

**Charles Ollerenshaw, Managing Director, Golfex Ltd
explains a few home truths about the internet...**

Surf's Up

The Internet has been around for at least three decades. It was originally a way of sharing data between people in the American defence industries. The Internet only exploded into the world arena with the public release in 1992 of a new thing called the World Wide Web. The existing Internet communication structure was used to carry the new content.

A Web is a document or a folder of related documents. What makes it special is that it contains links. The author can designate key words to point (link) to other places in the document which have some relationship to the key words. When a web document is viewed on a computer screen the link words (they're actually called 'hyperlinks') are coloured and underlined to make them stand out. Pictures in a web document can also be designated as hyperlinks.

As an example, consider a paperback thriller. The book is divided into chapters which typ-

ically shift from location to location, time to time, character to character as the author tries to engage our attention and hold it to the last page.

However, we have little choice but to read the book in strict sequence from the first page to the last.

Now imagine the book is a web with hyperlinks. In Chapter Nine I read "Colonel Walnut suddenly appeared in the doorway with a niblick poised to strike", but for the life of me I cannot recall who this Colonel Walnut is, though I vaguely remember him featuring earlier in the book.

But, this book being a web, the item reads "Colonel Walnut suddenly appeared in the doorway with a niblick poised to strike". I am reading it on the screen of my computer, or on my telly, or on some new device I can read in the tub but which has computer-like point-and-click facilities. I click on the hyperlink Colonel Walnut and immediately my screen jumps to the earlier chapter and verse where this shady old reprobate was first mentioned. A mere click returns me to the point I just left. I'm too young to know what a niblick is, so I click on the niblick hyperlink, go to a Glossary at the back of the book to find out and, by another click, return to the story. The book will have hundreds of hyperlinks so I can jump around it to my heart's content - but note that these are all

internal hyperlinks, meaning that they point only to places within this document.

The external hyperlink is the bit that bootstraps our

Web (individual document) up to the World Wide Web, which is nothing but a term for the totality of all individual Webs connected to the Internet. Any document can contain hyperlinks to other places within itself (bookmarks), other pages within its own folder (roughly equivalent to the book we've been discussing) and/or any bookmark in any document in any folder on any server in any country, provided that the 'target' (as it is called) is accessible and on-line. Hyperlinks in these target documents can do the same in turn. In the Book example the niblick hyperlink was internal since the author had provided a Glossary within the book itself. In practice it is much more likely that it would have been an external hyperlink to an on-line Dictionary.

The implications of this are staggering. We have a global information resource with unlimited hyperlinking capability. No matter what you want to know, it is almost certainly there. If it's not today it will be tomorrow. Plenty of stuff you don't want to know will be there too. The statistics numb the mind. I have read that there are already more pages on the Web than there are humans on Earth; that 200,000

pages are being added every week, or was it every day.

I'm often asked "What is the Internet?" The Internet consists of servers, communications facilities and clients. There are vast numbers of computers called 'servers' which hold pages and links that people have built for commercial, personal and every other kind of motives. The clients (users, visitors or whatever you wish to call them) must have some form of computer, a piece of software called a 'browser', a device called a modem which attaches their computer to a telephone socket, and an account with an ISP (Internet Service Provider, such as BT, America On-Line, Compuserve, Dial Pipex or any number of others). In between the servers and the clients is a data-communications set up which allows server or client to stuff addressed packets of data in at one end and have them come out at the other. There is no need to bother about how it works any more than you need to understand how your digital cell-phone works.

So far we have looked at a system in which we (the users/clients) read documents, click on hyperlinks, and in every way control what the system presents to our eyes and intellects. In this mode we are still readers of books, though we exert much more control than in the old days. But when we sit on our buttocks looking at the telly we are in a completely passive mode where the system feeds everything to us. Our only controls are the channel switch, the mute button and, in extremis, the 'off' switch. These polarised extremes will merge during the next few years.

A key indicator lies in the latest 'browsers': Microsoft's Internet Explorer 4 and Netscape's Navigator 4. These browsers introduce the concept of 'channels'. What this means in essence is that I can tell my browser what types of news-feed turns me on. I personally like Formula One racing, Malt Whisky, Clay Pigeon Shooting and one or two other personal things; I detest Football with balls of whatever shape, travel programmes, and News. So I, personally, tell my browser about these dark secrets and it sees to it that items on the things I like are presented, without explicit action on my part, on my screen within seconds of me accessing the Net, while other things that my neighbour likes do not come anywhere near me.

There's clearly going to be a spill-over to television. At present there is the ludicrous situation that advertisers spend fortunes on

Channel 3 advertisements many of which are for items in which I could not possibly be interested. The TV people are going to wake up soon to this waste, and in fact they probably have but their technology does not at present allow them to do anything about it.

Without question the television broadcasts and the Internet systems will soon both be engineered to feed each individual among us exclusively with material (at least in broad categories) that we, the recipients, have told the systems we wish to receive. It's quite possible, though not certain, that computers and television sets will actually merge into a single device that can do either job. In fact the jobs we now do on computers or television sets may themselves become indistinguishable. The only thing currently holding the Internet back is the low speed of data-flow over ordinary phone lines, but this will be fixed before long. The next few years are going to be great fun.

If the Internet were only an information resource it might not have too big an impact on the way we live and work. But there is already another dimension to it. It's possible to put a database on a server, and have the server respond to a client request by querying the database and constructing a page 'on-the-fly'. This transient page returns to the client for display, but no copy is kept. It's also possible for the visitor to enter data on a form and by clicking on a button post it electronically to the server, which can update its database or do anything else it's programmed to do. Relatively recently, encryption standards have been adopted which make it safe to send credit card numbers over the Internet. So we already have all the building blocks for database-driven electronic commerce.

At present the major areas of Internet electronic commerce are books, CDs, records etc. The technology will spread to embrace every kind of goods or services which can be ordered without the buyer having to be physically present at the point of supply. A product can be viewed, read about, listened to and, with virtual reality techniques, walked through and around without leaving one's chair. There are not many goods or services where physical presence is required, though there are a few. It's inconceivable that such a major shift in personal and business commerce will not significantly alter the way we live and work.

Finally, here is a bit of general advice about getting on-line: To

access the Internet it's best to invest in a decent computer; there are, for example, plenty of not quite-leading-edge Pentium PC systems around at bargain prices and there will be more in the sales after Christmas. Get a quick machine (133MHz+) with enough memory (16MB+), a fast (33.6k) modem, decent 'true-colour' graphics (SVGA+), the biggest and best quality screen (15inch+) you can afford, and a decent sound system with headphones for the times the family don't want to be disturbed. You should have no difficulty in getting Internet Access thrown in, though you have to pay a small monthly fee after a couple of free months. Make sure that the supplier gets the whole system working before you buy. If you don't know anything about computers find someone to help you who does. Set this system up in a room where you can be alone. At first you'll be a learner-driver and will be concentrating on the clutch and the gears, but soon the mechanics will become second nature and you will not notice them. Now a strange thing happens. Though your conscious mind knows perfectly well that the Internet pages are being sent to you, in your back bedroom, from whichever server the latest hyperlink pointed to, you actually start to feel that it's you that is travelling in hyperspace. If you are in a site about climbing Everest you feel as though you're on the mountain. It can be addictive, so be warned!