

VOX POP

Views on IT 1999-style
Collected by Sue Pederson



**ROBIN BLOOR, CEO,
BLOOR RESEARCH**

E-commerce is going to go wild...especially with the sale of holidays and airline tickets. By the end of the year it will be obvious that the electronic economy will subsume the rest of the economy. Java will start to mature and applet applications will appear, especially on PDAs and mobile phones. There's been [some] disappointment around Java but it will make a second coming. Linux will continue to gain popularity.



**GWYNNEETH FLOWERS,
MD, ACTION 2000**

Bigger businesses have taken action [on the millennium bug] but the big worry is smaller companies...too many have not made preparations. I am also concerned about embedded systems...The problems will be sporadic but they'll cause disruption. We will have incidents throughout 1999 but hopefully they will all be short term. The most important thing is to ensure that there isn't a panic in the run-up to the new year.



**CHRIS BAKOLAS,
DAN TECHNOLOGY**

I'm looking forward to seeing what happens to AMD, with Intel very aggressive with its low-end CPUs. I can't see many people buying those low-end PC bundles. You either have to cut the quality or the quantity of components. The peripherals bundled with them are a pile of junk. If you pay peanuts, you get monkeys. Customers won't buy the Xeon either, unless Intel cuts the price. We'll see the same kind of PCs, with more memory, and more with DVDs — goodness knows why. Flat screens will also become more popular and will fight it out with 17in screens.

Windows is dead! Long live Windows!

Last year was hardly a vintage year for IT. But, in the run-up to the millennium, it had very much the feel of the **end of an era**... the Wintel era.

Microsoft and Intel have dominated desktop computing for nigh-on two decades. Microsoft Windows, just eight years after the first hit version was launched, runs nine out of ten of the world's PCs. Most of these use Intel chips.

The ground on which this duopoly was built began slipping away with the advent of the web, which lets machine talk to machine regardless of operating system or processor. **Java** took this a stage further by offering programs which would run on any machine.

Both Microsoft and Intel now face embarrassing anti-trust actions. And **Sun** won the first round of an action over Microsoft's Java implementation. The claim is that Microsoft tried to destroy Java's global remit by introducing Windows-specific features.

Be beats the behemoth

Gates is being challenged — and beaten — even on his PC home ground.

The amazing new BeOS 4.0 operating system, free of the need for backward compatibility, makes Windows look a sluggard with multimedia.

Even developer Be does not suggest you use it to replace Windows — at least, not yet. But the OS, which packs audio, MIDI and video processing (plus a browser),

bundles a dual-boot utility. So, at an introductory £50, Be reckons you can afford to load it for doing just what it is best at, such as coping with many multimedia data streams (*above*) with no Windows-style hiccups.

Be, founded by French former Apple exec Jean Louis Gassée, wrote the first BeOS for the Mac. BeOS 4.0 is the first "proper" PC version, with wide driver support.

Be www.be.com; Computer Warehouse 0181 400 1298



More serious than court cases (possible Y2K bug claims aside) is the technological tide. Computers are diversifying into all kinds of devices which need neither Microsoft software nor Intel chips.

On PCs, Intel faces increased competition from cloners. The **BeOS** (see above) offers a fast alternative to Windows for multimedia use. Linux offers

not only an alternative operating system, but also a new model of software development

Microsoft and Intel are not about to go away; and Windows, short of Armageddon, *couldn't* go away. But, as I argue further at the start of our Comdex report overleaf, their absolute rule is over. It's a case of "King Windows is dead. Long live Windows!" **CLIVE AKASS**

First steps on fast track to future

The most momentous IT events of the past year were home grown and we have hardly started to feel their effects.

Digital television will catalyse myriad changes. It brings fast data to homes cheaply for the first time and will give the web a mass market.

Cable companies and BT have to upgrade land links to keep pace. Britain is getting its first cable modems and British Telecom has piloted a

rollout of ADSL (Advanced Digital Subscriber Line).

Just as important as the bandwidth these land links bring is the fact that they are always on. This is likely to change the predominant use of the net from pull to push.

It will also change the nature and revenue streams of broadcasting. Users will be able to choose when they see some programs, and access TV and radio archives. Advertisers will be able to sell

direct, generating the electronic economy. All this is coming to your home soon. BT Internet director John Swinge-wood sees ADSL, rolled out region by region, being in place across Britain in two years. Pricing has yet to be set but in time it could be free, paid for by e-trade and advertising.

COMDEX SPECIAL starts p26

Slim mobile vs thin client p27
2 megapixel digicam ceiling p29
TV PC hacking curbs p45

INTERNET

Users flock to 'no pay' web link

Dixons claims its free web service, Freeserve, attracted nearly half a million users in two months. It defied gloomy predictions by doing so with no major glitches.

Now, Virgin Net is believed to be on the verge of making its service free. It says few users have defected to Freeserve although it is getting fewer new subscribers.

Freeserve is the fastest-growing service provider in the UK, attracting 8,500 new members a day. By last month it had boosted Dixons share value by £690m.

Analysts were pessimistic about Freeserve's chances, predicting crawling connections and curbs on membership numbers.



Dixons says it is extremely happy with the service and that it has no plans to cap numbers. Press officer Justine Moon said: "We are adding new content all the time. Freeserve will continue and it will always be free."

Free internet services will become common, says Ovum's internet consultant, Daniel Bieler. "Companies are subsidising free services because in the long run they hope to increase the user base."

The more people who overcome their psychological issues about buying online, the more opportunities the companies have to sell."

He is slightly sceptical about how many people are actually using Freeserve. "It's one thing to have another internet account and another thing to have an active subscriber," he said. "People may just be signing up because it is free. I don't think you will find each person who signed up, surfing all the time." Dixons says that 40 percent of its members are new to the net.

BT claims that its pay-as-you-go Click service is outstripping its expectations. David Pincott, press officer for BT Internet, says that its regular internet service will have to stay on its toes. "It is up to us to provide the type of quality and content that will justify the monthly fee."

ADSL (see opposite), which Virgin and BT Interactive are both piloting, may also cause a shakeout of providers who cannot deliver data at 2Mbps.

SUSAN PEDERSON

Dixons in PC 'fair trade' probe

Claims that Dixons asks too much for its PCs are being investigated by the Office of Fair Trading.

Dixons, which owns PC World and Currys, was criticised by no less than Craig Barret, CEO of Intel. Its pricing has also been

criticised by Fujitsu. Trade Secretary Peter Mandelson called in the OFT after the Consumers' Association asked for an inquiry.

A Dixons statement said it offered Britain's "most competitive prices" and welcomed any inquiry.

short stories

BLAST FROM THE PAST



This man changed your life. If you use a spreadsheet, that is. Dan Bricklin invented the things in 1977 when he was at

Harvard. Now he heads Trellex, vendor of the eponymous web publishing package. I snapped him at Comdex, announcing that Trellex will be bundled with Corel's Wordperfect 2000 office suite. Corel said it is posting a free Linux version of the suite. — CA

DANMERE

We were a digit out, last month, on our number for Danmere (p42) which is a way of storing PC data on your video recorder. The number is 01606 74330.

www.danmere.com

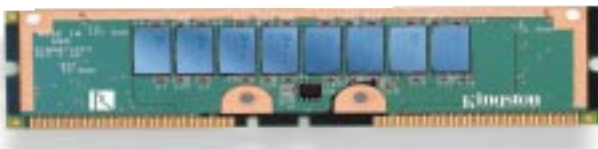
LAST WORD

• A story doing the rounds at Christmas was that German PC maker Siemens is moving to Staines. Probably inspired by Monica Lewinski's dress...

• English nuance can be perilous. Witness what French-founded OS developer Be calls its online software shop: BeWare.

MEMORY

Latest RAM buses in



This is the next-generation Rambus memory module (RIMM) which should start appearing in machines this year. Direct Rambus PC memory promises three times the effective bandwidth of an SDRAM-100 system, at

comparable cost and lower power. Dell has received its first sample RIMM modules from Kingston and Toshiba's components division — they aim to maintain supplies to systems with Direct Rambus memory architecture this year.

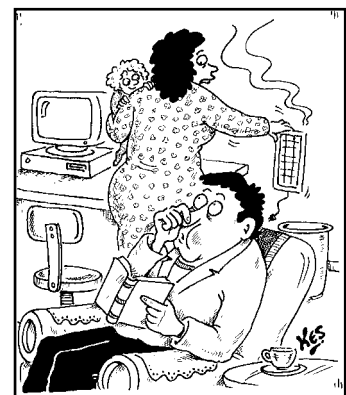
IAN ROBSON

Oh baby, it's a PC world!

Nothing like catching them young... you can now buy the PC equivalent of those wooden books designed to introduce babies to reading.

Parents keen to set their bundles of joy early on the ladder of IT success, can buy "lapware" called *Jump Ahead Baby*, designed by Cendant-owned Knowledge Adventure with the aid of psychologists. It costs £11.99 at high-street stores.

Cendant 0118 9209100



"Baby-learning, indeed... I just hope she's learned the difference between a PC keyboard and a potty"



◀ **Gates plays a video game with motocross rider Rusty Crank, on stage at Comdex**

Microsoft is finished. Oracle chief Larry Ellison spent much of his keynote speech deriding Microsoft's new Sequel 7.0 Server, which is being

Get Gates!

It's been "Get Bill" time. First there was Clinton undergoing ritual global humiliation for messing with his groupies. Now we've had Gates stuttering his lapses of memory to the DOJ trustbusters, and losing the first round of a legal battle with Sun for trying to hold back the Java tide.

"I've had an exciting year," said Gates in his Comdex keynote, showing the famous picture of someone throwing a pie in his face. At Comdex, too, he was under attack. *Wired* magazine put out an issue listing 83 reasons why

touted as the plain person's doorway to data. Ellison also announced that his latest Oracle database engine dispenses with an operating system altogether. Yah, boo! Take that, Gates!

It is hard to overstate the venom with which Ellison and Sun CEO Scot McNealy view Gates. Monumental egos both, you get the feeling that they mind most being beaten by a man who still looks like a smart-ass college kid who can't quite make the in-crowd.

The feeling is mutual. A very high-up Microsoftie went apoplectic on me once when I

made the mildest of remarks in favour of Java. "Don't you know that all those guys want is to destroy Microsoft?" he exclaimed, irony free.

Windows is not about to go away. Not Java, nor Linux, nor Epoc, nor any operating software combined can match the breadth of its use. Microsoft software runs 90 percent of the world's desktops and most of the world's businesses. There is no way this is going to change in a hurry. But the Windows era, the time when personal computing meant PCs and PCs meant Windows, is over. Comdex, a good annual snapshot of the IT industry, showed cameras, TVs, radios, phones, pagers... all manner of intelligent devices using not a line of Microsoft code.

True, there were also many using Windows CE, but they could just as well have used another operating system — better, because designers of mobile devices can play, free of the PC legacy. There is no reason to hand this arena to Microsoft.

Small matter that the cluster of Linux stalls was dwarfed by the CE pavilion. Linux will grow because people want it to: like the web's HTML, it is as free as English and they can grow it themselves. Small matter that Java cannot match the speed of native Windows apps. It will get faster as processors get faster and code gets tighter.

The fact is, without the help of the DOJ, without even the new AOL-Netscape-Sun axis, Microsoft is losing its monopoly. It is going the way of IBM: huge and growing, but no longer cock of the roost. Bill Gates has had his day as ruler of the IT world and his Windows is beginning to look like the pacemaker for better things to come.

But Gates is not friendless. Talk-show host Bill Maher, who knows shark-eats-shark when he sees it, raised a cheer at the Intel keynote when he cracked: "They kicked his ass because he was too successful."

CLIVE AKASS

www.pcw.co.uk

POINT OF VIEW

Going mobile with a true mobile

You may have noticed that we at "PCW Towers" have been drooling over the PCG-505G Vaio mini-notebook. Sony let me take one on my Comdex trip. I also took a Kodak DC 210 digicam. The Vaio was as good to use as it looks: sleek, efficient, and actually portable. It stood up well to the journey, too. Being fickle, though, I fell in love with the Vaio's young sister, previewed at Comdex.

The Vaio PCG-C1 (pictured) was definitely my Product of the Show. It looks like a foreshortened 505. The 8.9in screen is crisp and easy to use. Above it, set into the lid, is a tiny camera so the

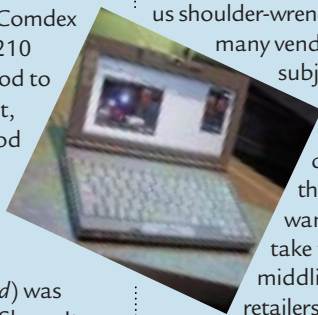
Vaio can be used as a video phone. It baffled me for years why no-one built true portables like these, instead offering us shoulder-wrenching luggables. The many vendors I earbashed on the subject all claimed a lack of demand.

Camera makers cling to a similar myth that digicam users don't want the controls you take for granted on middling film cameras. Big retailers, I'm told, have decided that only simple models will sell. I'm a snapper rather than a photographer

but I find this hard to understand. I use a digicam as a visual notebook, creating instant images that would be too much hassle using film. They may be just snapshots, but they still need fine controls, at least until "automatic" cameras can truly cope with poor light.

The DC 210 is no worse in this than others of its class, and it did me proud. If you get one, I advise you to buy a PC Card adapter for the flash card to speed downloads and save batteries. The megapixel resolution gives scope for cropping, which you need when you don't have the lenses to frame a good picture.

• Two-megapixel ceiling — see page 29



Clive Akass



goes on the road with laptop and digicam

You can see these stories and much more in our special web report on Comdex Fall, which gives a

INPUT SYSTEMS

Life without mouse or keyboard

The new interest in mobiles, and the fact that a keyboard dictates the size of most devices, has fuelled experimentation with input systems.

Speech-driven mobiles have yet to leave the development labs although Pilot Island showed an add-on called the Parrot that lets you control a PalmPilot by voice. It also, like some Palm clones, supports voice memos.

Lernout and Hauspie showed off its Voice Express Plus for PCs, which accepts natural language commands and sells here for £80.

Dragon Systems showed its Natural Speaking Professional package taking input from a Sony mini-disc recorder — check its web site for other models that work.

Voice input can involve wearing a mic to cut out extraneous noise. Andrea Electronics claims to have got round this with a far-field mic using a new Intel-backed technology called Digital Super Directional Array. Products are expected soon.

There were a couple of ideas on how to replace the mouse. Casio uses a thumb pad to the right of the display on its trim 1.82lb new Cassiopeia Fiva mini-notebook (above). Lefthanders will not be happy with it, though.

Another bright idea came from a company called Concept Kitchen. It's a stylus that fits on your finger (right). It means that you can use a keyboard and touch-screen

without having to keep picking up a stylus. At \$19.99 it ain't cheap, but it is made of silver.

See our PCW web site for links



MOBILES

Slim laptop versus thin client

Mobiles have divided into two classes: those using full Windows, or those using a compact operating system like CE or Epoc. The divide boils down to a choice between machines with a high price, high spec and low battery life, and cheaper models that can run basic apps for a working day without a battery charge.

Sony's Vaio 550 set the pace for mobiles and had more than one imitator at Comdex, including near clones from Hitachi and Toshiba. The pen-driven Palm series has established a considerable following, as evidenced by a wide range of software and peripherals (see left and our PCW web site for details).

CE dominated the other handhelds, including pen-driven



PalmPilot lookalikes from Casio, HP and Uniden.

More directly competing with thin laptops were the new CE-bagables; too large

Starfish, whose software runs the Rex PC Card organiser, will develop synchronisation software for Symbian's Epoc operating system used on Psion palmtops, ceo Philippe Kahn said.

Full story on our web site

for your pocket but small and light enough to carry in your bag. One imaginative design, the Vadem Clio, is also sold by Sharp under the name Mobilon TriPad. It can be used as a pen tablet (left), laptop (right) or (above) as an easel for presentations.

Intel does not hold sway in this area. The TriPad uses a MIPs processor and

Hitachi uses its own SH-3 for its HPW-200EC, which has a laptop-size keyboard and half-depth VGA screen.

HP's new Jornada 820 handheld was on show, due to ship in Europe, in early 1999, for 957 Euros (about £684). It weighs 1.13kg and has a claimed 10-hour battery life, a built-in 56K modem, "instant on" and simple synchronisation of email and other data.

The larger mobiles are aimed mostly at business users and can act as thin clients running full



Windows apps across a network using Windows Terminal Server.

See our PCW web site for links

• Sharp's Mobilon Pro PV-5000 will cost about £800, not £80 as we stated last month.

Home, home on the network...

There are those who claim that home users can barely cope with a PC, let alone a network. If so, lots of people are going to lose a lot of money invested in the idea.

Peracom showed a system you could imagine people actually using. It used plain old coax cable, as used on your TV, to transport audio-visual and data signals so that you could view your TV or DVD player on your PC, or check out any PC in the house via your TV. A combined remote control and radio mouse allowed you to control a PC via a TV; so much for Johnny playing video games when he should be doing his homework.

Sharewave and Philips jointly developed a radio product called Ambi which similarly allows you to net-surf or run PC programs on

any TV in the house. **Epigram** announced technology that can provide 10Mbit/sec links using a standard phone line. Intel, AMD and Tut are developing similar systems although there is doubt whether they are allowed to, under UK telephone regulations.

Proxim demonstrated its Symphony range which provides 1.6Mbit/sec networking via 2.4GHz radio links. There are four products in the range: a \$149 ISA card, a \$199 PCI card, a \$299 56K modem which allows more-than-one-use net access simultaneously, and a \$399 Ethernet bridge for use with a cable modem or ADSL link. Proxim uses its own protocols but is a member of the Home Radio Frequency Working Group which is trying to thrash out standards.

STORAGE Cheap

Orb takes on Jaz

A \$199 fast drive was launched by Castlewood Systems — set up two years ago by Syquest founder Syed Ifitkar. The Orb has a claimed transfer rate 50 percent faster than rival Jaz, and cartridges a quarter of the price at around \$30.

The initial EIDE model will be followed by parallel and Ultra SCSI versions in the new year. European shipping times will be later. The launch came as Syquest went into Chapter 11 protection, and Iomega showed a 250Mb Zip drive which will cost \$199 in the US. It will read 100Mb Zip disks; the 250Mb ones will cost \$16.65.

Storage technologies competing for use in small devices include IBM's microdrive (see far right) and Iomega's Clik!

which takes tiny 40Mb disks. Iomega has yet to say when it will ship. Sony showed what it calls a Memory Stick, (left), a 4Mb or 8Mb slug the size of a piece of chewing gum for use in digital appliances.

The company claims the device is more robust than compact flash.

Fuller versions of these stories and more are on our site at www.pcw.co.uk

DIGITAL PHOTOGRAPHY

2 megapixels — that's your lot for digicams

The resolution of digital cameras for all but professional users will stop at two megapixels — just twice that of today's middle-priced machines, a top Nikon executive claimed.

"The resolution wars will soon be over," Nancy Carr, general manager of Nikon's consumer digital group, told a Comdex seminar.

Megapixel cameras have fallen drastically in price. The Kodak 210 now costs £399 and offers 1152 x 864 resolution, enough for photo-realistic 5in x 7in prints.

The resolution of a 35mm film is equivalent to 13 megapixels, and two megapixels are considered necessary for 10in x 8in prints.

Carr argued that few need that kind of resolution, and the processing power and storage required would make cameras too expensive.

Intel general manager Don Whiteside said Carr underestimated the growth of processing power and he believed higher resolutions were needed to allow people to crop their pictures.

Representatives of the big camera companies agreed that digital photography will have to be made as easy as film if it is to get a foothold.

Willy Shih, vice-president of Eastman-Kodak, observed: "We are used to thinking of digital being better than analogue. But photography is one area where this is not true."

Sony's latest Mavica, the **FD91**, does not use its new 200Mb HiFD super-floppy but it does allow you to capture up to 60 seconds of video onto a standard floppy.

It takes still pictures up to 1024 x 768 resolution. It will cost \$999 in the US.

Canon showed its **Power Shot Pro70** which offers a 1536 x 1024 resolution and a 28-70mm optical zoom, burst, and two Compact Flash slots: one a CFII which can take IBM's 340Mb microdrive (below, next to a US dime).



Backplate could digitise your SLR

Nikon may produce a backplate that can transform a film SLR camera into a digital one, hinted Nancy Carr, general manager of Nikon's consumer digital camera group.

Digital adaptations of leading SLRs have been available for at least three years for between £7,000 and £10,000 — several times their component costs. One company has shown, but not shipped, a universal 35mm

backplate with its guts fitting into a cylinder the size of a film cartridge.

Most photosensors are smaller than a 35mm film, so the view they see is smaller. Otherwise, there seems to be no great problem in replacing the film by a sensor, logic and storage. Carr said Nikon had explored the idea. "All I can say is 'watch this space'," she told journalists after the digital photography seminar.

CONNECTIVITY

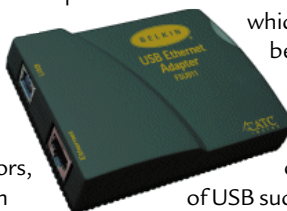
USB goes mainstream but the old RS232 goes faster

The USB bus, long tipped to replace both the parallel and serial port on the PC, hit the mainstream for the first time this year — more than three years after vendors began fitting USB ports to PCs.

But there is life in the old RS232 serial port yet. An Oxfordshire firm announced a chip which can push 15Mbit/sec through one,

more than 100 times faster than a normal serial port and 25 percent faster than a USB.

The chip, from Oxford Semiconductors, is a pin-for-pin replacement for the 16550 UART chip which drives most PC serial ports. It can allow much faster



devices to use the RS232 — the standard version of which can be overloaded, even by a 56K modem. But it lacks the other advantages of USB such as hot-plugging and the ability to daisy-chain devices.

Almost every peripheral you can think of is now

available with a USB link. One of the more interesting, of which there were several examples, was a USB-Ethernet adapter which would allow laptops, say, to link to a network via the USB port. The one pictured left is from Belkin.

Oxford Semiconductor
www.oxsemi.com;
Belkin www.belkin.com

DISPLAY TECHNOLOGIES

E-book breakthrough

Researchers at plastic-screen pioneer CDT have got the blues and they are delighted. Their **Light-Emitting Polymer (LEP)** technology is tipped to drive the next generation of screens.

They demonstrated a monochrome screen a few months ago but at the time they could only obtain red or green displays.

Blue, because it uses higher frequencies, is more difficult to achieve, but they have finally done it, leaving the way clear to combine the three

colours into a full-colour display — work the company is doing in partnership with Epson-Seiko.

LEP screens have a number of advantages. They should be easy to make and can be fairly flexible. Most importantly, they use a twentieth of the power taken by a TFT liquid crystal for a given luminosity level. This is because, like your Light-Emitting Diode (LED) status indicators, they generate their own light. Liquid-crystal displays are inherently

less efficient because they work by differentially blocking an external light source.

CDT development manager Carl Towns could give no date for when LEP colour screens will ship.

"We should have a demonstration screen by the middle of next year [1999]," he said.

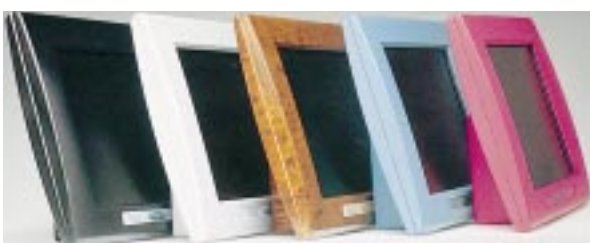
LEP screens would be the nearest that displays have come to the convenience of paper, and could lead to the first practicable electronic books.

www.cdtltd.co.uk

Slim PCs

These may look like screens, but they're full-spec PCs from Italian firm Seco (+39 575 26979).

Details at www.seco.it



Monitors: the third way

Want to increase productivity by upgrading hardware? The old debate as to whether to buy RAM or a new processor has a third contestant, say researchers.

It seems reasonable that monitor size and quality should be relevant, but there has been no evidence for this since the days of monochrome, text-based displays.

Tests at City University for the Computer Suppliers Federation were carried out with volunteers on a selection of de-badged monitors of varying quality and size (14, 17 and 21in). They were asked for subjective ratings after carrying out tasks which included proof-reading, reading values from a bar chart and data searching on a spreadsheet. Care was taken to ensure a level

playing field: in the chart-reading and proof-reading tests, the screen resolutions were set to ensure that corresponding bars and characters utilised the same number of pixels.

Surprisingly, the 21in monitors did not sweep the board: a "poor quality" 21in performed worst in the bar-chart test; a 17in "good quality" monitor scored best in the proof-reading test and was by far the subjective favourite. The 21in only came into its own when reading values from large spreadsheets — not having to scroll the display halved the search time. But with a 17in display, the accuracy in the bar-chart test improved by ten percent and both reading speed and accuracy improved by five percent.

TIM NOTT

AOL aims for US top five

AOL's buyout of Netscape quickly became Silicon Valley's most important story of the year. Microsoft's Department of Justice trial is a hot item too, but this one really hit hard. Netscape re-energised this area and put it back on the map. Some mourned the end of an era in which a small start-up could, in a very short time, achieve importance all over the world. Others said that Netscape's days were numbered anyway. Many saw the merger as part of the consolidation of an industry in which a handful of companies own 75 percent of the market. To an extent, all these assessments are true.

To understand what is really happening, you need to recognise what AOL chairman Steve Case wants the company to be when it grows up: the fifth major US network with ABC, CBS, NBC and Fox (CNN is considered a specialised news channel). He wants it to become the main way in which text, audio, animation and video is delivered to homes. And he is laying the groundwork to take advantage of high bandwidth when it is finally delivered to the home.

Case eventually wants to deliver interactive news and even an interactive sitcom. And this two-way approach is not his only advantage over traditional broadcasters. They have only a general understanding of who are their viewers. AOL has addresses, names, phone numbers, demographic data, even credit-card information and purchase records. In addition, Netscape's Net Center gives him eight million new users and a business-to-business e-trade site, revenues from which will help him buy time until high bandwidth is available in homes.

These plans do not include Netscape's IT products, which Sun took off Case's hands. This is also why Case is not in a hurry to switch from Microsoft's Explorer to Netscape's Navigator browser. He cares only that either browser can deliver his content. The merged AOL/Netscape could be the most important "network" in the early 21st century — that is why this merger is important.

This is an end of the first Netscape era but the start of a new one in which the company could rewrite the rules of television, radio and information delivery.

Tim Bajarin



letter from **Silicon Valley**

Y2K ROUND-UP

Countdown to Y2K

Some government departments are failing to cope with the Year 2000 problem, warns the independent consultancy group on Year 2000 issues. Nine government departments were described as high risk in a report by Taskforce 2000.

The author of the document said that a full audit of government systems would probably show the real situation to be far more serious than the report indicated. Among the nine departments named are the DTI, the Ministry of Defence and the Home and Foreign Offices.

The British Government, meanwhile, said it was making good progress in readying itself. The Leader of the House of Commons, Margaret Beckett, said that two-fifths of government departments and agencies were near to completing their work on critical information technology systems and three-quarters were more than half-way to completion. She said the Ministry of Agriculture Fisheries and Food, and Customs



and Excise, had made impressive progress, but she was still concerned about the Inland Revenue and the Driver and Vehicle Licensing Agency.

- **ICL says that companies** should test their office building systems, having discovered that chips embedded in its own premises were vulnerable to the millennium bug. Tests conducted on its own premises revealed potential failures in a number of critical systems. The bugs could have left the company without working telephones, building access systems and fire alarm panels.

- **Air traffic control systems** are almost completely safe

from the millennium bug, the group that runs communications networks for 650 of the world's airlines and airport authorities has stated. But it refused to completely rule out the risk of failures and admitted there will almost certainly be problems in some parts of the world. It claims that its network is 99 percent compliant.

www.bug2000.co.uk, www.taskforce2000.co.uk

When the data is dead, it stays dead

Companies worried about what could happen to sensitive information on their old PCs can breathe easier with two new data destruction products. Launched by Technical Asset Management (TAM), the Sanitizer and Shredder range of products can make

sure that when your data is erased, it stays erased. The Sanitizer works by overwriting every bit of data on your hard drive and starts at a price of £155 (ex VAT) for a disk that will wipe data from ten drives. The Shredder, which costs £155 (ex VAT) for a single-user copy,



tackles individual files rather than the entire hard drive.

Face the facts

A typeface specialist, Faces has found that the font you use can say a lot about you. It says that people who use Times New Roman are accurate, assertive and

What do you mean, I'm impatient??

unwilling to compromise. Those who choose Helvetica are likely to be talkative, a bit impatient and have a no-nonsense manner.

VOX POP

Views on the year ahead
Collected by Sue Pederson

GORDON LAING EDITOR

My prediction for 1999 is convergence. The digital set-top boxes of 1999 will have decent web and email capabilities, turning the TV into the deserved entertainment and communications centre of the home.



NIK RAWLINSON REVIEWS EDITOR

1999 will see a net explosion. The development of free access and email providers, along with the likes of free site hosts, will open the net to the UK masses, enhancing both global communication and an understanding of the collective localised identity.



ADELE DYER FEATURES EDITOR

Mobile computing will take great leaps forward. In 1998 there were some amazing ultra-portable laptops and powerful PDAs. This year will see the introduction of lighter devices running more impressive OSes with greater connectivity. GSM connections, net access and dock solutions will be standard, and expect to see digital cameras built into several models.



IAN ROBSON SENIOR STAFF WRITER

In 1999, Digital Versatile Disc will break from its current low-key prominence. With specific authoring it will be able to take advantage of the huge capacities this medium can offer. Initially, expect games with Dolby Digital Sound and high-quality movie clips.



short stories

TALK TO THE NET

L&H will soon let users talk to the internet. Its newest technology uses L&H's natural language-understanding technology to grasp the user's question, then goes out on the web to find the information and read it out using a new text-to-speech system. Because the system does not bother to download the images from the web sites it consults, the response is almost instant. The technology is expected to be embedded in products by the middle of next year.

www.lhs.com

MONEY TALKS

Cable & Wireless has joined eCHARGE to launch a new form of payment for internet content. Unlike other micropayment schemes, eCHARGE payments are made directly to your phone bill. To access premium content, users are automatically transferred to a previously agreed premium call charge rate. Once the download is complete, they can transfer back to the usual local call charge rate.

www.echarge.com

NET TALKS TO THE BLIND

Blind and partially sighted people can now join an internet access service which has been specially adapted to their needs. The service, available from UK ISP Direct Connection, uses text translation software to negotiate the internet and email. It's available for the same price as a regular dialup account. Users can also get a regular account for sighted members of the household for an extra £2.50 per month.

www.directconnection.com
0800 072 0000

INTERNET NEWS FROM COMDEX

Panel fears web power loss

Widespread web power-outages are likely to occur over the next few years, creating chaos, it was claimed at Comdex. Dave Holtzman, senior vice-president of solutions at Network Solutions, made the claim at a panel discussion called "The Internet Crystal Ball: the future of the internet".

"We'll see several large brownouts, maybe due to fibre technology or switches but they'll probably be DNS-related. A year ago, if the net went down for a day it was OK, but if it happens now there'll be havoc," he said. "Until I started to look into it I had no idea that the DNS infrastructure was so fragile. The outage won't be permanent but it will scare people. If it happens next year, though, people will just blame it on the year 2000."

Holtzman also claimed that one of the biggest barriers to the growth of the internet is the lack of available IP addresses. The convergence of appliances



▲ POWER OUTAGES: THE LIGHTS GO OUT ON THE WEB

will continue to a certain point and then stop because they all need IP addresses, he explained.

"Power companies are requesting IP addresses for every outlet — and that runs to millions — but the problem is there's just not enough, and IPV6 is at least three years from widespread adoption," he said. Holtzman expected to see geometric growth in the adoption of domain names,

however, with 100 million expected to be in existence within three years.

A more positive note is that panel members also expected the cost of web connection to plummet over the next 18 months as DSL takes over from ISDN (see p24). This will most likely lead to two-tier web sites aimed at different segments of the market: one tier to deal with fast internet connections, and another aimed at users with slower means of access.

CATH EVERETT
(LAS VEGAS)

Travel log

Microsoft has launched a UK version of MSN Expedia, its internet travel service. The new service, Expedia UK, is Microsoft's first UK e-commerce initiative and has been launched in conjunction with Thomson Holidays and British Airways. Users can choose from a complete range of services including last-minute holiday bookings, separate flights, hotels and car rental. Visitors to the site can also peruse destination guides, which come

complete with maps, currency converters and links to other travel sites.

www.expedia.co.uk





Machines start talking back

The future will see **man and machine interacting** on a level that most of us cannot yet imagine. Many leading companies in this field have their roots in Cambridge University's renowned Speech, Vision and Robotics (SVR) lab, which for six years has come top in US Advanced Research Projects Agency evaluations of natural language processing.

Entropic has just announced its first contract in partnership with US telephony specialist **Interactive Voice Technology (IVT)**. Until recently, Entropic focused on supplying speech-development toolkits to schools. The IVT deal involves providing call centre solutions for general portal services.

Entropic's award-winning Graphvite natural speech development kit will be allied to IVT's NT-based voice response systems. Entropic's products are based on HTK, a toolkit for building high-performance speech-recognition systems. Entropic has exclusive access to new research as it

becomes available from the SVR lab, to help provide facilities which the company says "makes users think they are actually having a conversation with a computer." The expanding organisation has received further investment from Amadeus, the Microsoft-backed venture capital fund. Entropic has just taken on a new president from the US, Paul Finke. Steve Young, head of the Cambridge SVR group, remains chief scientist and vice-president of engineering.

Another local company, **Vocalis**, has come up with revolutionary technology to enable people get **web information by phone**. SpeechHTML, launched at the recent Voice show, allows you to ask a site for information using spoken commands.

Vocalis builds a range of voice-activated telephony products for network service providers and clients worldwide, defining the way people interact with machines. The new service has been offered to 1,000 companies as a pilot, and a full service is due to be launched early next year.

"Interacting with a web site via speech creates a whole new dimension to the internet phenomenon," says Mike Williams, Vocalis' business

development director. He claims SpeechHTML gives companies an affordable way to provide interactive voice services.

Voice-activated web access puts Vocalis in a strong position in what is expected to be a £3 billion market for web/telephony services. It means people anywhere in the world can get information from a web site using only a telephone.

"This pilot is the first step in providing every company with a telephone information and transaction service as part of their world wide web facilities," says Williams. Companies taking part in the trial will be given a phone number that they can promote and distribute to their customers.

Vocalis has licensed US comms component manufacturer Dialogic to incorporate its speech-recognition technology telephony cards. This will enable integrators to develop speech-processing systems using standardised interfaces. And, it has just signed a **£2.5 million deal with Ericsson** for a new voice-driven collect call service called SPEECHtel.

www.entropic.com
www.speechhtml.com

Caroline Swift



continues her reports from Silicon Fen

Hong Kong: the price is right

The cost of **consumer electronics** in the East redefines the word 'cheap'. Gordon Laing reports.

Microsoft Office 97, Adobe Photoshop 4 and CorelDraw 8. Yours for under a tenner. Such is the reality of the electronics shops in Hong Kong where piracy rules and the officials seem to be powerless.

On a recent week's visit to Hong Kong I couldn't resist a spot of high-tech shopping. However, just like Tokyo's Akihabara, Hong Kong's Mong Kok and Sham Shui Po districts are high-tech only in terms of the products for sale. The shops themselves tend to be small and seedy and the surrounding area draped with rubbish underfoot and neon above. So saying, these are the places to come for electronic bargains and the latest products, many of which will never see the light of day back home.

Every major application and software suite is available on pirated CDs, presented in rather smart packaging. The going rate was three packages for 100 Hong Kong dollars, which works out at about £3 each. One compilation pack which caught my eye was labelled Adobe 98 and consisted of the last four versions of Photoshop, Illustrator and Premiere, with a collection of filters, for just £10.

Console games players are well catered for, with Sony Playstation and Sega Saturn

CD games an easy target despite their non-PC file formats. Even the cartridge-based Nintendo 64 couldn't escape, with the cunning pirates selling add-on CD-ROM drives just for playing the ROM games that had been copied onto disc. Apparently some pirates are occasionally raided, but they just reopen across the road, often on the same day.

Every major application and suite is available on pirated CDs

DVD movies have the pirates stumped for the time being, although at least the prices were as cheap as you'd find them in the US. Every DVD player was sold as standard, with the ability to play movies from all regions. Players originally hailing from Hong Kong proved a particularly good bet since they share the same

voltage as the UK and usually supported both PAL and NTSC video standards. Hardware, whether computers, consumer electronics

or cameras, cost typically just over half the UK price. Even adding around 30 percent tax and duty at UK customs you can't go wrong, so for major electronics I advise you to get yourself on a plane. My personal favourite top buys were:

➤ **A tiny Pentax Efina APS camera** for only £100. It costs £175 in the UK and represents much better value than

the slightly slimmer Canon IXUS.

➤ **A brand-new Sony Vaio PCG-C1 portable**, little bigger than the average CE

handheld and, as yet, unavailable in the UK but boasting a 266MHz processor, 64Mb RAM, 1024x480-pixel full-colour 8in widescreen display and a built-in videoconferencing camera in the lid, all for just over £1,100.

➤ **And finally**, for those following my continuing search for the perfect home DVD player, a new code-free Denon DVD-5000 with component output, support for DTS, HDCD, PAL/NTSC, 240V, and the first model to be certified as THX Ultra (Lucasfilm's latest high-end badge).

The Sony Vaio remained in the shop window, but at around a grand, the Denon just had to come home with me.



▲ **PRETTY IT AIN'T, BUT HONG KONG'S SHAM SUI PO DISTRICT IS THE PLACE FOR CUT-PRICE PCs AND PIRATE SOFTWARE**

short stories

ISP RATINGS

Inverse Network Technology has launched a monthly ratings report in the UK for the 12 leading internet service providers. UK BenchMark grades ISPs on



connection success as well as reliability and speed of downloads. Last October, Virgin Net came first with five grade As, while BT Internet got four.

www.inversenet.com

COMPAQ ONLINE SALES

Compaq has followed its competitor Dell into online PC sales in the US. Compaq has traditionally only used dealers to sell its PCs, but says that it will keep them in the loop by offering them a commission on every customer they refer online.

BROWSERS

AOL won't axe IE

AOL will continue to ship Microsoft's Internet Explorer as the default browser for its online service, despite its purchase of Netscape's rival Communicator offering.

Many analysts speculated that AOL would drop IE after it acquired Netscape in November. AOL provides its customers with a customised version of IE, while in return, AOL has a prominent position on the Windows desktop.

However, Steve Case, chairman of AOL, stated that although AOL had the right to unilaterally terminate the IE licensing deal when it expired at the end of 1998, the company planned to renew it instead. "We believe

that it is important to stay bundled with Windows," he explained.

During the Microsoft anti-trust trial, an AOL executive testified that the firm had opted to use IE so that its icon would be displayed on the Windows desktop. Microsoft disputed this, however, arguing that AOL's choice was motivated by IE's superior design.

Case is now showing readiness to collaborate with Microsoft, however. "There are places where [AOL and Microsoft] can work together, and we're ready to do that. And there are places where we will have to compete, and we'll do that too," he said. This suggests that the recent deals between

AOL, Netscape and Sun are less of an anti-Microsoft alliance than some analysts have implied.

The acquisition puts AOL in a strong position in the browser market. Recent IDC data indicated that Netscape still holds 41.5 percent of the browser market, compared with the 27.5 percent owned by IE. AOL's version of IE commands an additional 16.3 percent. This means that if AOL were eventually to switch its online service over to Communicator, the Netscape browser would have a market share of almost 60 percent — more than double that of IE.

VNU NEWSWIRE



Yahoo have mail



Users now have yet another **free email service** to choose from. Yahoo! rolled out its free Yahoo! Mail service in the UK and Ireland in November. The service, which is similar

to Microsoft's Hotmail, gives users a free web-based email account which they can access from any computer with an internet connection. Yahoo! Mail allows users to create email

folders, search their messages and apply junk mail (spam) filters, as well as set up reminders for important events.

www.yahoo.co.uk

COMDEX EXTRA

Digital TV firms seek curbs on PC hacking

Broadcasters will be able to control which programs and how many times they can be recorded, if new security measures are adopted into the standard for 1394, the bus most likely to be used to link digital TVs to recorders.

It also seems that the fear of pirate recording and of people hacking into paid-for TV channels, free, has been one reason broadcasters have been unenthusiastic about PCs being used to receive digital TV. Fear of copyright abuse has already delayed the production of digital TV cards for PCs, according to a Panasonic engineer to whom I spoke at Comdex.

Panasonic was showing a card based on the US high-definition TV system, but high-frequency-product specialist Trent Horio said the company had also worked on DVB (Digital Video Broadcasting) cards suitable for European TV reception.

Digital TV facilitates commercial piracy because quality is not lost with re-recording. However, digital content can more easily include copy-protection measures. And at least one UK prototype set-top box has been spotted with a 1394 interface blocked off, perhaps awaiting implementation of the new copy protection measures, which are backed by Intel. Even the designers admit these are not hacker-proof, but they could only be defeated by a hardware device, which would be amenable to legal control.

The PCI bus, on which DVB cards sit, is another leakage point for pirate recordings — even illicit decryption of paid-for programs. “We don’t want any copy protection on the PCI bus,” said Horio. “It was not designed for it and I don’t think it would be a good thing.”



▲ **This model home, shown at Comdex, uses 1394 to network IT and consumer devices. The 1394 bus will not go mainstream in a big way until 2000, by which time its maximum data rate will have reached 800Mbps and there will be wireless and optical implementations.**

An American 1394 specialist, who asked not to be named, told me: “I could get around any protection they put on the [1394] bus. If they implement copy protection, you can bet there will be boxes on sale that get around it.”

CLIVE AKASS

The new e-economy

Tim Bajarin comments on **the rise of e-commerce** and the wide-ranging effects it will have.

The global move towards an information-based economy is in full swing. The new internet economy is attracting the attention of business leaders, educators and politicians worldwide, and companies like Amazon.com, eBay and eTrade are successfully rewriting the rules of consumer purchasing.

Intel is selling products worth \$1bn over its web site each month and Cisco sells \$500m-worth of routers a month. E-commerce companies have come from nowhere to become powerhouses. Some are being valued at billions of dollars after less than 18 months in business. We are on the verge of a new economic model which will redefine how we buy and sell in the next century. And just as important are the trends that will affect the way we work, learn and play.

Amazon.com has defined how net purchasing of products works and is on track to become the WalMart (a US mass-retailer) of cyberspace: it will eventually be a worldwide supermarket. Walmart will itself become a serious player. CDNOW.com and MusicBlvd.com are pioneering music sales; Beyond.com and Egghead.com are helping to do the same for software. In time, online purchases could account for as much as 50 percent of all consumer goods sold, according to bullish internet analysts. Of course, selling products over the web is not just a consumer phenomenon. Boeing will soon sell airplane parts from its web site.

All this will have many side effects. Today, a sales person calls on a company to show off his wares, but in the future those wares could be demonstrated via a two-way, web-based, real-time presentation and the sale completed online. So the role of the salesman could dramatically change to that of a "customer relationship representative". There will still be sales calls in the standard sense, but the reason for the personal visit will be to enhance

the business relationship while the selling will be done online, in some cases automatically.

Businesses of all kinds will begin to run their entire operations over the internet, which will have an incredible impact on the future workforce. Over time, the wired workforce will have more information on its hands than ever imagined. It will allow them to create virtual workforces — something that will forever alter the dynamics of business.

Workers will be empowered by the information at their fingertips and will use it to enhance their business skills, but learning will be lifelong. In the past, people were trained to handle one skill for their entire life. In the new internet economy they may need to acquire as many as five to ten different

skills in their working life. Companies will grasp the fact that their real assets are their employees. But of course, this creates a whole new problem since their assets walk out the door each night at 5pm. Smart companies will figure out how to keep them loyal via programmes that keep morale high and turnover low.

The lifelong learning model is the key to the future of any education system, too. Today, most schools teach by giving children information. In the future, the

emphasis will need to be on the learning process itself. Children will use the internet to

gather information as well as to develop worldwide virtual learning enclaves. Distance learning and collaborative learning will change the educational scene forever.

All this will have many side effects

There's one other trend that will be in full swing in 1999. We are seeing the "deconstruction" of the PC. Today, a PC is defined as either a box that sits on your desktop or a portable you take on the road. These are both excellent internet access tools, but we are soon going to see set-top boxes, web phones and web TVs as well as portable web pads (left) — tablets that give users wireless access to the internet just about anytime, anywhere. This trend will push the new internet economy at lightning speeds beyond business and into the hands of mainstream users, and will help usher in this new e-commerce model sooner rather than later.

These moves all point to the fact that the internet economy is the most important thing on which any business leader, government official or educational administrator needs

to get a firm grip in order to prepare their own staff, constituents and students to take advantage of this major economic shift.



◀ **DECONSTRUCTING THE PC: A PROTOTYPE WEBPAD FROM CYRIX USING ITS MEDIAGX CHIP. (PICTURED AT COMDEX USING THE KODAK DC210 DIGITAL CAMERA. SEE P26.)**

Community spirit

The growth of **online communities** is attracting e-commerce. Susan Pederson reports.

Groucho Marx once famously claimed that he wouldn't want to join any club that would have somebody like him as a member. Nevertheless, people are ignoring his advice in droves and flocking to become members of a new kind of club that will take virtually anybody as a member. These are the online communities. For as long as networks have existed, people have used them to

communicate with other likeminded people. After all, that is why they were designed.

In their earliest incarnation they were created and used by scientists and universities to trade information and keep up to date on the latest research in their field. These networks gradually expanded to include people from the larger population who developed proto-online communities such as CIX in the UK, and Usenet.

Newsgroups dealing with every topic under the sun sprang up almost overnight and soon it became possible to find someone — and in many cases, hundreds or thousands of people — who wanted to discuss computer problems, fly fishing or the latest episode of Coronation Street.

It soon became evident, however, that people were not just using these networks for practical purposes. Instead of simply finding an answer to their problem, library-style, and then getting back to their regular lives, they were staying online. And so the concept of the online community was born. Today, the most famous of these early online communities is probably The Well, a computer conference system which sprang up in California during the mid-eighties. Even now, it's still considered the height of cool to have an email address ending in @well.com.

With the development of the world wide web, online communities began to



▲ **DISCOVER THE GASTRONOMIC DELIGHTS OF LITTLE ITALY WITHIN THE ELECTRONIC WALLS OF FORTUNE CITY**

also provide possibly the biggest single marketing opportunity, ever. Companies can spend millions of

move away from the bland, text-based interfaces of newsgroups and computer conferences towards HTML pages. New communities sprang up, most offering web space to users in return for plugging advertisers' wares.

Geocities, one of the most well-known web communities, has created 41 themed neighbourhoods which are populated by almost three million "homesteaders". Altogether it claims to have hosted 22 million web pages. This is an astonishing amount of content, particularly when you consider that it sprung up with only a little encouragement.

Fortune City, Europe's largest virtual community, is organised along much the same lines as Geocities. There, you'll find neighbourhoods organised by subject matter, such as Benny Hills (the comedy district) and Wembley (the football district). Users get 20Mb of free web space, which is paid for by a floating ad window attached to their pages.

Fortune City describes itself as "the only true democratic community in cyberspace", saying that it offers an environment where citizens (or so-called "netizens") can develop relationships, build homes and have a direct impact on the development of their community. But Fortune City is not shy about the fact that it wants to pull businesses into the community, as well.

Online communities may provide a valuable support network in an increasingly fragmented society, but they

pounds trying to find out who are their potential customers, yet by targeting specific online neighbourhoods they greatly simplify the task.

Tripod, which recently established a UK community site, is also hoping to attract advertisers to its site as well as turn its citizens into advertisers themselves. Tripod offers 12Mb of web space and a web-page builder, and claims to have three million eager homesteaders. E-commerce sites such as bookseller Amazon are also getting in on the act by providing chat areas for customers to communicate with each other, and communities are also likely to become a big part of portal sites such as AltaVista, Yahoo! and Netscape's Netcenter.

These communities are a potential goldmine but they'll have to tread carefully to avoid alienating their citizens. Geocities was recently blasted by the US Federal Trade Commission for selling-on its clients' personal details to direct marketers.

As online communities continue to grow, the advertisers are sure to follow. But with any luck, "pure" online communities, such as The Well, will continue to thrive as an alternative to advertisement-based services. As geographical barriers collapse, it's almost certain that one day it will be as common to stake out a virtual real-estate claim in cyberspace as it is here on Earth. ■

short stories

▶▶▶ STREAMLESS WHISPER

A technology that transmits sound over the internet without streaming has been unveiled. The software, called hyperceive, delivers internet audio almost instantly by breaking the sound down into its separate components and then caching and relooping it. Unlike other internet audio products, users don't need a separate plug-in. You can see hyperceive (priced £152 inc VAT) in action at George Michael's site, www.aegean.net/greatesthits. www.insigma.com

▶▶▶ DID I SEE YOU AT ICQ?

AOL says that a new version of ICQ, the free internet chat software that it acquired last year, is on the way. ICQ99 is expected to have more portal-style features, such as web-search capability. This feature is already available from AOL's own messaging product, AOL Instant Messenger. ICQ has over 21 million users worldwide.

▶▶▶ EXPRESS SERVICE

A new high-speed wireless data communications company has launched its internet and intranet service in the Thames Valley. Tele2 UK's Advanced Digital Wireless Network hopes to provide businesses and homeworkers with permanent speed without the high costs of a leased line. A phased national rollout of the service is planned for this year. Tele2 is offering line speeds of 128, 256 and 384Kbps, but it says that speeds of up to 2Mbps will also soon be available. Prices start at £65 per month for a 128Kbps connection, with a £290 installation charge. The service also offers permanent connectivity, but users only pay for the time they are actually transferring data.

www.tele2.co.uk
0800 328 7222

E-COMMERCE

EC to regulate e-commerce

The European Commission (EC) has adopted draft legislation to **regulate the exploding e-commerce market**. The proposed legislation, which covers the sale of products and services via the web, as well as advertising, direct marketing and online newspapers, essentially puts the burden of responsibility on national consumer laws in each member state.

However, certain areas would be standardised across the 15-country community — namely, giving the location and business of a company via its fixed location. This would make online contracts as legally valid as paper ones.

Intermediaries who transmit and store data will be exempt from liability if their role is a passive one in simply transporting information.

The EC plans to give each individual country control over internet businesses operating out of its territories. This is a hugely contentious point, and one that is likely to cause clashes. Consumer organisations want the legal system in the country where the consumer is living to deal with any cases that arise. However, e-commerce business groups want complaints dealt with in the country in which the e-commerce company is based. The EC said that

regulation is necessary to increase Europe's slice of the e-commerce market, which is heavily dominated by the US, by increasing customer confidence and giving operators legal certainty. The EC estimates e-commerce could be worth \$240bn by 2000, when the number of people connected to the net will rocket from the current estimated 86m to 250m.

Nothing, however, is yet written in stone. The proposals will have to be approved by the Council of Ministers before becoming law. In this process they could face substantial amendment by the European Parliament.

JAN HOWELLS

BT pushes PointCast

The most well-known "push" internet news broadcaster has launched a UK version of its service. The PointCast Network delivers the latest news, weather and stock-quote information to the desktop via selected channels. The UK edition, which launched in December, will take its content base from ITN,



the Press Association, *The Economist* and Reuters. BT, which is a major sponsor

of the free service, is collaborating on other channels such as industries, companies, sport and lifestyle. PointCast Network UK is now available for download from

www.pointcast.co.uk or from www.btinternet.co.uk.

The service is also included on BT Internet CD-ROMs.

Win a wand at wizard web site

The Merlin Mystery is a book that gives readers the chance to win a prize of over £100,000 — if they can solve the puzzle it poses. A web site has been set up to let readers swap clues and track the prize fund, which also includes a gold, bejewelled wand.

www.merlinmystery.com



Top 10 products Last month

Peripherals

| | | | |
|----|----------------------------|-----------|---|
| 1 | 3Com 56K V90 Voice/Fax Ext | 3COM | 1 |
| 2 | P75 To P200MMX | Evergreen | 4 |
| 3 | Billion Internal BT only | Euro Serv | - |
| 4 | Sound Blaster PC128 PCI | Creative | - |
| 5 | SoundBlaster Live PCI | Creative | 7 |
| 6 | Sidewinder Freestyle Pro | Microsoft | - |
| 7 | Astra 1220S Flatbed | Umax | - |
| 8 | 56K Message Modemex | 3COM | - |
| 9 | Typhoon Gold Wave 3D ISA | Typhoon | - |
| 10 | Natural Keyboard+ECU sym. | Microsoft | - |

Windows software

| | | | |
|----|--------------------------------|------------|---|
| 1 | Centennial 2000 Pro Net | Centennial | - |
| 2 | Encarta Reference Suite 99 | Microsoft | 1 |
| 3 | Windows 98 U/G CD | Microsoft | 4 |
| 4 | Office Pro 97+Books U/G | Microsoft | 3 |
| 5 | Norton Systemworks v1 | Symantec | 6 |
| 6 | Masterclips 150,000 Clip Art | IMSI | 2 |
| 7 | Works Suite 99 | Microsoft | - |
| 8 | Partition Magic 4.0 | POW | 9 |
| 9 | Money 99 | Microsoft | - |
| 10 | Via Voice 98 Executive Edition | IBM | - |

DOS software

| | | | |
|----|-----------------------------|-----------|---|
| 1 | Turbo Pascal v7 DOS Educ. | Borland | 3 |
| 2 | PKZip for DOS | Nico Mak | - |
| 3 | Turbo Pascal v7 | Borland | 1 |
| 4 | Mail PC Remote 3.2 | Microsoft | - |
| 5 | DOS v6.22 U/G | Microsoft | 4 |
| 6 | PC Anywhere v5 Host | Symantec | - |
| 7 | Novell 3.25 | Novell | - |
| 8 | Star Trek: A Final Unity | Spectrum | - |
| 9 | FSFX U/G for MS Flight Sim. | Microsoft | 4 |
| 10 | Norton Commanderv5 | Symantec | 2 |

CD-ROMs

| | | | |
|----|------------------------------|------------|---|
| 1 | South Park Desktop Themes | Telstar | - |
| 2 | Simpsons Virtual Springfield | Fox Int. | - |
| 3 | Star Wars: Behind The Magic | Lucas Arts | 1 |
| 4 | Simpsons Cartoon Studio | Fox Int. | - |
| 5 | Dancing Baby Screensaver | Jellyfish | - |
| 6 | James Bond Ultimate Dossier | Eidos | - |
| 7 | Dancing Baby CD Player | Jellyfish | - |
| 8 | Lego Creator | Lego Media | - |
| 9 | Top Of The Pops Mix Factory | BBC | - |
| 10 | Dance eJay | Fast Trak | 7 |

Games

| | | | |
|----|-------------------------------|------------|---|
| 1 | Tomb Raider 3 | Eidos | - |
| 2 | Half Life | Sierra | - |
| 3 | South Park | Acclaim | - |
| 4 | Settlers 3 | Bluebyte | - |
| 5 | Populous: The Beginning | Bullfrog | - |
| 6 | Simpsons: Virtual Springfield | Fox Int. | - |
| 7 | Wargasm | DID games | - |
| 8 | Anno 1602 | Max Design | - |
| 9 | Combat Flight Simulator | Microsoft | - |
| 10 | Trespasser: The Lost World | Dreamworks | - |

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

GAMES NEWS

The new Populous has the personal touch



For all those who enjoyed Populous, the sequel is on its way. Bullfrog's **Populous: The Beginning** makes the game more personal, strategic and tactical. You play a Shaman, the leader of a tribe battling your rivals to gain the ultimate prize of divinity. Your tribes build settlements and are prepared to fight and die for their goals. You must survive through each new world and fight to acquire the power of magic and the wisdom of the Gods. For more on this intriguing game, look out for a review in *Screenplay* soon.

More sequel news. TOCA Touring Cars was so successful that **TOCA 2** was inevitable. Soon available for the PC, this game recreates the most exciting, aggressive, closely fought racing tournament of the 1997 British Touring Car Championship season. Players will have the chance to get behind the wheel of a Peugeot 406, Renault Laguna or Audi A4 and take them up to speeds of 147mph. At an estimated price of £12.99, you're really on the right road.

Do you dream of designing an amusement park? Hasbro Interactive is releasing a game where you can do just that. **Rollercoaster Tycoon** is a fully featured amusement-park simulation that concentrates heavily on the fascinating and complex skill of rollercoaster design. The player can also build non-rollercoaster rides, shops and stalls and open their park to virtual visitors. The challenge,

therefore, is not only to invent an amusement park which is sufficiently fun to keep visitors coming back, but which is also profitable. Rollercoaster Tycoon will be out at the end of March.

Games publisher SCI is involved in a legal battle with the British film censors over the age rating for its latest offering, **Carmageddon II**. The game is currently featuring zombie "pedestrians", but if you find them rather tame targets and would prefer to run over innocent members of the public, visit the SCI web site at www.sci.co.uk where you can get hold of all the necessary upgrade files.

Eidos has launched a range of merchandise that flaunts the charms of Tomb Raider totty, **Lara Croft**. The clothing range, called LARA, comprises men and women's T-shirts, polo and sweat shirts, a fleece, a jacket, dressing gown, baseball cap and knitted ski hat. There are also accessories such as a briefcase bag, mini-rucksack, bath towel, wallet and watch. To order, call 01525 381808 or visit the web site at www.eidos.co.uk/larac/.

ETELKA CLARK

Games in *Screenplay* this month (p312): Pinball Arcade, Hedz, Speed Busters, Small Soldiers: Squad Commander, 101: Airborne Invasion of Normandy, and FA Premier Football Manager.