



As PCs find more and more ways of connecting to each other, Ian Wrigley tunes in to a fast-moving software market.

Comms Dancing

hether it's checking electronic mail, connecting your machine to another on the network, faxing from your PC or downloading the latest patch for your software from the web, everyone's using comms (or communications) software.

As well as traditional comms software, a host of new solutions are coming of age. You can talk to people via your PC just as you would by phone, using the internet instead of a standard telephone line; you can pick up faxes in your office in Scunthorpe from anywhere in the world; you can control one machine from another several thousand miles away. And on it goes.

The secret, however, is to pick the software that's right for the job. There are, for example, many many email packages around, but some will have too high a specification and some will be too basic for your needs. Too many people soldier on with the wrong type of software because they have not properly weighed up exactly what they need, and

what each option offers, before they buy. Whether you are looking for an email package, PC-to-PC connectivity, fax software or something more esoteric, we'll show you what to look for, how to evaluate your requirements and how to make your final decision. Along the way, we'll examine some specific packages, but remember: you should work out exactly what you need from the software, then check out the specifications of all the different packages on offer. That way, you will end up with a solution that's exactly right for you.

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Email packages

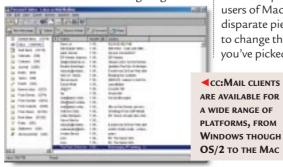
Whether you're a one-man band or a mega-corporation, electronic mail is an important business link.

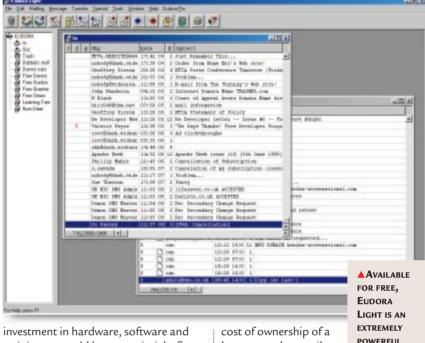
ust about everyone uses email these days: indeed, it is often used when a simple phone call would be a much better idea. Electronic mail has been around ever since the first Unix systems, although these days mail readers are somewhat more user-friendly than the basic Unix command-line interface. There are basically three different types of email systems: those designed for internal company use; those designed for wide area use, normally via the internet; and those which work well in both environments.

As most people are now connected to the internet, email packages need to be able to cope with both internal and external email equally well. So if you are looking to implement a new email system, or upgrade or change your software, you need to look at exactly your needs, or those of your company, now and in the future. Here, we will look at a number of different scenarios and try to pick out some possible options for each one. Remember that many companies claim their packages are just as good for two-person organisations as they are for 2,000-employee companies. And in some cases that's true. But realistically, there's no point in going for a massive system if you'll never want to link more than a dozen people together. And likewise, some systems which are perfect for 100 people start to struggle when you get over twice that many trying to collect their mail at 9a.m. on a Monday morning.

Large companies

If you are specifying the email system for a large company - one with more than a few hundred employees - then choosing the right option is vitally important from the start. You will be making a significant





investment in hardware, software and training, so you'd better get it right first time. Arranging email for large numbers of people is not easy. You need to combine power and speed with ease of use, as many of the people who use the system will not be particularly technically adept. (Tip of the day: if there's a feature allowing users to "mail everyone", disable it. There are many stories of novice users sending emails along the lines of "Can the person parked in my space please move their car" to all 50,000 people around the world working for a multinational organisation.) Cross-platform compatibility is another

significant issue, especially for large companies. Although

Windows-based PCs make up the

vast majority of all desktop systems in most companies, you may well also have users of Macs, Unix boxes and other disparate pieces of kit. They will not want to change their machines just because you've picked a PC-only email system.

> Don't forget people on the move, either; users may need to be able to collect their email from palmtop devices, for example. You will find that the

cost of ownership of a large, complex email system is significant. Big companies will probably need someone dedicated just to maintaining and administering the email

system — and at least some of your other IT support staff will need to have some understanding of the system, too. Dedicated servers will be needed to accept, store and forward email, and they should also have fast access to the internet if employees are spread around the world and use the net for

inter-company communication. One very popular option is

MAIL CLIENT.

COMMERCIAL

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FEATURES

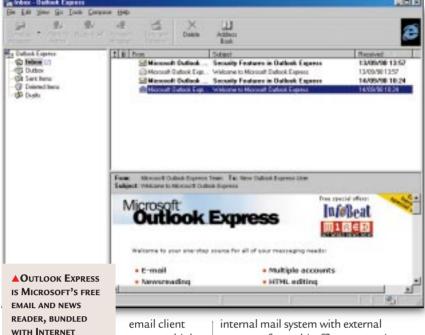
VERSION ADDS

THE

Microsoft **Exchange**

Server. This runs under Windows NT Server and is possibly the most adaptable mail server around. It supports just about any mail protocol you can think of, including existing standards such as SMTP (Simple Mail Transfer Protocol) and POP3 (Post Office Protocol version 3), as well as up-and-coming standards like IMAP (Internet Message Access Protocol). If these acronyms don't mean much to you, don't worry; basically, Microsoft

Exchange should talk to just about any



you can think of, on pretty A COMMERCIAL much any VERSION, OUTLOOK platform. 98, ADDS SCHEDULING Microsoft AND CONTACTS DATABASE FEATURES encourages people to use

Outlook (which we'll say more about later) and certainly this has advantages, such as being able to link people's schedules as well as email. But you may prefer a different email package, or have people working on platforms other than Windows or the Mac.

EXPLORER.

Another widely used solution is Lotus Domino 4.6. The Domino Mail Server gives full access to mail standards such as POP3 and IMAP, as well as interfacing to Lotus Notes clients. Notes is an extremely popular information management system used by many of the world's top companies, and the Domino server allows Notes users access to many extra features on top of standard email. Domino is also available as the Domino Web Server, which gives you all the email functionality as well as internet and intranet server and development applications. Domino might be especially worth considering if your current servers are not Windows-based; although it runs on Windows NT 4 and Windows 95, the Domino server will also run on OS/2 Warp 4, AIX, Novell NetWare and Solaris.

Lotus produces another email package, cc:Mail. This system has been around for several years, and as the internet has grown, it has adapted from being an

internal mail system with external gateways for multi-office companies, to a fully-featured mail package capable of handling thousands of users. In many ways it's a competitor to Microsoft Exchange, and the server runs on a Windows NT server. It supports just about all email clients (using POP3), as well as being able to use web browsers to access mail, and also has dedicated mail clients for the Mac, DOS, OS/2 and all flavours of Windows.

Another option is to use a Unix-based mail system. All Unix systems support

Choosing the right option

is important from the start

email, via a program called Sendmail. This is not particularly

easy to set up, but is more than capable of handling many hundreds or thousands of users once it is configured. Other, free, mail programs for Unix such as Zmailer are also available, offering extra features or different configuration options. The beauty of such systems is that

they use standard protocols such as SMTP and POP3, so anyone with a POP3 mail client can connect to check and send mail. While solutions such as Domino, cc:Mail and Microsoft Exchange Server have become popular because of

► QUICKMAIL Pro's CLIENT GIVES YOU AN ATTRACTIVE, GRAPHICAL INTERFACE TO YOUR EMAIL. MAC AND WINDOWS CLIENTS ARE AVAILABLE

their wide range of features and the fact that they will run on an NT server, there are still many companies out there using Unix-based mail systems with no problem at all. And it's worth noting that if you connect to the internet via a dialup Internet Access Provider (IAP), your email is almost certainly handled by Unix systems — which proves that they are capable of dealing happily with many thousands of mail accounts.

If you are considering any of these systems, remember that they are complex. They work very well, and can be used by companies of any size, but you will need to budget a fair amount of time and expertise to setting up and maintaining them. It isn't something you can do in one afternoon.

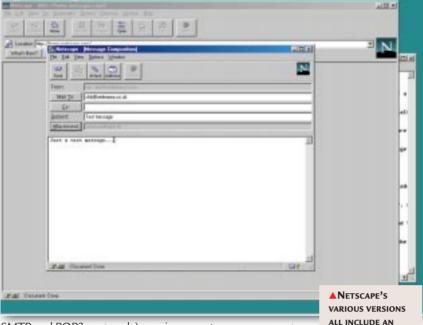
Small-to-medium businesses

If you are setting up email for a smaller business, then you can certainly still use one of the above systems. And indeed, many do: Microsoft Exchange Server, for example, is very popular in many SMEs (small-to-medium enterprises). One reason for this is that it works both with Outlook Express, which is part of Windows 95 and 98 and allows you to read email and internet news, and the full Outlook 98 program. Exchange Server is also a personal information manager, allowing you to keep an address book

> and calendar on your PC, then link to other people's schedules to

organise meetings and so on. Lotus Domino, of course, also provides these features via its Notes client.

Another option is CE Software's QuickMail Pro. This is basically an internet-standard mail server (it uses the



SMTP and POP3 protocols) running on Windows NT or Windows 95. Like all servers that use standard protocols, QuickMail Pro can be used with any POP3-compliant mail client, but it works best with its own — available for both Windows and Mac.

The server can be configured to run as an intranet-only server or as one which also communicates with the internet, either via a permanent connection or a dial-up account. When using the QuickMail client, users can send their mail as one of several different designs of form - for example, a "while you were out" form, an "invitation" form, a "for your information" form and so on, rather than just as plain text. You can even design your own forms, if you wish. The original QuickMail was a Mac-only system, but QuickMail Pro has turned it into a full, cross-platform solution that doesn't require too much administration to set up and maintain.

Tiny-to-small businesses

If you are intending to send lots of internal email, then you will need to choose a solution which gives you an in-house server; something like **QuickMail Pro** would be a good start. However, if your main email use will be via the internet, then you might be able to manage by just using the email account, or accounts, provided by your IAP. The advantage of this is that you don't need a server within your company; you let the IAP do all the work for you. You can use

whatever POP3 or SMTP-based email

server you want (check with the IAP to make sure it supports the same protocol as

your mail package, although it would be very strange if this was not the case); to send or check mail, you simply need to connect to the internet.

EMAIL TOOL, SO YOU

RECEIVE EMAIL FOR

CAN SEND AND

FRFF

This approach is great unless you find yourself sending lots of email internally, or until your company grows to more than a few employees. At that time, you will find that the cost of continually phoning up the IAP will exceed that of installing an email server internally and getting that server to dial the internet just once every couple of hours to send and check for mail. This way, internal mail can be delivered immediately, without having to go via the internet.

Mail clients

As we've seen, some of the larger systems have their own mail clients. However, they all support others, and there are plenty to choose from. For starters, you can use the email client that ships with either Internet Explorer (Outlook Express) or Netscape

Navigator/Communicator. These are free, and many people use them happily. But you can look around for other packages; one of the most popular is **Eudora Pro**, from Qualcomm. Eudora is a very sophisticated email program, with plenty of options to filter and sort messages, keep them in different locations ("mailboxes") and so on. Best of all, there's a free version, **Eudora Light**,

which can be downloaded from the company's web site. This gives you a flavour of Eudora's power, and is used by many people as their only mail program. But only with the Pro version do you really get the full power of the program. Both the Pro and Light versions are available for the Mac and Windows.

Pegasus is another free email program, originally designed for NetWare networks but now used by mail people as a general internet email client. Again, it supports all the major features; and since it's free, you can try it out before you make a decision whether to standardise on it. Pegasus is PC-only. Turnpike is not just an email program but a full internet access suite, including news and Telnet (which allows you to log on to Unix machines remotely). It is a commercial package, but a free 30-day trial can be downloaded from the company's web site. Finally, if you use CIX, you can use the **Ameol** program, which allows you to read and compose email off-line, as well as downloading items from the system's chat areas for off-line reading. CIX is fully connected to the internet, so you can send internet messages from the system.

PCW DETAILS

Lotus Domino

Price Server £1,325.40 (£1,128 ex VAT), Notes client £97.53 (£83 ex VAT) **Contact** Lotus 01784 455445

www.lotus.com

Lotus cc:Mail server

Price £475.88 (£405 ex VAT) **Contact** Lotus 01784 455445

www.lotus.com

Eudora Pro

Price £24.99 (£21.27 ex VAT) **Contact** RMG 0181 875 4441

www.eudora.com

QuickMail Office

Price *Five-user pack* £299.95 (£255.28 ex VAT)

Contact Computers Unlimited 0181 200 8282

www.cesoftware.com

Microsoft Outlook 98

Price £99 (£84.26 ex VAT)

Contact Microsoft 0345 002000

www.microsoft.com

Pegasus

Price Free

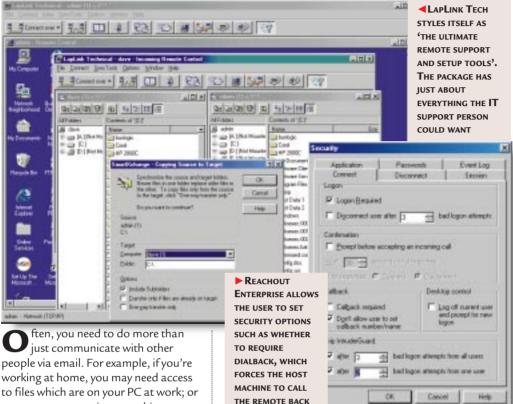
www.pegasus.usa.com

Turnpike

Price £46.94 (£39.95 ex VAT) www.turnpike.com

Remote access

It's a kind of magic: remote access software can help get all aspects of your business under control.



ften, you need to do more than just communicate with other people via email. For example, if you're working at home, you may need access to files which are on your PC at work; or you may want to print something out on the departmental printer so that someone in the office can read it. Staff at helpdesks may find that they spend half their lives walking from machine to machine, examining the software that's installed and showing users how to perform tasks.

Remote control

In all these cases, remote access software can help. Packages which fall into this category are designed to allow users to connect to one machine from another, either somewhere else on the network or via a dial-up connection. The first time you see a remote access package in action, it looks rather like magic: you watch the cursor move, applications open and close, and words appear typed on the screen as though by an invisible person sitting at your keyboard and mouse. In fact, it's someone who's not even in the same room. Of course, remote access programs can easily lead to cries of "Big Brother" and of unwanted management surveillance. But used correctly, they can be a massive aid to productivity. Home workers, for

example, don't need to copy the entire

contents of their document directories to their laptops or to disks for use on their home machines; they can simply dial in and retrieve the files they need. And for helpdesks, software like this is a real boon; the support person can simply connect into the remote user's machine and perform the task while talking the user through it on the phone.

All the remote access products on the market work via either a local area network (LAN) or a dial-up connection, and require software both on the remote

machine and the one from which you're connecting. If you are Used correctly, remote access programs can be a massive aid to productivity

connecting via the local network, you will use one of a number of protocols (the language computers use to communicate with each other on the network). If you are using a dial-in connection, then you can either dial directly in to your machine, if it is set up to allow this; or, if your company has a permanent internet connection, you can connect by dialling your local internet

access provider using your internet account. This is likely to be slightly slower than a direct dial connection, but it does mean that you don't need a modem attached to your office machine and that you can connect in from any other internet-connected machine. The principal packages in this market are

LapLink, pcAnywhere, Reachout Enterprise, and Carbon Copy 32.

All do a good job and the differences between them tend to be mostly cosmetic. We last reviewed these remote access products in our November 97 issue and although several have

since undergone version changes, the major features remain the same. So here we will briefly run through each package, pointing out primarily where they differ, rather than the features they all share.

All of the packages allow you to transfer files between the host and remote machines and control the host machine from the remote, either via dial-up or network connection.

And all support TCP/IP, so as long as your host is configured correctly and is permanently connected to the internet,

you can control it after dialling in to your internet access provider (IAP).

■ The package

that has changed most since we last examined them is probably **LapLink Tech**. Although other versions exist, we looked at the high-end package, which includes a number of new features aimed at making LapLink Tech the complete system administration tool. It now includes Dr Solomon's WinGuard anti-virus program, and Ghost Special Edition, a program

which allows you to "clone" hard disks so that you can, for example, store a complete backup of a machine or upgrade the hard drive by cloning the contents of the old drive to a server, installing a new drive, then copying the contents back.

LapLink Tech's remote access features now allow you to converse with someone sitting at the host using both machines' sound cards; but since doing this is likely to reduce data transfer speeds, you may well be better off just using the phone. You can also print directly from the remote machine to a printer on the host's network: before, you would have to copy the file to the host, then remotely control it in order to print. Some extra improvements have also been added to the user interface of the program. All in all, LapLink Tech is an excellent choice for remote access.

► We last reviewed version 7.5 of pcAnywhere. It is now at version 8 and again includes some extra features. It integrates pcAnywhere's remote callers with Windows NT's User and Group security, and includes stronger encryption for security. Multiple remote machines can connect to one host, which could be useful for training, and you can choose to suppress things like the host's desktop wallpaper to increase

▼ CARBON COPY 32

HAS A NEAT.

the speed of remote control operations.

A new version of pcAnywhere for CE is now available. Look

A GOOD FEATURE OF PCANYWHERE IS THAT IT AUTOMATICALLY VIRUS-CHECKS ANY FILES YOU TRANSFER FROM THE REMOTE MACHINE

Options

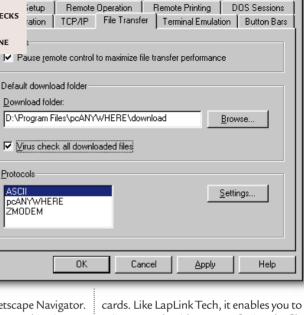
out for a review in next month's PCW

Reachout Enterprise also does a good job of both remote control and file transfer between the remote and host machines. Where it really shines, though, is in its ActiveX for Internet

Explorer or plug-in for Netscape Navigator. This means that if the host machine is connected to the net, you can control your machine from any internet-connected PC, even if you don't have the full remote access software installed.

The last time we looked at the final package in our round-up, Carbon Copy **32** from Compaq (formerly Microcom), we praised its ease of setup: it automatically walks users through the setup process and points out any problems on the way. Version 5.0 has some new features including file

print remotely without transferring the file first, and the package includes a version of Carbon Copy for Windows CE so you can communicate with your palmtop as well as your desktop machine.



Remote access choice

It would be difficult to recommend a specific remote access package. Although the manufacturers may demur, they all provide many of the same features and, from the user's point of view, work in much the same way. However, LapLink Tech includes anti-virus software and disk cloning via Ghost Special Edition, so this may be something to consider when making your purchasing decision.

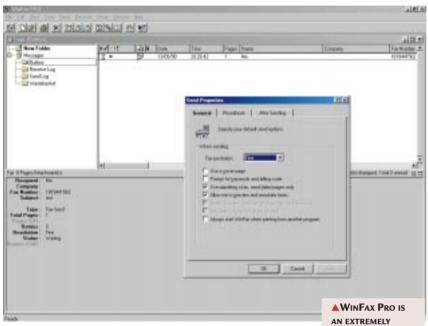


PCW DETAILS **Traveling Software Laplink Tech Price** £169.95 (£114.64 ex VAT) **Contact** *Traveling Software 01344 383232* www.laplink.com **Stac Reachout Enterprise** Price £149 (£126.81 ex VAT) Contact Stac 01344 302900 www.stac-europe.com Symantec pcAnywhere Price £175.08 (£149 ex VAT) Contact Symantec 0171 616 5600 www.symantec.com **Compaq Carbon Copy 32** Price £105.75 (£90 ex VAT) **Contact** Compaq 0845 270 4000

www.compaq.com

Fax software

Many people still prefer the fax to any other form of electronic document exchange.



You may think that faxing is old technology, but there are an awful lot of fax machines out there, and for a lot of people faxing is still the preferred electronic document exchange mechanism.

So, the obvious thing to do is to fax directly from your PC. And for this, you'll probably be looking at either Microsoft Outlook 98 or Symantec WinFax. Outlook 98 is Microsoft's fully-featured version of Outlook Express, which ships as part of Internet Explorer. It's an email client and personal information manager; you can use it not only to read your email, but also to store all your contacts information and use it as a calendar, too. And using Microsoft Exchange Server, you can even schedule meetings with other people from within the program.

When you buy Outlook 98, you are entitled to a

copy of Symantec WinFax Starter Edition, which you download from the web. The Starter Edition only works from within Outlook, and allows you to fax, rather than email, a message to someone if you prefer. Of course, you'll need a modem connected to your computer to do this.

WinFax Pro

is a rather more sophisticated, standalone program.

WELL-FEATURED FAX PACKAGE. A CUT-DOWN VERSION IS FREE IF YOU BUY **O**UTLOOK **98**

It allows you to fax from any application by choosing the fax driver rather than a printer driver when you want to print the document. To use WinFax Pro from within Outlook 98, though, first you need to ensure that you have installed the corporate or workgroup version of Outlook, not the email-only version. This is true even if you are working at home, on a single machine: otherwise you can't truly integrate the two programs. Once you have installed the corporate version of Outlook (we found that we had to de-install the email-only version of the program completely and then re-install it to do this), you can follow the Help instructions that come

A fax is very difficult to change without that with WinFax Pro to fax directly, rather than change being obvious having to select "print" each

> time. WinFax Pro does have one other option: WinFax Pro for Networks. This separate package allows one machine to become the fax server for the entire network, sending faxes from any WinFax Pro-equipped machine. You simply select the fax server on your network and away you go - extremely useful for offices

where installing a modem on each PC is not a viable option. In practice, we have found that fax software is useful for sending faxes from a PC - the quality tends to be much higher, since there's no scanning involved before the document is sent - but that receiving them via PC isn't always as handy. Normally, the first thing you do with a fax you've received is print it out anyway; and with the cost of plain paper fax machines now dropping to sensible levels, perhaps it makes more sense to send via PC, but to receive on a standard fax machine.

Our tip of the day for faxing from a PC is: scan your signature in and save it in a sensible format on your hard disk. That way you can "sign" letters before they are faxed — which looks far better than putting a "faxed from a PC" note at the bottom of a letter to explain the lack of a signature.

JFax.Com

Finally, we must mention in this category an interesting company called JFax.Com www.jfax.com. Subscribers are given a unique phone number, which they can give out as their fax and voicemail number. All faxes and voicemails are then forwarded to an email account so that they can be read from anywhere in the world, using an internet-connected machine and the JFax software. This is a super idea: it means you can receive faxes no matter where you are, solving a long-standing problem for business travellers.

PCW DETAILS

Symantec WinFax Pro

Price £116.33 (£99 ex VAT) **Contact** *Symantec* 0171 616 5600

www.symantec.com

Microsoft Outlook 98

Price £99 (£84.26 ex VAT) Contact Microsoft 0345 002000

www.microsoft.com

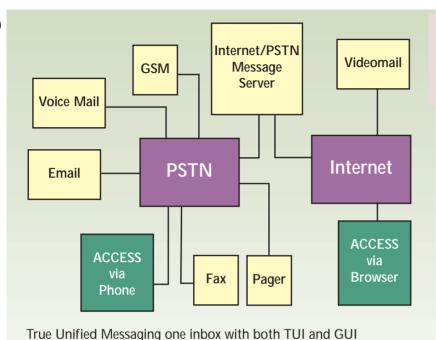
Ifax

Price Rates vary depending on the services required

www.jfax.com

Internet telephony

Say goodbye to expensive long-distance call charges: make your calls via the internet instead.



Internet telephony is seen by many as a potential "killer application" for the internet. Essentially, it allows you to use the internet - via your dedicated, leasedline connection or using a local dial-up call to your internet access provider (IAP) - to make and receive voice calls. This means that instead of paying expensive long-distance phone charges, you can call people on the other side of the world for just the local call charge to your IAP; or, if you are on a permanent internet connection, for no cost at all. This, of course, has made some telecoms companies rather unhappy. If you can call across the world for the cost of a local call, how are the long-distance carriers going to make any money?

Uneasy feeling

Internet telephony has also made many IAPs uneasy. The problem for them is that people using internet phones tend to use up rather more bandwidth than people surfing the web - and the more bandwidth you use, the slower everything gets. For that reason, when internet phones first made an appearance in 1995, some IAPs even banned their use. These days, though, as bandwidth for all but the smallest IAPs has increased, this is less of a

concern; and indeed, some IAPs are even offering internet telephony applications as part of their service. Internet phones normally work using your PC's sound card. Software on the PC digitises your voice as you speak into the microphone and sends the resulting data across the net to the person at the other end of your call. The software at the other end decodes the signal and plays it back through the sound card.

Early attempts at internet telephony tended to be half duplex; in other words, only one person could speak at a time. This was due to bandwidth considerations - how much data your modem could transmit at one time and also because the software was working very hard to digitise your voice, so

until high-speed PCs were prevalent it could only really cope with one task at a time. These days,

virtually all internet-phone software is full duplex, so you can both talk at the same time, just like on a normal telephone. And the quality has improved, too. Early attempts at the software made each caller's voice sound as if it was being received over a very dodgy short-wave

◆INTERNET TELEPHONY WILL LET YOU CONNECT TO MORE THAN JUST ANOTHER PC radio, but compression techniques from companies like Voxware www. voxware.com have improved to the point

where it is now possible to have a perfectly reasonable conversation with someone a continent away.

There are several internet-phone applications around. At the moment, both you and your receiving partner must be using the same software. However, a new standard, H.323, should standardise things to the point where it won't matter which application you use.

Board meeting

The benefit of using your computer as a telephony tool is that it's not just voices which can be transmitted. Microsoft's NetMeeting, for instance, allows you to collaborate using a "virtual whiteboard" - you sketch something on your machine's screen and it appears at the other end of the connection — and even enables videoconferencing, if both parties have some form of video camera attached to their PCs.

This is all very well, but most people would much prefer to talk on the phone than yell into a computer microphone. And the computer-to-phone network interface is where the really exciting work is going on.

The idea here is that you call a gateway from your normal phone. The gateway takes your call, digitises it, and sends the data down the internet to the receiving gateway close to the destination. The

When internet phones first

made an appearance, some

IAPs even banned their use

receiving gateway dedigitises the data, then completes the final portion

of the call by standard phone line again. The real benefit of this is that, again, the long-distance charges have been eliminated; instead, only two local calls are being paid for, one to the gateway, one from the other gateway to the recipient.

Several large companies, including traditional telecoms carriers who can see the benefit of using the internet for at least some of their traffic, are actively exploring this type of scheme. Of course, the quality is more variable than with traditional phone lines, but the cost saving can outweigh this. And, interestingly, some providers are now producing turnkey systems which can be installed by companies with their own permanent internet connection. This sort of system may make a lot of sense for organisations with offices in different parts of the world, which are faced with massive intra-office phone bills. Again, a minor deterioration in the quality of some calls - often there is no deterioration, given a reasonable internet connection - may well be justified by the cost savings.

AVAILABLE PRODUCTS

he internet phone The inc... applications available to you depend on what platform you are using. Some, like **NetMeeting** and CoolTalk, come with Microsoft's and Netscape's browsers. Others, like the **Internet Phone**, from the company which first introduced internet telephony, VocalTec, are available for download from the company's web site. VocalTec Internet Phone, for example, is a free download, so you

> can try the system out before you pay for the You can

find it at www. vocaltec.com. Likewise, WebPhone, from www.netspeak. com, is downloadable as a trial version; the company says you should ensure you have made at least one successful call, to be sure that the system works for you, before you pay \$49.95 for the full version.

Net2Phone www. net2phone.com allows you to make calls to normal phones from your PC. The company charges on a per-minute basis for the call and offers rates such as \$0.10 per minute to the US from anywhere in the world. The system doesn't work the other

way around, though, and you can't receive incoming calls on your PC — it's net-to-phone only.

If you are interested in corporate applications for phone-to-internet, it's worth looking at VocalTec's site www. vocaltec.com. The

VocalTec Telephony **Gateway** does just this, and is available as a full package running on a Windows NT server. If you want to know more about this subject, a good starting place on the web is www.pulver. com/newvon/ teleptext.html, which provides a list of links to other companies' sites.

