Jargon Buster !

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A layperson's guide to the Internet

The language of the Internet need not be a daunting thing. While the technical details can be complex, the concepts are simple. By taking the time to come to grips with a few basic terms, you'll rapidly become a power Internet user.

What's more, the delivery of services over the Internet is becoming a common commercial practice. That ensures that lawyers will be asked to draw contracts and act in litigation that require an understanding of how the Net works. Just as lawyers who act in product liability matters must familiarise themselves with the manufacturing and use of the product, and with the operation of the industries in which it is used, the commercial adviser or litigator needs to know what the Internet *is* before advising on it.

For a start, take the Big One: *TCP/IP*. It stands for "Transport Control Protocol" and "Internet Protocol". On the Internet, big pieces of information are broken into tiny little parcels for "posting". Each parcel has its intended address and its sender's details on it. When all the little parcels reach the other end, the computer reassembles them into the whole. TCP is the software that does the breaking up at one end and the reassembly at the other.

IP is a courier system. It makes sure that the little parcels travel across the Internet to their destination. So TCP/IP work together: TCP creates and addresses the parcels. IP carries them to their destination. At the other end, TCP reassembles the parcels. That's it.

TCP/IP is the fundamental system for movement of information on the Internet. For your computer to work on the Internet, it must have TCP/IP installed, just like every other computer on the Internet. TCP/IP is built into Windows 95, so you can install it like notepad, calculator or any other Win95 component.

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Know it or not, when you surf the Net, your computer has an *IP address* — an "Internet Protocol address". Every machine connected to the Net has one: a unique number that represents the address of that computer. So when you ask for a page on the Web, the information is sent to your computer's address. It's a number, like 203.10.26.567.

There are two kinds of IP addresses. Machines that never hang up from the Internet can have a fixed, unchanging number to identify them. That's called a *static* IP address, because it doesn't change. For most users, who dial up when they want to connect to the Net, their service provider's computer issues them with a temporary address for each surfing session. That's called a *dynamically allocated* IP address.

When the little data packets travel across the Net looking for their destination, they pass through special devices called *routers* (pronounced "rowter"). These machines all have a road map of their part of the Internet inside them. When they receive a packet, they send it on to another router closer to the destination. That router sends it to another, closer still. Finally, the packet arrives at a router that is directly connected to the destination computer. That last router effects the delivery to you.

If your office network is connected to the Internet, you'll probably have a router that takes traffic from the outside world and sends it to the correct machine in your office. Because it stands at the interface between the internal office network and the outside world, the router is an important part of your security, or "firewall".

Once you're on the Net, you'll visit a lot of *URLs*. This means "Universal Resource Locator" - nothing more than the address of a page on the Internet, such as "Page address" would be a much better term, but computerheads call them "URLs" (pronounced "earl").

Now, in reality, each page on the Internet is named using a number like 203.67.56.5 rather than a name like *ford*. But words are easier for humans to remember than numbers. So the Internet compromises. Computers know each other by numbers. People can refer to the same pages as words. So when I ask to go to *ford*, how does the computer know what *number* that is ?

Some computers on the Net hold lists of every possible page and its corresponding number. When I ask for *ford*, my computer goes to one of those lists and sees what number corresponds to *ford*. It then contacts that number, and I get the page I want. The computers that hold those lists are obviously vital. Without them, I ask for *bhp*, but my computer has no way of finding what number that page really is.

These computers are called "Domain Name Servers" or just DNS. Your Internet provider will tell you which one it uses, so that your computer can refer to the list. If the DNS breaks down, surfing activity stops.

What's a "domain name" ? It is a combination between a business name and an address. For instance, my domain name is keating.com.au. So my email address is lawyer@keating.com.au. My World Wide Web page is at www.keating.com.au. Domain names are fiercely fought over, since they make it easy to locate a service from memory. Type in *www.mcdonalds.com* and you go straight to the burger chain's web page, so they were pretty upset when someone else registered it first (they got it back from him later).

Because domain names have this quality of indicating a particular business (e.g. www.colesmyer.com.au) or product type (e.g. www.pizza.com) they are starting to generate litigation in the trade practices area. A competitor registers www.kentuckyfried.com.au and starts an online take away chicken ordering system. The good colonel fronts at your office claiming that this is passing off. It is an interesting, and growing, area of practice.

You'll often see a web page address beginning with the letters *http*. They stand for *hypertext transfer protocol*, which refers to the particular way in which Web pages are transferred around the Internet. Other kinds of file have special protocols that are most efficient for them. One you'll see a lot is the *file transfer protocol*, or FTP. It is used to send computer files, say programs or word processing files, over the Internet. You'll hear PC people say "You can FTP a copy to me", meaning that you can make use of an FTP program to transfer the file over the Net.

Here's one you'll hear a lot: *proxy server*. A proxy server is a computer with a vast hard drive. Every time a user reads a page, the proxy keeps a copy. When another user orders a page from, say, London, the proxy first checks its hard drive to see whether it already holds a local copy. If it does, it sends that instead of calling up a fresh one all the way from London. There are many pages that are called up by lots of people. The proxy server satisfies all requests after the first from its local copy, thereby speeding up the delivery.

In your browser settings, there is a place to tell your computer the address of the right proxy server for you (you get that information from your Internet Service Provider, or *ISP*). If you don't include it, your computer has to get a fresh copy of every page instead of using previously stored ones. So, if you have very slow Web access, one thing to check is that "proxies are turned on" as the Net saying goes.

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Another area fruitful for the jargon buster is email. There's POP, the *Post Office Protocol*. People often wonder what happens if someone emails to them while they are not connected to the Net. Is the message lost forever ? No. It is stored on a computer at the office of your ISP, ready to be collected next time you dial up and check your mail. The program that looks after the storage and delivers mail to you (and not to the wrong person) is like an Internet post office. That's why it is called the Post Office Protocol – POP.

The computer used by an ISP to run the POP post office is called a *POP server*. If that breaks down temporarily, the Internet cannot deliver mail to you. So, if someone says, "The POP server is down", you know that there will be an interruption to your mail service.

Outgoing mail is handled by a different program at your ISP's office – called the Simple Mail Transfer Protocol, or *SMTP*. So if the *SMTP server* breaks down, expect to have trouble *sending* mail.

Read through this article a few times. Next time your ISP says "We have a new proxy server. Here's its address", you'll know why it's important to change the setting in your browser. When they say "The POP server blew up", you'll realise that incoming mail will be disrupted. Surfing is more satisfying when you know what causes the waves.

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