Setting the world on wire

ILLUSTRATION: MIKE NICHOLSON

The information superhighway has quickly become a media buzz phrase and the most hyped IT concept in years. Yet the structure that could turn it into a reality, the Internet, has been around for years. So are our lives really about to be transformed? Tony Smith sifts the fact from the fiction

The information superhighway. Right now it seems as if it's impossible to go anywhere without hearing about it. From the after-dinner conversations of the chattering classes through to the more mundane mutterings of techies, to articles in the national press, it's making ever-increasing appearances. Even BBC television, a bastion of technologically-untutored arts graduates if ever there was one, is starting to make programmes about it.

But why? What has suddenly propelled the information superhighway and its curious cousin, the Net, out of the world of the nerd and into the mainstream? Hype springs eternal, but in the computer business it rarely leaps beyond the confines of the industry.

Not since the early 80s and the arrival of the home computer has IT appeared to have found something to tickle the fancy of the wider public as it has with the Net.

Or has it? Have the papers just latched onto something they think is popular, but has yet to really make its mark in the wider world? A kind of Soho for the late 90s, perhaps?

The Net has certainly been around long enough. Emerging out of a US Department of Defense plan to link up weapons makers and researchers in the early 70s, the Internet — what the non-trendy call the Net — has been slowly expanding, incorporating an enterprise here, an academic network there, an information bank somewhere else, ever since.

But as a system that could be of use to general users, it's benefits achieved critical mass some time ago. Over two years ago, this very publication was one of the first to cover the business benefits the Net provides. So why has it taken over five years for individuals and businesses to take notice?

And they are taking notice. According to Cliff Stanford, a director of Demon, one of the UK's leading Internet access providers, the number of users with Demon-sourced Internet accounts is growing by around 20 per cent every month. "We started offering the service on 2 June 1992," he says. "We reckoned we'd have around 400 subscribers by the end of the year. In fact it was more like 1400. We currently support 6000 users, around 1000 of whom joined last May." The coverage of the Net, it seems, isn't groundless hype.

Probably the chief reason for this growth has been the public profile that the Net has received over the last year or so. The Clinton administration has been bending over backwards to seem more computer-literate than your average government (though cynics would suggest this had more to do with appealing to young voters than a deep-seated

For most businesses, the Net is the cheapest way of talking to other company sites. Many of the world's libraries are also linked up. Put these together and you have an extremely powerful communication and data retrieval system

interest in IT). Vice president Al Gore created the 'information superhighway' tag last year when he launched the National Information Infrastructure initiative, a scheme which aims to bring government and business together to create a kind of national meganetwork, capable of offering telephony, television and computer data to all Americans.

The German government recently announced plans to develop a similar set-up throughout Germany. A team, under the chairmanship of Heinrich von Pierer, head of Siemens' engineering group, has been formed to explore how such a system would be installed and operated.

As German technology minister Paul Krüger explained, it will have full government backing, to prevent the country being left behind by foreign networks. The UK administration, on the other hand, feels that encouraging words are enough and, according to a DTI spokeswoman, it's up to the telecoms industry whether Britain gets an information superhighway or not.

Whatever happens, though, the information superhighway idea is classic 'what a wonderful future technology will bring' stuff, and guaranteed to have *Tomorrow's World* viewers falling out of their armchairs in paroxysms of ecstasy. But it also touches on a more important issue — the convergence of the media, telecommunications and IT.

Television and video are still analog systems, but it's clear that just as the music industry has, thanks to the compact disc, 'gone digital', so they will too. The phone companies are already within a cat's whisker of being there. And once your phone system is exclusively digital, what you have is effectively a very large computer

network. Ditto digital cable TV systems.

Building the physical infrastructure, managing the networks and providing the software is going to be very big business. To fully integrate it and pull in the computing side of the equation, you need to link it all up to the world's networks. This is easier than it sounds, because all the major computer networks around the globe are already talking to each other — on the Internet.

The true information superhighway is some way off, admittedly, but the hype surrounding it has raised awareness of the component that is in place — the Net.

Couple the Net's higher public profile with an increase in the number of companies providing businesses and individual users with access to the Internet — either direct links, such as Demon's service, or e-mail gateways to on-line services like Cix and CompuServe — and prices that, for once, don't require government subsidies or corporate revenues to fund them, and you have the ideal climate for growth.

And just as access to the Net is no longer as expensive as it

Internet users

In the early days of the Internet, users were predominantly technical staff. The Net soon became the haunt of IT companies, and they stamped their personalities on it. Lately, though, the profile of the average user has changed.

According to Cliff Stanford, a director of Demon Internet Services, one of the UK's leading Net account suppliers, there is no longer a single profile that defines the average Internet user.

"There are four basic types," he says. "There are people who need a global file transfer system — journalists, for example, filing copy from the field."

They also make use of the banks of information — libraries, government departments, that kind of institution — available through the Net for research.

Stanford also identifies a large number of Americans working in foreign subsidiaries of US parent companies who use the Internet as a simple, cheap way of keeping in contact with head office.

At the same time, there are still plenty of techies. Given the way major IT operations have colonised the Net, that's not surprising, and the technically-oriented are likely to dominate the user base for a little while yet.

Finally, Demon is seeing a growth in individual users, of varied of computer literacy, who are exploring the Net just to see what kinds of services it offers. "We get a lot of people who sign on as themselves to evaluate the system for their firms and who then have their accounts transferred into company accounts," says Stanford.

once was, neither is it as hard to do. There are now plenty of packages — most of them available free from servers on the Net — that make tracking down data or posting e-mail very simple indeed. Software like Mosaic, Archie, Gopher and WAIS (Wide Area Information Server) are standalone programs that make navigating the Net and tracking down the information a darn sight easier than keying in commands. The World Wide Web (WWW), on the other hand, is an emerging hypertext-based system that's designed to give the Net a much friendlier face.

Such improvements can't help but increase the use of the Internet, though there's plenty of room for further enhancement, not least at the PC end. Once, as Stanford puts it, modems are easier to use — drop all that configuration nonsense, he advises suppliers — and PC networks become less parochial, growth in the numbers of people and institutions joining the Net will increase further: "It will be just like the fax market. Soon everyone will own an Internet address."

But what's actually turning users on to the Net? Reduced charges, more providers and better software all make it easier to plug into the global network — but most people need better reasons than that. The main factor, says Stanford, is e-mail. The Net's global nature makes it simple to zap a memo to any of over 25 million (at the last count, circa December 1993) users worldwide, but for most businesses, it is the cheapest way of communicating with other company sites. Demon's customers include a French firm that dials into the UK company's London server to send mail to the US because calls from the UK are cheaper. Newspapers use the Net as an easy way of linking to distant bureaux and agencies for whom the time difference makes voice communication impractical.

Next on the list of business benefits is the wealth of information available to Net users (or, to the incurably naff, 'surfers'). Not only are many of the world's libraries linked up to the Internet, offering their catalogues and contents in digital form ready to be downloaded, but organisations like Dow Jones and Reuters make their data available on it.

Put these facilities together and you have an extremely powerful communications and information storage and retrieval system. On top of that you have Usenet, the Net's conferencing system, through which users can argue with each other about every topic under the sun, from IT issues to more esoteric areas, such as those raised in 'alt.sex.bondage'.

The GUI of WWW has allowed businesses to create on-line sales brochures, letting Internet devotees browse through catalogues and, at the push of a button and the entry of a credit card number, order produets from anywhere in the world. And, as Stanford points out, in the case of computer hardware and software, have a direct point of access for technical support personnel: "I can dial up a supplier's catalogue, check out their products, review the tech-specs, check the goods I want are in stock, order them, and have the transaction processed and the kit dispatched almost immediately." The Net, it seems, is the ideal way to avoid being held in a hotline queuing system. Facilities like these are offered by the likes of CompuServe, but, largely thanks to their commercial nature and non-academic origins, these lack the sheer wealth of information open to Internet users.

Talk of the information superhighway, 500 channels of video, data and voice may be nothing more than dreamy plans for a far off future, but the Net is here now, and if users continue to sign up at the rate they have been doing over the past couple of years, providing ways for their colleagues, whether they be individuals or groups of people to be linked, a corporate network is going to be big business.

And for anyone in doubt, there's only one thing left to say — get Netted. □

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A bluffer's guide to Internet lingo

Largely thanks to it's techie background, jargon abounds on the Internet. The system may be easy to use, but wherever you go, you're going to come up against 'technospiel'. Internet may have embraced the ordinary user, but it's having no truck with the ignorant.

To avoid embarrassment while Internet surfing, here's the *MicroScope* guide to Net nonsense:

Cyber Daft but handy prefix for adding to any word you use if you want to sound as if you're an old Net hand. For example, cyberspace, cybersurfing, cybernaut.

Flaming Writing abusive messages in reply to comments you violently disagree with.

This is considered *de rigueur* for top-notch cybernauts.

FTP File Transfer Protocol. Internet's answer to X,Y and Z modem. You don't know what they are either? Some Net surfer you are, dude.

SLIP and PPP Serial Line Internet Protocol and Point-to-Point Protocol, both methods by which your PC can talk to an Internet server. SLIP is passé — real cybernauts use the faster PPP.
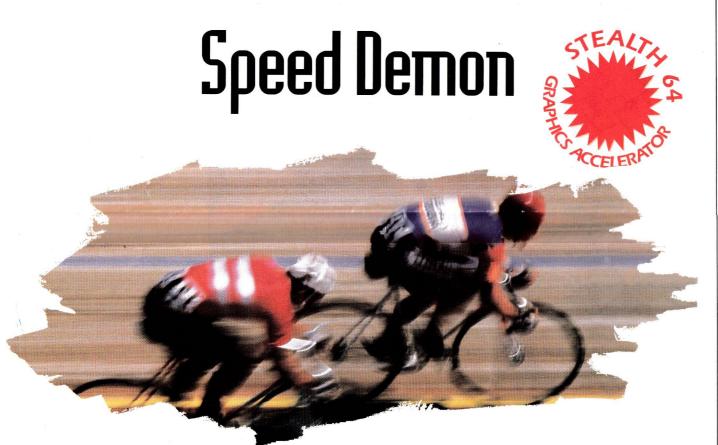
TCP/IP Transmission Control Protocol/Internet Protocol. The clever bit, this is what makes the Internet possible. It's the 'language' Net computers use to talk to each other and exchange data. Any computer that

can speak TCP/IP and is linked to another computer is instantly part of the Net.

3W Short for the World Wide Web. A graphical interface for the Internet, not dissimilar in appearance to an Ann Summers marital aids brochure.

Telnet E-mail protocol for users who prefer command-line interfaces to GUIs. Yes, there still are a few sad cases left...

UUCP Unix-to-Unix Copy Protocol. Like anything with the word 'Unix' in it, best avoided unless you really do know what you're talking about.

WTF Rhymes with 'what the luck' — polite way of asking other net surfers to explain the true meaning of their most recent comment.

UK Internet providers

There are a number of companies offering Net accounts to individuals and businesses, and these are listed below. Alongside them are the on-line services like Cix and CompuServe which maintain links with the Internet but don't offer full accounts — subscribers can send and receive mail and news via the Net, but many of the more sophisticated features are denied them.

Demon
The best-known Internet service, it offers users complete Net access, and all at very low prices — Demon is the 'tenner a month' company. It claims that's all its service costs on average.
● Phone: 081-349 0063

BBC Networking Club
A new addition to the list of UK providers, the BBC's system was set up in conjunction with *The Net*, its computer magazine show.
● Phone: 081-576 7799

Cityscape
Another new Internet provider, Cityscape uses the same system as the BBC, offering 210 modem lines through Pipex's network.
● Phone: 0223-566 950

The Direct Connection
Log on and you get almost instantaneous news and mail access, and the ability to use all the usual Net facilities.
● Phone: 081-317 0100

EUNET
EUNET caters for corporate clients who need large-scale Internet connections. It operates throughout Europe, and its UK sights include Birmingham, London, Glasgow, Canterbury, Bracknell and Cambridge.
● Phone: 0274-75497

ExNet
Aimed at users seeking news and e-mail facilities, ExNet offers a range of connections, from simple off-line reading to personal global mail addresses.
● Phone: 081-244 0077

Pipex
Both the BBC Networking Club and Cityscape operate through Pipex, which offers Internet access via modems and leased lines to commercial organisations, with no restrictions on the type or volume of customer traffic.
● Phone: 0223-250 120