and desktops.

But Linux is eating into some potential Win2000 markets and its new 2.4 kernel is expected to be released at the same time.

IDC analyst Peter Lemon said: ‘I’m sure Linux is going to do whatever it can to steal Windows 2000’s thunder. That’s the fun part.’

ADDITIONAL REPORTING

VNUNET.COM

Fast data services won't come cheap

Cellular upstart Virgin Mobile has launched a suite of Internet services using current generation phones – claiming that the newer Wireless Application Protocol (WAP) mobiles are too scarce and expensive for a mass market.

The company's head of

advanced technology Richard Williams also says that emerging fast mobile data services will be too expensive for most people.

The new services rely on Virgin's Advanced Wireless Technology Platform, which takes advantage of the relatively large 32KB of

memory in its mobile SIM cards.

The technology uses SMS (Short Messaging Service), which normally restricts messages to 160 characters. Virgin links together SMS bursts in order to provide a full-email service with messages and attachments

consisting of up to 32,000 characters.

Virgin's browser can access WAP sites because it understands WML, the subset of eXtended Markup Language (XML) used by these sites. Users will be able to download lists of phone numbers, as well as music and television listings, plus rail timetables.

Services will also include ecommerce, and users will receive special offers such as last-minute cut-price air tickets. Wilson says that the inherent security of cellular networks makes etrade relatively simple to implement.

Virgin Mobile, a 50/50 joint venture with One2One, was launched in November last year boasting of simple 'no rip off' pricing structure. It charges no monthly fees, and does not subsidise handset prices. Calls cost 15p per minute for the first 10 minutes each day, 10p for the next 10 minutes, and 5p after that. Calls to other mobile networks cost a flat 35p a minute.

www.virgin.com/mobile

See also news analysis p46.



Hitachi unveils 2GB SDRAM

Hitachi Europe has introduced what it claims are the world's first 2GB SDRAM modules. They pack 72 256Mbit chips on a 168-pin DIMM card and support a 100MHz bus. Meanwhile, there were mixed message from Intel and memory specialist Kingston over RAMBUS memory, which took a big credibility hit last year – see p37.

RSI hits health body

Ninety staff have been hit by repetitive strain injury (RSI) at the Health and Safety Executive (HSE) – whose job includes advising keyboard users how to avoid the problem.

You might think that the HSE, which also advises employers on how to avoid and treat RSI, would be put out by the news.

But a spokeswoman said: 'If more companies admitted they have RSI problems we would make this issue more open... Too many employees are afraid to admit they are suffering until [RSI] becomes debilitating and they are unable to work.'

VICKY AUGUST
VNUNET.COM



He wanted to warn people about the danger of jumping out of windows

IMAGING

Clive Akass has the latest on the super-powerful and flexible compression standard.

JPEG 2000 already making waves

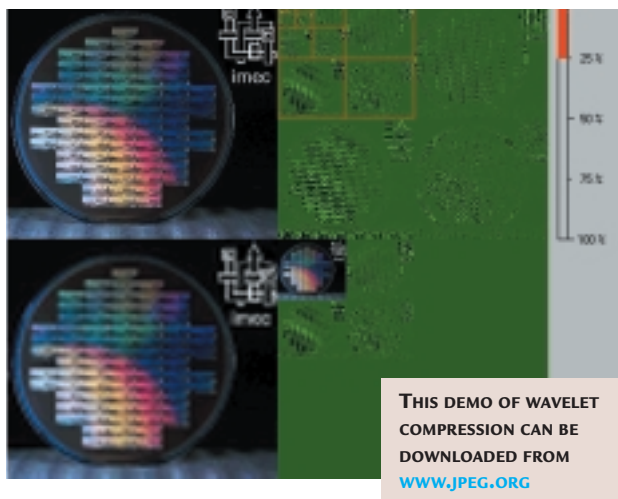
A new compression standard to be agreed this year promises smaller and more flexible image files.

Experts have been working on JPEG 2000 for more than three years and at its centre is a radically different form of compression from the Discrete Cosine Transform used in earlier JPEG standards.

JPEG 2000 uses wavelets, a refinement of the Fourier Transform which expresses complex waveforms as a set of sine waves of different frequencies. Wavelets use shapes rather than the regular sine wave and are better at modelling many phenomena, including image transitions.

JPEG 2000 maps an image at increasing levels of detail, producing files that can be transmitted, viewed or printed at any required resolution – including lossless, in which the image contains all the information in the original.

A web designer will be able to use the same file to



THIS DEMO OF WAVELET COMPRESSION CAN BE DOWNLOADED FROM WWW.JPEG.ORG

transmit an image at different resolutions for different target devices, a feature that may become more important with the proliferation of web devices. Users can decide the resolution at which they wish to receive a picture.

JPEG 2000 will simplify the structure of sites with the option of seeing high-res versions of thumbnails; these currently need to hyperlink separate files for each

resolution. Similarly, some digital cameras store both thumbnails and full-res images.

The Flashpix format also addresses this problem, but its files are 20 per cent larger than a standard JPEG. By contrast, JPEG 2000 files are 20 per cent smaller, and contain more information. Other JPEG 2000 advantages include:

- Fewer 'artefacts', or blemishes on decompressed

images. The difference between old JPEGs, which deal with blocks of pixels, and the wavelets of JPEG 2000 is like the difference between using a straight and torn edge when patching patterned wallpaper. The torn patch is less visible as the jagged edge merges better into the pattern.

- Publishing houses can use the same file for fast, rough proofing and for the final high-res output.

- Bandwidth is not wasted downloading unnecessarily detailed images.

- Current JPEGs offer only basic RGB information; JPEG 2000 can carry CMYK, and ICC profiling used for tight colour matching; there is also provision for other 'metadata', including timestamps.

Developers are already offering 'near JPEG 2000' compression but agreement on the standard is not expected until late this year.

www.jpeg.org
www.digitalimaging.org

POINT OF VIEW

The Windows to the world

There comes a point with a manufactured news story when it transcends hype and takes off under its own momentum. Hype involves pushing a story, talking it up. Hype succeeds when it does itself out of a job.

This happened when Microsoft launched Windows 95. It spent more than £125m on marketing but got far more publicity than money could buy.

Quite why the media went so crazy on the story remains a mystery. Win95 got a front-page review (albeit negative) in *The Guardian* on launch day and headlined on the main radio and TV news. I knew it had hit blanket coverage when it made lead story on *Woman's Hour*.

That was less than five years ago, but it was a very different world. I'd guess nine in 10 people reading about Win95, and not a few writing about it, had only the haziest idea what it was all about. Computing was still done largely by experts, and Microsoft had yet to latch on to the importance of the Internet.

Microsoft executives, as I never cease to remind them, assured us all that Win95 would run in 4MB of RAM, standard for PCs at the time. In truth if you wanted to run it at a sensible speed you needed to upgrade your PC.

The Micro-softies weren't lying: they were

repeating what they had been told.

Microsoft learnt its lessons (it's good at that) and has been far more open about the hardware needs of Windows 2000.

This is as much a technological advance as Win95 was over Win3x, but it won't get anything like the same coverage. The media frenzy over Win95 turned out to be justified: the OS introduced a fair proportion of the world to computing. No software is likely to have that kind of impact ever again. With one in five UK homes owning a PC, we are all old hands now.

Clive Akass



on the OS that cleaned up

POST-MILLENNIUM BUGS

Number change sparks update fear

Computer users face yet another dodgy deadline as the Y2K panic begins to subside. Rolling deadlines for the UK phone-number changes have been set for the coming months but many, perhaps most, databases and organisers will need updating by 22 April.

The changes will be particularly necessary for contact management and telephony software that dials numbers for you. Dial-up web-access software may also need to be fed a new number.

Main changes are that all mobile numbers will start with 07, and there are new codes for Cardiff, Coventry, London,

Northern Ireland, Portsmouth and Southampton.

The new and old numbers have been working in parallel for the past few months. The first thing to check, if you work in a big office, is whether your switchboard can cope with the new codes – it may, for instance, bar the new 020 London codes.

Old local numbers, as opposed to ones dialled with the national STD code, will not work from 22 April. This means, for instance, that to ring PCW's main switchboard number from central London you will have to ring either 0171 316 9000, the new 020 7316 9000 or 7316 9000 –

the old seven-figure local code will not work.

The 0171 version, and other old city codes, will be phased out between August and September. This means that if your software lists and dials national codes with each and every number, you have until August to make your updates.

Mark Whitehorn's *Hands On* workshop (PCW, January) on updating large databases is now available online at www.vnu.co.uk/theconnection. To date we have seen remarkably little software help for people wishing to change Outlook and other personal data files.

A spokeswoman for the Big Number organisation, which is co-ordinating the changes, said: 'A lot of people have been concentrating on the Y2K problem.'

Microsoft has no plans to provide help for its Office suite. A spokeswoman said: 'We have left these things to third-party developers in the past.'

Full details of the changes

and their deadlines are at www.numberchange.org.

Quick fix

A generic solution for organisers is to export data to a comma-separated-variable (CSV) file. If your data includes commas, a tab-separated file is preferable.

First back up your existing file. Import the CSV or tabbed file into a word processor or spreadsheet and do a Search and Replace on the target numbers; then re-import as a new data file – ie make sure it's not simply appended to your old file.

You will have to take care to avoid unwanted changes. This can often be done by including tabs, commas and/or spaces in your Search and Replace strings – eg to distinguish an 0171 dialling code from an 0171 in the body of a non-London number.

Euro date

Another date to mark is New Year's Day 2002, by which time companies in countries that have signed up to the euro will have to ensure that their systems can cope with the euro.

Even if Britain does not actually join, any UK business that is trading with euro companies will also require basic conversion capabilities.

British companies will spend an estimated £7.6bn coping with the change, according to analysts IDC.

SMART SWITCHES

Multiple PCs made easy

Cybex has lent me a SwitchView (right), one of the simplest of the company's range of smart switches – it has transformed my desktop.

On my desk are two PCs: one workhorse and the other for trying out new software. I used to switch each to the same monitor as needed, and

confused myself over which mouse and keyboard to use.

This is not the case with SwitchView. It is called a KVM because it switches keyboard, video and mouse simultaneously: I need only one set for both machines, and I can control two notebooks from it as well.

The switch restricts itself

to machines which are on, so you can't switch to machines that are not there, as you would with a passive 'dumb' switch.

A two-PC version costs £124.55 (£106 ex VAT), and a four-PC one costs £183.30 (£156 ex VAT).

Most KVMs are used by administrators to control



servers

from a single

desk; They get a lot

more powerful than SwitchView: the XP4040 (below left) can hold up to 14 switching modules and can be linked to others to create any switching environment.

Other Cybex modules allow remote switching and link with control and management modules to enable an administrator to work at any of hundreds of machines remotely.

CLIVE AKASS

www.cybex.ie



CYBEX'S XP4040 (LEFT) AND SWITCHVIEW (ABOVE) WILL SAVE YOU TIME AND FIDDLING AND BOTH WILL QUICKLY MAKE THEMSELVES INDISPENSABLE

short stories

3G MOBILES FACE TRIAL

Vodafone and Nortel are planning a trial of third-generation (3G) mobile communications in London early this year.

Prototype devices to be tested include mobile phones with built-in MPEG4 video cameras, that are capable of transmitting and receiving data at rates of 64Kbits/sec.

There will also be wireless modems for laptop computers, and a mobile data device with speeds of up to 348Kbits/sec.

LIFE AFTER Y2K FOR GMT

You may have wondered what will happen to all the firms that have been working on the Y2K problem. One of the best known, Greenwich Mean Time, describes itself as a desktop-management software developer and, as if to escape the Y2K image, it has released an MP3 encoder, player and organiser called J-Box.

Karl Feilder, who heads the company, said this is the first of a planned series of Internet products. J-Box costs £29.95 inc VAT.

www.gmt-2000.com

HARDWARE

Adaptec drives SCSI forward

SCSI specialist Adaptec has released four Ultra160 host adaptors to cope with the latest superfast disk drives. They can pass a theoretical 160MB/sec, twice the bandwidth of previous LVD SCSI.

In fact they clock at exactly the same rate as Ultra2 but use both the rising and falling edge of the pulse to trigger twice the number of transitions on the data bus. The adaptors are backward-compatible with previous SCSI devices.

Wider SCSI bandwidths are necessary as data rates and drive speeds increase (14,000rpm is expected this year) and an increasing number of drives are clustered in RAID arrays.

Quantum, IBM, Western Digital and Seagate are all offering Ultra160 drives. We will be taking an in-depth look at some of the latest devices in our group test next month.

Ultra160 also replaces the parity error-checking used on previous versions of SCSI, with more reliable cyclic-redundancy checks. It also introduces domain

validation, which allows devices to negotiate the optimum transfer rate with their host, similar to the way a modem negotiates the best data rate a connection can sustain. In previous versions a connection can fail if it cannot sustain a data rate agreed between host and client device.

The entry-level Adaptec 19160 and 29160 Ultra160 adaptors, designed to support fast internal drives and slower external legacy devices, have a 50-pin external and 68-pin internal connector. They sit on a 32bit PCI bus and can support a maximum of 15 devices. The £194.99 19160 is designed for single-user workstations

and the £249.99 29160N is optimised for server use.

The £259.99 29160 and the £299.99 39160 are 64bit PCI devices with 68-pin connectors for internal and external devices. However, the 39160 includes a dual set of connectors, enabling it to support 30 devices. All prices are ex VAT.

www.adaptec.com;

www.ultra160-scsi.com



Games players wishing to compete from linked PCs are being offered an 'instant network' kit from Farallon.

The Battlepak kit costing £49.99 consists of a Starlet

hub and two 10BaseT network cables, but you have to buy your network interface cards separately.

Softline: 01372 726333
www.softline.co.uk

short stories

GREEN TONERS

A national charity plans to raise cash by recycling the estimated six million toner cartridges used each year in Britain.

The British Institute for Brain Injured Children (BIBIC) says half of these toners end up in landfill sites where they will take thousands of years to biodegrade.

'Abuse of our natural resources will impact on all our children for hundreds of years,' said organiser Erica Wheeler. BIBIC will also recycle used inkjet cartridges.

● Hewlett-Packard has developed a smart toner cartridge that will tell you when it is running low or has not been installed correctly. It will also prevent rogue traders selling refilled cartridges as new, the company claims. A release date has yet to be announced. BIBIC 01278 684060 or email info@bibic.org.uk

ALL EYES ON ET

More than 1.5 million people worldwide have downloaded the screensaver that allows a PC to join the Search for ExtraTerrestrial Intelligence (SETI) scheme looking for life elsewhere in the universe. Spare processing capacity in participating computers is co-ordinated to create, in effect, a huge parallel computer, which has contributed 125 years of processing time to data from the Arecibo observatory in Puerto Rico. Version 2.0 of the screensaver is in the pipeline. setiathome.berkeley.edu

CUT-PRICE CALLS ARRIVE

Net2Phone, which offers cut-price PC-to-phone calls to more than 30 countries, has launched a phone-to-phone service in Britain. The service uses a private IP network. www.net2phone.com

LINUX

Web kit snubs Windows

Intel is to produce a range of web-access appliances designed, like the 'web companion' platform Microsoft unveiled last year at Comdex, to be leased or given away by service providers.

The difference is the boxes will run Linux rather than Windows – a boost for the open-source operating system. Web appliances offer service providers, banks and retailers the opportunity for new business models by providing customers with the means to access their services.

The first Intel-branded products, based on Intel's Celeron processor, will be available in mid-2000 and will integrate Internet access with telephony features such as call management and unified messaging.

The move is a blow for the prospects of Microsoft's Pocket PC software, formerly called Windows CE, which Microsoft targeted at just this type of device (see also Tim Bajarin's analysis, p38).

IDC analyst Peter Lemon said Microsoft must be

concerned because its 'bigger and better operating system' philosophy doesn't work for appliance operating systems.

An Intel spokesperson described Linux as the 'operating system of choice for customers', but said Intel would continue to support Windows and 'historically support multiple operating systems.'

Lemon believes Intel chose Linux because it is free. 'Intel can own the whole thing.'

ADDITIONAL REPORTING
LISA KELLY, VNUNET.COM

INTERNET PCS

Compaq toasts blue Presarios

Compaq is following its novel business-oriented iPaq systems (see *PCW*, February, p24) with a ground-breaking design for the consumer market. The Presario EZ-2000 range of Internet PCs come with a choice of Pentium III or Celeron processors and have a blue toaster-like box with

ports, bays and expansion slots covered by front (pictured) and rear lids.

They include a modem, two free PCI slots, and USB and 1394 ports as well as what Compaq describes as a



Digital Dashboard.

One of its tasks is to notify up to 10 users of any new mail.

US pricing begins at \$999.

MAC

Summer launch for MacOS X

Steve Jobs has unveiled the long-awaited MacOS X – and announced that he has finally taken a permanent job at Apple after more than a year as 'interim' chief executive.

Version X of the OS has a new user interface called Aqua and will be released this summer.

Jobs, who rejoined Apple in 1997 after a 12-year break from the company he co-founded, announced his new status at the Macworld trade



show in San Francisco.

He also unveiled a redesigned Apple.com website with a range of services, including lists of safe websites for children, online data storage, email services, and online greeting cards. He

said the services are specifically designed for the latest operating system.

Apple is also investing £125m investment in US Internet service provider Earthlink, which Mac users will be encouraged to use as their primary connection.

Some analysts were not altogether happy at the news. Giga Information Group's Rob Enderle, said Jobs' job announcement was made to distract people from the fact the company hadn't brought out new hardware.

VNUNET.COM

CHIPS

Intel and AMD play beat the clock

Intel and AMD continued their duel over processor speeds with the release of 800MHz versions of their leading-edge processors. Intel also launched a 533MHz version of its low-end Celeron chip to compete with AMD's 533MHz K6-2.

Both companies face potential competition for these low-end chips from VIA, which bought WinChip developer IDT and Cyrix's MII technology last year. VIA plans to launch a 'PIII-class' Celeron clone early this year using the Socket 370.

Initial clock speeds are expected to be a relatively

slow 433MHz and 466MHz but the chips will boast a 133MHz front-side bus and 256KB of on-chip Level 2 cache, compared with the 66MHz bus and 128KB cache of current Celerons.

But smaller, faster Celerons are on the way with an imminent move to 0.18micron manufacture, according to Intel's desktop products vice-president Pat Gelsinger. Speeds of up to



633MHz are expected by the end of the year.

Intel was first to announce an 800MHz PIII in December and AMD unveiled an 800MHz Athlon at the Consumer Electronics Show two weeks later. Intel also launched a 750MHz PIII,

matching the previous fastest Athlon rate.

The new PIII launch had not been expected until well into 2000 but was brought forward to pre-empt the Athlons.

AMD and Intel are racing to be the first to bring a 1GHz chip to market. AMD showed

two Athlons clocking 900MHz at room temperature at CES.

The company also plans to introduce its Gemini technology, which uses voltage dropping and clock switching to save power, in much the same way as Intel's SpeedStep technology.

SYSTEMS

Start-up in new bid to beat Amiga jinx

The Amiga could live again following a deal with PC vendor Gateway, which bought the brand after the collapse of Commodore Business Machines in the US. Gateway has sold the name to start-up Amino Development, headed by former Gateway marketing executive Bill McEwen, for about £3m.

Gateway has done little to revive the machine which still has intensely loyal users. McEwen said: 'This is a very exciting day and now an even more exciting tomorrow. We can finish the job that was started 15 years ago.'

McEwen also purchased the rights to Amiga-related Internet domain names and

email addresses. But the deal does not include the transfer of Tom Schmidt, Amiga's president, or other staff. Gateway has also retained the 47 Amiga patents it acquired for about £8m.

However, buyers of Commodore salvage have not had a happy history so far. The Commodore name was

bought in the UK by Escom, which went belly up. It was then acquired by Tulip in Holland, which promptly came close to following suit (though it has since revived). And of course Commodore itself did a rescue job on the Amiga, only to file for bankruptcy in the US in 1994.

short stories

AD SITES SPRING UP

Rupert Murdoch will by no means have everything his own way with his new shopping sites (see main story, right). A new classified ads site has been set up by the people who built the car-trading website www.autotrader.co.uk. The site at www.adtrader.co.uk will include a virtual shopping centre as well as a claimed 250,000 classified ads.

Also recently launched is www.safestreet.co.uk, a shopping centre that incorporates more than 70 'stores', offering a wide range of prod-



ucts. Traders can have their own store for £49.95 a month, plus one per cent commission on sales.

CUT OUT SPAM CALLS

You can prevent unsolicited telephone and fax calls by registering with preference schemes set up by the Direct



Marketing Association (0845 070 then 0707 for voice calls or

0702 for fax). Traders who fail to honour your privacy then risk a fine of up to £5,000. The www.NumberCheck.co.uk website allows you to check whether your number, or one you are calling, is registered.

OFFSHORE GAMBLE

Ladbrokes, facing competition from tax-free online betting shops based outside Britain, is setting up a telephone and Internet operation on the isle of Gibraltar. The website, which uses Orbis' OpenBet system, is expected to go live early this year. www.ladbrokes.com

INTERNET

Murdoch fires up web assault

Media mogul Rupert Murdoch has launched a fresh assault on the web with an auction site, set up under a newly-formed Internet division called News Network.

FiredUp.com shows how Murdoch's media empire can offer formidable competition to high-profile start-ups, which have made much of the early running in ecommerce.

It will sell a mix of showbiz merchandise and a variety of end-of-line bargains and other special offers from leading manufacturers, attracting visitors with a series of online events – all promoted by Murdoch titles like the *News of the World* and *The Sun* on a scale few start-ups could afford.

News Network, part of the



News International group, will not confine itself to down-market ventures. It will provide a common marketing and ecommerce infrastructure for a number of sites targeting different markets, including the readerships of Murdoch's heavyweights *The Times* and *The Sunday Times*.

However, the papers will

retain their own sites. Page3.com and The Bun, a portal and service provider originally launched as the online Sun, will continue as sister sites to FiredUp.com under News Network.

BSkyB, which is 40 per cent owned by News International, has taken a 10 per cent stake in the gameplay.com games portal and five per cent of toy vendor toyzone.co.uk, under new-media director John Swingewood. BSkyB's Internet strategy is independent of News Network, though there is some cross-promotion.

Old firms show their strength

The investment in Internet start-ups will slow down soon as venture capitalists get tired of the slow return rates – and online-only businesses will lose out to those that also have a bricks-and-mortar base, a San Francisco conference was told recently.

Richard Christner, VP at Mercer Management Consulting, cited Britain's Dixons as an example of a company that had used its brand and market position to promote its online sales.

'You will begin to see hybrid firms whose strength is

to enable links for returns and refunds [at their bricks and mortar stores],' he told the Nextvaganza conference.

Fellow Mercer consultant David Morrison said that traditional firms are the ones making money on the web.

LINDA LEUNG, VNUNET.COM

Dotcoms threatened by Act

Non-US firms could be fined over £60,000 for using their own name in 'dotcom' addresses, under a new law aimed at curbing cybersquatting, according to a leading Internet lawyer.

David Flint, technology specialist at MacRoberts solicitors, predicts that the US Anti-cybersquatting Consumer Protection Act will lead to foreign firms using local domains, which are not

subject to US law, rather than registering as a dotcom.

The Act was aimed mainly at those who buy up domains with the aim of selling them at a profit. US courts had previously ruled repeatedly against companies which argued that web addresses should not include anything similar to someone else's trademark. But, after fierce lobbying, the new Act reverses this position: offending site

owners face not only fines but also the potentially high cost of litigation.

The Act does not cover names registered up to 29 November 1999, and it is not clear how it will cover cases where the same trademark has different owners.

Flint described it as a very worrying turn, that gives US companies 'a substantial advantage in any dispute with a foreign domain registrant.'

MEMORY

RAMBUS set to hit the mainstream

The price of fast RAMBUS memory will fall to within 20 per cent above that of rival SDRAM by the end of this year, according to memory specialist Kingston Technology. Currently it costs between four and five times as much as SDRAM.

The credibility of RAMBUS technology took a big dent last year when glitches forced Intel to stall the launch of its supporting 820 chipset.

The hiccup boosted VIA's chipset, which supports PC133 memory and was seen as a short-term alternative to RAMBUS. VIA is also backing emerging Double Data Rate (DDR) SDRAM, which doubles the memory speed for a given clock rate by triggering on both the rising and falling edge of the pulse.

Kingston does not make memory chips but is the world's biggest producer of memory

modules – including RAMBUS rivals. European technical support manager Robert Allen said early versions of RAMBUS had been in use since 1995 in workstations.

The 820 chipset supports only two RAMBUS modules – the problems occurred when there were more. 'In a perfect world RAMBUS works fine,' said Allen.

'Three Kingston modules on an Intel [mother]board work fine. But when you have modules from different manufacturers on boards from a variety of manufacturers you get propagation problems.'

The problems can be overcome by rigorous testing and the four major memory makers are ready for production, said Allen. He predicted that NEC's Virtual Channel Memory would not take off. And he said

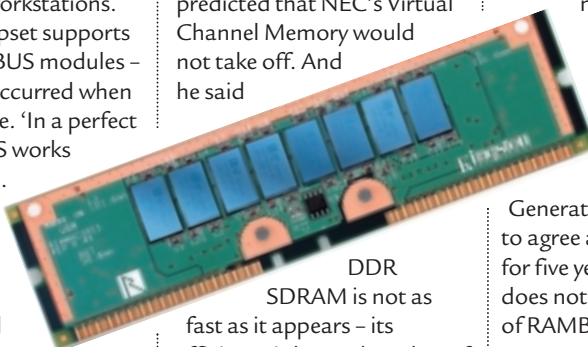
technologies as processor speeds soar. But in the short term there remain doubts whether mainstream users will pay a premium for a relatively marginal increase in memory speed.

Intel, under pressure from PC vendors, is hedging its bets.

It has formed a Next

Generation DRAM alliance to agree a memory platform for five years' time – its remit does not include discussion of RAMBUS.

Samsung – which stopped making the chips in the wake of the 820 chipset debacle – has a new 288MB Direct RAMBUS chip and says it is producing two million a month.



DDR SDRAM is not as fast as it appears – its efficiency is lower than that of RAMBUS because the proportion of misreads and miswrites is higher (see table).

Few dispute that RAMBUS has more headroom than rival

Comparative efficiency of rival memory platforms

	SDRAM	PC133	DDR SDRAM		Direct RAMBUS	
Frequency	100MHz	133MHz	200MHz	266MHz	600MHz	800MHz
Max bandwidth	800Mbits/sec	1Gbit/sec	1.6Gbits/sec	2.1Gbits/sec	1.2Gbits/sec	1.6Gbits/sec
Expected bandwidth	500Mbits/sec	600Mbits/sec	900Mbits/sec	1.2Gbits/sec	1.1Gbits/sec	1.5Gbits/sec
Efficiency	65 per cent	60 per cent	60 per cent	60 per cent	97 per cent	97 per cent

Source: Kingston Technology

WIRELESS

Bluetooth and IR will work side by side

Bluetooth wireless technology will not spell the end of infra-red for short-range data links, according to the executive director of the IR Data Association (IRDA).

Lawrence Faulkner said that infra-red and emerging Bluetooth wireless links will complement – rather than compete – with each other.

IRDA is showing signs of nerves over Bluetooth, which it admits may replace IR for many purposes. Faulkner said in a newsletter to members: 'It is vital that we understand and communicate our

strengths and that we quit apologising for what we are.'

One of those strengths, he said, is that you make an IR connection simply by pointing a device. Bluetooth has to find all devices in range and then pick from a list.

'I understand that it is possible for Bluetooth devices to recognise each other automatically once they have been set up to work together, but the first time will be cumbersome,' he wrote.

He says this makes IR much more useful for public data ports in airports, hotels,

and stores – any time you need to connect to a device that is not your own.'

IR also avoids the problem of interference, which could be acute in a typical office environment. 'The directed nature of IR allows users to control interference from external sources; controlling RF signals is like trying to herd cats,' he added.

Speed is another issue. IR now has a top throughput of 16Mbits/sec, compared with about 1Mbit/sec for Bluetooth. 'Not just the basic signalling rate, but the

prospect of sharing that bandwidth with other devices means that the throughput of an IR link should outperform Bluetooth by many times,' Faulkner said.

He concluded: 'We are not in competition with Bluetooth. We are in competition with ourselves and our own ability to effectively utilise this wonderful technology.'

Curiously he does not mention the security advantages of IR – unlike radio waves it does not travel through walls.

HANDHELDS

Pilots are winning the battle with CE-based handhelds, but Microsoft has a Rapier-sharp plan

Titans lay down battle plans

Three years ago I told Jeff Hawkins, father of the Palm Pilot, that he would sell one million of the devices in their first year. He laughed at the time, but my wild prediction was close to being correct.

But before you get the idea that I am a genius at predicting the future, I must also confess to having forecast that Microsoft would sell 300,000 units of its Windows CE-based handhelds in their first year; in fact they barely sold 150,000. There are now 6.5 million Palm Pilots in use, compared to around a million CE machines.

Everex and Philips have discontinued CE-based products, and Microsoft itself has dropped the name CE in favour of the phrase

customer and retailer complaints, and sales still can't keep pace with Palm.

Palm sales account for nearly 75 per cent of all personal digital devices sold, according to researchers International Data Corporation. Sales were expected to top one million over the Christmas period alone, followed by another four million over the coming year.

HP, Compaq and NEC have continued to support and sell CE-based devices, but sources close to all three companies suggest that they are also looking very closely at the Pilot as a possible alternative platform.

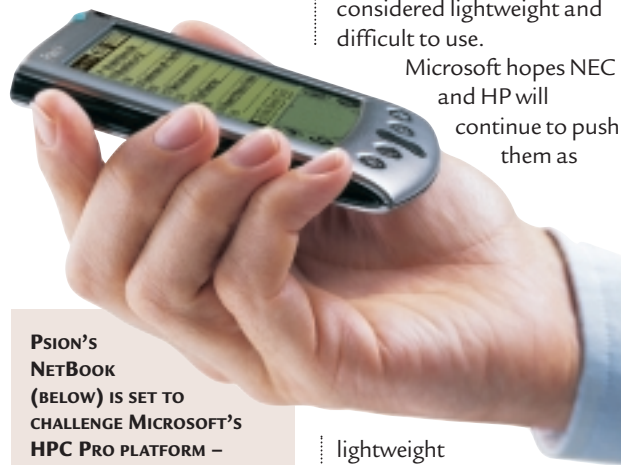
So, why has the Pilot been so successful while CE has been such a dismal failure? The answer

handheld devices.

Complaints have driven Microsoft back to the drawing board and I understand that the company now has a new Pilot-like interface, code-named

called CE (see page 18), which comes with pocket versions of Word, PowerPoint, Access, Excel and Outlook. These devices have also sold poorly as the pocket applications are considered lightweight and difficult to use.

Microsoft hopes NEC and HP will continue to push them as



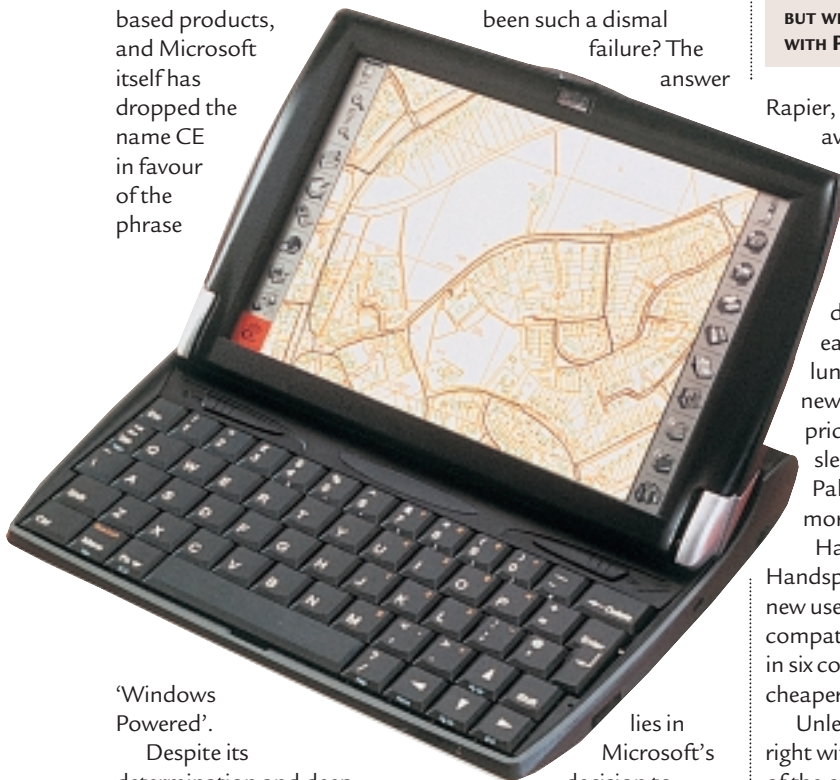
PSION'S NETBOOK (BELOW) IS SET TO CHALLENGE MICROSOFT'S HPC PRO PLATFORM – BUT WILL EITHER CATCH UP WITH PALM?

lightweight alternatives for mobile road warriors. A Palm OS equivalent has yet to appear but Psion's NetBook (marketed in the UK as a corporate version of the Series 7) is about to launch in the US and could provide strong competition. Its user interface is very simple to use and easy to learn. It comes with built-in apps that are file-compatible with Microsoft's Office applications and it has a battery life of close to 12 hours.

I got a chance to try one out at Fall Comdex last year and I am convinced that the 199MHz StrongArm-powered NetBook will give Microsoft's HPC Pro platform as much competition as smaller CE devices have had from Palm.

Microsoft clearly has an uphill battle ahead. Given Palm's long lead, it is highly unlikely that Microsoft will ever be the main player in this important new sector.

TIM BAJARIN



'Windows Powered'.

Despite its determination and deep pockets, Microsoft has been thwarted in its attempts to dominate the handheld market. CE has been adapted three times in response to

lies in Microsoft's decision to create a scaled-down version of the familiar Windows interface. This might work on a big screen, but it is difficult to transfer to small

Rapier, which should be available on next-generation handhelds in the spring.

Meanwhile, Palm Computing, the Pilot division of 3Com, is eating Microsoft's lunch. It has tempted new users with lower-priced models, while new sleek designs like the Palm V appeal to the more upscale users.

Hawkins' new venture, Handspring, is taking aim at new users with Palm-compatible models that come in six colours at prices even cheaper than most of Palm's.

Unless Microsoft gets it right with Rapier, the chances of the company gaining any ground on the Palm platform in 2000 is minimal.

Microsoft is also still pushing its Handheld PC Pro platform, based on what was

Microsoft has entered the microbrowser arena with its Mobile Explorer platform

Raising a few I-browsers

It has finally happened: Microsoft has announced an Internet browser for mobile phones. The Microsoft Mobile Explorer (MME) platform consists of a dual-mode microbrowser, the Pocket PC operating system (aka Windows CE), with applications and server-side components.

Microsoft says this platform allows 'partners to pick the solution that best fits their needs, using one or more of the components'. One such partner is Ericsson, which is to supply its WAP (Wireless Application Protocol) stack to Microsoft and will adopt the Mobile Explorer for its handsets.

WAP and the Wireless Markup Language (WML) are designed to deliver Internet-based content over mobile networks to devices with limited displays. Content providers must reformat information to WML, and end users need a WAP-compliant device with a microbrowser. While WML supports graphics, most content will be limited to text headlines and options for delivering news, sport, banking and other applications.

In the early days of microbrowsing, Microsoft was conspicuous by its absence from the WAP forum. Nokia and Ericsson were to write their own microbrowsers. Just about everyone else was going to license Phone.com's

software: Motorola uses it in its WAP-compliant tri-band mobile. Nokia is still reeling with the demand for its long-awaited 7110 which uses the company's microbrowser.

Ericsson may use Microsoft's microbrowser and server components, but it

The other version, for smart phones, supports more sophisticated messaging and PIM applications to run on higher-resolution PDAs with built-in mobile comms.

Considering that Microsoft has always aggressively pushed its OSs, and wanted

what kind of device should they be using for mobile applications? Should it be a mobile phone with extended facilities, or a PDA with cellular comms? Mobile phones are certainly more familiar, but suffer from small mono screens, while no-one really wants to hold a Psion 5 to their ear.

The radio Bluetooth technology (that Microsoft and Ericsson are developing) may have the answer (see also feature page 130). Nowadays many mobile users leave their phone in a bag or pocket and use a wired headset. But imagine a future PDA with cellular and Bluetooth capabilities. Again, it sits in your pocket or on a desk, but you make voice calls using a wireless headset over a short-range Bluetooth connection. Ericsson has already shown such a headset (far left), designed for use on its T28 (left) and R320 mobiles that works up to 10 metres away. Alternatively, you could have a PDA-sized Bluetooth screen, to extend your phone's display capabilities.

WAP offers a great solution for delivering content to basic mobile displays over slow 9,600bits/sec networks, but no-one knows if such stripped-down material will set the public's imagination on fire. There's also the question of how many people would re-author their content to WML. WAP solves problems that will go away soon: within 12 to 18 months, mobile data will increase to at least 384Kbits/sec, and we should have Bluetooth solutions sooner. Mobile Internet will be big, but whether WAP will be a long-term partner is another matter.

GORDON LAING



ERICSSON'S WIRELESS BLUETOOTH HEADSET (LEFT) CAN BE USED UP TO 10 METRES AWAY FROM ITS T28 PHONES (ABOVE)



CE to be the standard on mobile phones, this dual strategy is a quite mature move. On the one hand there's the

OS-independent microbrowser option for basic data-capable mobile phones which Ericsson has plumped for, and on the other is a more sophisticated suite for larger devices that will more than likely be running CE.

Microsoft will still pitch CE against devices such as the Psion 5, but looks as if it may give up on pushing more than its microbrowser to the feature-phone market. The Ericsson deal could result in a Symbian PDA running Microsoft's browser under Psion's EPOC32 OS.

All interesting stuff, but the big question for users is

is not interested in the Windows CE portions of the MME platform, and won't let the deal affect the Symbian alliance with Nokia, Motorola and Psion.

Microsoft has two implementations of MME. The first, for feature phones, is an 'operating system-independent, air-link agnostic browser-based solution that enables secure corporate or personal access to email, personal information manager (PIM) data and the Internet. It includes the first dual-mode microbrowser that can display HTML - and WAP 1.1-authored content'.

net shorts

BRIT BROWSER

AltaVista is the latest search engine to open a UK-oriented site. In addition to extended multimedia search facilities



there will be news feeds from Reuters and *Sporting Life*.

Searches can be done within any of five categories: UK-only, global, images (above), audio and video. Users can also make use of the Babel Fish multi-lingual translation service and can set password-protected filters to prevent children accessing unsuitable material.

AltaVista CEO Rod Schrock claimed it is 'the fastest and most comprehensive web search service designed for British users'.
www.altavista.co.uk

SEARCH 'N' SAVE

A new site claims it can save



UK users up to 35 per cent on the price of a CD using its comparative shopping

engine. The site at www.clickmusic.co.uk searches music commerce sites to find the best prices. It claims it could have got you December's top 10 albums for £96.30 – compared to £132.90 at OurPrice.

CARTOON LOVERS

You don't need to go away to cultivate a holiday romance or make friends. www.dobedo.co.uk sets up chat sites in cartoon tropical locations.

PRIVACY

Nyms cover tracks of surfers

Web surfers will be able to cover their tracks and maintain complete anonymity using software called Freedom, its Canadian developers claim.

Freedom allows users to send email, chat and use newsgroups using any number of untraceable pseudonyms or 'nyms'.

The system developed by Zero Knowledge Systems (ZKS) encrypts and re-routes

Internet traffic through a network of 150 Freedom servers, each of which erases source information, including the IP address and identity of the sender.

ZKS' president Austin Hill revealed that the company's ultimate aim is to manage and control the disclosure of personal information on behalf of both consumers and businesses.

The company's chief

scientist, Ian Goldberg, said: 'Freedom will correct many of the Internet's privacy deficiencies by empowering users to control who gets access to their personal information.'

Freedom will be available to a maximum of 100,000 users in mid-February for £31.22 from www.freedom.net. A 30-day free trial version is available for download. www.zeroknowledge.com

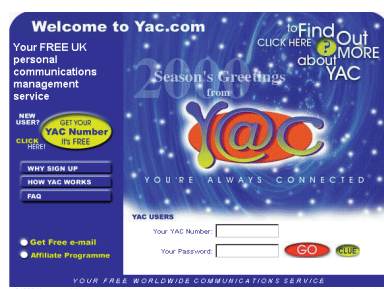
TELECOMS

'Free' number keeps track of you

A comms company is offering an Internet-based global telephone number for voice, voicemail, fax and email completely free – although callers to the number will pay mobile phone rates.

Calls to the number can be redirected virtually anywhere in the world and the users can administer the YAC.com service from any browser.

Callers also get an option to leave a voice message, which is delivered to an email



address of your choice. So are any faxes sent to your YAC number. You can register for a number simply by accessing the site at www.yac.com.

The company says that

although parts of the service are offered by rival schemes, none offers the equivalent of the full YAC service – certainly not 'free'.

Chairman Mike Feerick says it offers a new level of flexibility. 'The service is totally

independent of any communications device, Internet service provider or voicemail system. It brings control to personal communication.'

One foot in the web

New retirement homes for the elderly may be fitted with Internet access as standard following the success of a pilot scheme.

Builder McCarthy & Stone, which specialises in retirement homes, installed Internet-enabled PCs at some of its properties in Dorset and Hampshire. Residents aged up to 90 were so enthusiastic that the company may extend the scheme to homes

throughout the country.

NTL provided free access for the pilot and Bournemouth University helped teach the elderly users how to surf the Internet. Lecturer

Frances Cambrook admitted that she was astonished at

how quickly the residents managed to pick it up.



net shorts

COMPAQ'S NET STINGER

Compaq has licensed a version of the Be operating system called Stinger, for use in Internet appliances.

The two companies are also working on joint development and sales initiatives. But a Compaq spokeswoman said the deal did not 'guarantee that we will use its OS'.

Compaq has said the market for Internet appliances could be 'in the millions and millions'. At Comdex Be showed prototype access boxes using its software and is producing a version for NatSemi's Webpad.

Rob Enderle, an analyst at Giga Information Group, pointed out that Compaq cross-listences pretty much everything. 'The question is are they going to ship anything? This is good PR for Be but you can't eat PR.' Stinger includes a browser and supports popular streaming audio and video standards.

DEALERS SIDESTEPED

Compaq is offering many products online at dealer prices, in a bid to win back business from online vendor Dell.

The move will force many dealers to find other suppliers. Other dealers will become subcontractors, assembling PCs to order and delivering them within 24 hours.

Andy Brown, IDC analyst, said: 'The move was inevitable but may have been a bit hasty. This will make or break Compaq.'

Steve Palmer vnunet.com

TALKING EMAIL

Customers of service provider Pipex can use a new free service to ring up and hear their email read over an ordinary telephone. They simply dial a special number and enter their SpeechMail account details.

PROCESSORS

Alpha gets £250m boost

Compaq and Samsung are pumping £250m into the research, development and marketing of the Alpha processor.

The Alpha, which Compaq inherited with its takeover of Digital, has long been the dark horse of computing. It is used mainly in high-end machines – but has the potential to break into the desktop market.

Compaq has signed a memorandum of understanding with Samsung and Alpha Processor Inc (API)

to invest £250m jointly under the new deal. Samsung owns 87 per cent of API, the Alpha manufacturing and marketing unit, and Compaq owns the rest.

Total additional investments in Alpha could approach £1bn over the next five years. The deal involves API possibly supplying low-end workstations and servers to Compaq, and expanding Alpha into thin servers, network appliances and comms infrastructure devices.

There will be partnerships with software developers, such as Cygnus, to develop open-source tools to boost the number of Linux-based Alpha applications.

Alpha sales actually increased in the third quarter of 1999, according to IDC, despite the cancellation of a project to put Windows 2000 on the processor. Up to seven per cent of Alpha sales are said to be for the Linux platform.

JONATHAN LAMBETH
[VNUNET.COM](http://vnunet.com)

OPERATING SYSTEMS

Linux makes a move on IA-64

Four leading Linux distributors are joining the Trillian project to port the operating system to Intel's forthcoming 64bit Itanium processor. Red Hat, Caldera, SuSE and TurboLinux will join HP, IBM, Intel and VA Linux Systems on the project, which aims to have the code ready for distribution by the time the first Itanium ships – probably late this year.

Peter Lemon, senior analyst at IDC, said that Linux distributors are becoming 'proper grown-up companies. They need a firm road map to offer investors'.

He added: 'A consortium such as Trillian shows that Itanium will be the default platform for the next five to 10 years. Everybody has to be there or be nowhere.'

Lemon believes Trillian is

an attempt to prevent what happened to Unix: 'When people started to use it, it fragmented fast.'

Benoy Tamang, VP of marketing for Caldera Systems, said: 'A Linux-enabled IA-64 architecture will allow our electronic service providers to create ebusiness solutions for high-end performance platforms.'

LISA KELLY, [VNUNET.COM](http://vnunet.com)

Four-in-one mic arrives

Believe it or not, this is a PC microphone. The LVA-7280 ClearVoice Digital Array is one of an emerging breed of so-called far-field mics – desktop models that are designed to match the performance of headsets when used with speech-recognition software.

The LVA-7280 is actually four mics in one: an on-board DSP chip uses subtle timing differences to



distinguish background noise from speech. The £99 (inc VAT) device, available on 1 April, also checks ambient noise when switched on and subtracts it from the signal.

It's on the large side for a crowded desk, but manufacturer Labtec says versions of it may be incorporated into system boxes and monitors.
www.labtec.com

short stories

VIRUS CREATOR FACES JAIL

A computer programmer who admitted creating and letting one of the first-ever viruses into the wild is due to be sentenced in February.

David Smith pleaded guilty to two charges related to the Melissa virus, which sent itself to the first 50 names in a victim's address book. Melissa carried no malicious payload, other than a list of porn sites, but it cost an estimated £56m in disruption of email systems across the world.

Some companies, including Microsoft, had to shut down their email systems to clear the virus. Smith told the court: 'I had no idea there would be such profound consequences.' He faces a maximum of five years in prison and a fine of over £150,000 under federal law, and 10 years and a fine of over £90,000 under state law.

FIRST WEB OS ARRIVES

A US company has launched what it claims is the first entirely web-based operating system. MywebOS.com says that by using the Internet as the network it reduces maintenance costs, gives universal access to data and is similar to a thin-client architecture. One of the first packages to run under MywebOS is Hyperoffice 2000, an office suite that includes a web-based word processor, email client, calendar, and contact manager.

AVG 6.0 FOR FREE

Directions is giving away its anti-virus product AVG 6.0, which can also be updated free on the web. It will scan files (including Zips) and removable disks on demand as well as on access and it also protects email.

www.directions.ltd.uk

SHARES

Online dealing health warning

A huge explosion in online share dealing is worrying City authorities. Call centres and other systems used by brokers were overwhelmed when trading levels doubled in the space of a few weeks. The increase was triggered partly by Channel 4's share-tipping programme *Show Me The Money*.

Some brokers reported a three- or four-fold increase in trading. Watchdog the Financial Services Authority (FSA) warned new investors that they could get badly burned – particularly if they are putting their money into small, new high-tech companies that can be subject to volatile price movements.

One risk is that investors' money becomes tied up in stocks that are very difficult to sell.

But the FSA said brokers

should also take care to build an infrastructure capable of coping with peaks in demand and it threatened to curb trading of those who failed to do so.

In the US what is called 'day trading' has moved dealing in stocks and shares out of traditional institutions and into homes across the country. Many people give up their jobs to sit at home, trying to make money out of minute-by-minute fluctuations in share prices.

The dangers were highlighted last July when a man killed himself, his family, and nine people at two day-trading firms after losing around £300,000.

The FSA has posted a warning on its website for people considering going into day trading. It points out that unless you have expensive access to real-time changes in

prices, you will be at a disadvantage compared to the professionals.

The warning goes on: 'Day trading is a stressful full-time job. It involves serious concentration and steady nerves. To spot market trends day traders must watch quotes and price fluctuations continuously.'

A 0.5 per cent stamp duty on transactions has to be offset against gains from marginal price fluctuations.

The FSA also warns that traders need sufficient resources to be able to exit fast if necessary. 'The whole market can move very rapidly and professional dealers may well be ahead.'

Investors are also advised to call the FSA's Central Register on 0845 606 1234 to check whether they are using an authorised dealer.

www.sib.co.uk

ONLINE BANKING

Failure on the cards for ebanks

Many of the 30 banks that are expected to launch online in Europe this year will fail because their business model is flawed, a management expert has warned.

Durlacher Research consultant David Pannell said most will be the Internet arms of 'bricks and mortar' banks, trying to defend their existing business rather than exploiting the potential of the medium for financial services.

Online financial offerings are convenient but lack new value propositions to differentiate them from rivals. 'Tailoring accounts to the needs of the individual is vital.

Few are moving towards personalisation or building communities,' he told the e-Financial Services Forum.

Pannell said a web-only bank costs about £20m to build and lacks the advantage of links into branches.

Customer loyalty will be poor because people will experiment and try out three

or four accounts, he said. Pannell believes that portals will lead the market, often in partnerships with banks like that between Yahoo and NatWest. Wireless Application Protocol (WAP) service providers may also apply for banking licences. 'The explosion of WAP usage will enable a new range of mobile data and mobile commerce applications,' he said.

LISA KELLY, VUNET.COM