

# TechTalk

## THE INTERNET AND YOU

I'm not sure how, but an old friend, Jane, recently talked me into attending a charity dinner. I should have known better, for two reasons:

▶ Nearly everyone at the event (except me) was a clinical psychologist.

▶ Jane and I trade practical jokes—and I was due.

"I'm from Seattle," someone said as I entered the dining area. "How about you?"

"Memphis," I replied, adding, "and my childhood was very pleasant, thanks." I guess I was a bit edgy, waiting for Jane to spring her trap.

I was caught off guard when a man wandered over and said, "I feel a little out of place with all you psychologists."

A fellow refugee!

"You and me both!" I agreed. "I'm into technical training—computers, LANs, satellites. I don't have a clue about Freud and company."

"No kidding," he said, after introducing himself as Ted. "Do you know anything about the Internet?"

Maybe this wasn't going to be so bad, after all.

I smiled. "A little," I said, as Jane walked up. "We teach an Internet course out of my department at

*The Internet is no joking matter—at least, for people who understand such terms as WWW, GUI, and Veronica. Here's how you can get connected, too.*

### A Glossary of Internet Basics

#### Archie

Archie (ARCHIVE) is an Internet utility that allows users to search through FTP archives (see below) that contain about a million files that are available for downloading for free. The names of the files are stored on 800 or more Archie servers.

#### FTP

FTP stands for file transfer protocol. The protocol includes standardized processes that allow a user to connect to an FTP site, navigate through directories at the FTP site, and download desired files. TFTP (trivial file transfer protocol) is a subset of FTP that allows the user to download files but does not provide full FTP capability.

#### Gopher

A gopher (go-for) is a program that allows a user to search through hierarchical menus to find a file or resource on the Internet. As the search progresses, the user may be

switched to some of the 500 or so Gopher servers on the Internet.

#### Veronica

Veronica—or Very Easy Rodent-Oriented Netwide Index to Computerized Archives—is a program that allows a user to perform specific searches on Gopher servers. Instead of simply searching by file name, the user obtains a subset of menus that pertain to the topic of interest.

Veronica does for Gopher space what Archie does for FTP archives. Unlike an Archie search, Veronica searches can connect the user directly to the data. The user doesn't even have to know where the data are—he or she just "double-clicks" to select the desired menu item.

#### WAIS

WAIS (pronounced ways) stands for wide-area information server. WAIS is a data base that contains indexes of documents that are

available on the Internet. A user can conduct key-word searches on WAIS indexes to identify documents of interest. The user can initiate a search by typing it out in plain English.

#### World Wide Web

The World Wide Web is also known as WWW or the Web. When used with Web browsers, the Web provides the ability to read and search documents on the Internet, using hypertext links. The process is nonlinear, in stark contrast to Gopher searches (and related services) that involve hierarchical menus.

Text-only versions of Web browsers do exist. But most Web browsers are graphic-based (point and click). The WWW and Web browsers merge information and the retrieval of that information into a powerful, nonlinear, global information system. The Web supports video and audio as well as text and graphics.



work. Is there something in particular you wanted to know?"

"Why all the hype?" he asked pointedly. "Everywhere I turn, I see or hear something about the Internet. What I've never heard is an explanation as to why I should bother. I mean, how can the average person benefit from the Internet?"

"There is a lot of hype about the Internet," I said. "But there are also a lot of benefits: You can communicate with millions of people around the world, schedule airline tickets, rent a car, research an issue—"

"I don't mean to be rude," Ted said, rudely cutting me off, "but that's the kind of hype I'm talking about. I can pick up the phone and communicate with millions of people around the world—and I don't have to be able to type. I can call a travel agency and have someone book my tickets. I can do research by going to the library. Why should I bother buying a PC and a modem to go on-line?"

I glanced at Jane, who was calmly waiting for my response. I decided to dispense with the glittering generalities. "Fair enough," I said. "When you get right down to it, many of the things you can accomplish on the Internet you can also accomplish by more traditional means. The difference is speed."

"What do you mean?"

"I'll give you an example. A few months back, I had an open position to fill in my department. I dialed into an on-line service and posted an electronic note in a public forum, asking where I might try to recruit for the position.

"A few hours later, I checked my electronic mail, or e-mail, and found that several people I did not know had suggested a particular trade journal. I wrote the journal's editors an e-mail message, asking for information about circulation and ad rates. The same day, I received an e-mail response, complete with sample ads.

"I sent my ad to the journal electronically, and it was published in the next edition. Ultimately, I hired a person who responded to it."

"But you could have done all that without the Internet!" Ted challenged.

"You're right," I agreed. "I could

### On-Line Service Providers

#### America Online

8619 Westwood Center Drive  
Vienna, VA 22182-2285  
800/827-6364

*Graphical/text interface. Partial Internet access now; full access planned.*

#### CompuServe

5000 Arlington Center Boulevard  
Columbus, OH 43220  
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#### Delphi

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have—but not as quickly. It would have taken me longer to find out about the journal and to receive information about it. It would have taken me longer to get the ad to the journal—in fact, I probably would have missed the submission deadline, so the ad would have appeared a month later."

"I don't know," he said. "A fax here and a call there..."

I couldn't help myself. I had to make this guy see the light.

"I'll give you a more personal example," I said. "A few weeks ago, I was planning to have dinner with friends. One of them called at the last minute to say that a guest from Hungary would be joining us. I knew next to nothing about Hungary and thought it would be polite to learn a little. So I dialed into an on-line service and moved into the reference section. Within 5 minutes, I downloaded some information. At dinner, the Hungarian guest was delighted that Americans had taken the time to learn about his country."

Ted flashed his knowing smile.

"That's a nice story, but I don't see any real meat there. It's not much of a return for investing in a computer and software."

A tough cookie, this Ted. I was beginning to be annoyed.

"That was on the lighter side," I said, controlling myself. "But there can be a significant return from a business perspective. Not long ago I needed to buy an ethernet card for a computer at work. I went on-line and searched the latest issues of a popular computer magazine. The search took about three minutes. I downloaded the information and used it to avoid the lemons and pick the card that was best for my situation. I even had the company names and phone numbers."

"That's still small potatoes," he scoffed.

Was I going to have to spell it out? Ted was getting under my skin.

"I admit it—that was not a major buy," I said. "But what would it be worth to you as a businessperson to advertise your products or services to 30 million people?"

"30 million people?" he asked.

"That's a conservative estimate of the number of people connected to the Net. For the sake of argument, let's say only a measly 10 million are connected—that's very conservative. Imagine giving 10 million people direct access to your magazine, product line, or service!"

"If it's such a good marketing tool," he said smoothly, "why aren't more companies using it?"

Only someone who had never been on the Net could ask that question. "They are using it, Ted," I replied, a little too loudly. "They're using it by the hundreds—maybe thousands. My company's on-line, for example. That's why we teach the Internet course. We have a World Wide Web, and—"

"World Wide Web?" he asked, cutting me off again.

"A standardized way to structure electronic information such as text and graphics. Each web has a 'home page' or starting point. People can navigate within a web or between different webs—maybe separated by thousands of miles—simply by clicking on (selecting) highlighted words."



"What's the point?" he asked.

*What's the point?!* I thought to myself. *It's a whole other interface for the customer—for millions of potential consumers!*

I couldn't believe this guy. I looked to Jane for support—and she was laughing. I looked back at Ted. He had a big grin on his face. So, Ted was Jane's stooge—and I was trapped like a rat in a maze.

**So, what is the point?** I hope that, along with exposing the immaturity of my friends, I've helped make the value of the Internet seem a little more concrete, by providing personal examples of how I've used it.

There are as many ways to use the Internet as there are things to do on it. Some are lightweight, and some are not. But get on the Net now—even before you've come up with a list of 10 things you can do on it. You'll realize the value of the Internet only after you play on it a while. And it doesn't have to cost you an arm and a leg to try it out. If you already have a computer, you can probably get on-line for less than \$100 (the price of a modem).

Exactly what is the Internet? Basically, the Internet is a labyrinth of academic, commercial, government, and military computer networks that are interconnected. It was started in 1969 as an experimental network by the U.S. Department of Defense, specifically the Advanced Research Projects Agency. Initially, one of the Internet's objectives was to enable scientists working on government grants to communicate with each other.

The experiment started by connecting four computers. Now, the Internet connects more than 45,000 computer networks in government, education, business, military, and consumer arenas—in more than 70 countries. Each network can support anywhere from a handful of users to thousands of them.

**What's the Net good for?** E-mail is one of the most widely used features of the Internet. Large businesses have benefited from internal e-mail systems for years, initially via mainframe systems. But in the past, most e-mail systems only worked within a single organization. The advantage of hooking into the Internet is that

### For More Information About the Internet

*The Whole Internet User's Guide and Catalog* by Ed Krol. Sebastopol, CA: O'Reilly & Associates. ISBN 1-56592-025-2. (All levels.)

*Beginner's Guide to Global Networking* by LaQuey, Tracey, and J.C. Ryer. Reading, MA: Addison-Wesley, 1993. ISBN 0-201-62224-6. (Beginner level.)

*Internet 101* by Alfred Glossbrenner. McGraw-Hill. ISBN 0-07-024054-X. (Advanced level.)

*Internet Slick Tricks* by Alfred and Emily Glossbrenner. Random House. ISBN 0-679-75611-6. (Beginner level.)

"The Internet: Where Few Trainers Have Gone Before" by Bryndis Rubin (with companion pieces, "The Attractions of the Internet" by Erica Gordon Sorohan and "Trainers Network on the Net"). *Training & Development*, August 1994. To order reprints, call ASTD Customer Service, 703/683-8100. Photocopies are \$15 for the three-article package; call for prices on bulk orders of custom reprints. Use priority code FHM.

*Internet Yellow Pages* by Harley Hahn and Rick Stout. Osborne McGraw-Hill. ISBN 007-882023-5. (Beginner level, and useful as a reference.)

*How the Internet Works* by Joshua Eddings. Ziff-Davis Press. ISBN 156276-192-7. (Beginner level.)

you can send e-mail to anyone else connected to the Net—not just to other people in your company.

Another major use of the Internet is research. Using features such as Archie, Gopher, Veronica, and FTP—and, more recently, the World Wide Web—browsers can find information on just about any topic, within a matter of minutes. See the sidebar on

definitions (page 67) for an explanation of those capabilities.

The Internet is by no means perfect. Because it comprises a multitude of computer networks that are interconnected, it is subject to the limitations of those individual networks.

You might connect to one system today without a hitch. But that same system could give you fits tomorrow. Why? For starters, it's because each system has a certain limit on the number of simultaneous connections it can handle. So a popular system may simply be too busy at times to accommodate your attempt to connect.

Be prepared for some dead ends when you do research on-line. The good news is that you can often find what you seek in multiple locations.

With the advent of commercial on-line companies (such as America Online, Delphi, and CompuServe) consumer services are also a major offering. For a monthly fee, on-line services provide a wide range of abilities:

- ▶ electronically file your taxes
- ▶ search through on-line versions of your favorite magazines (including *Consumer Reports*, *PC World*, and *Sports Illustrated*)
- ▶ review job postings
- ▶ participate in open forums on topics as diverse as national politics and corporate training.

On-line services also offer varying degrees of access to the Internet at large. All the major services offer e-mail gateways to the Internet (in other words, they allow you to send e-mail over the Internet). Delphi was the first on-line service to offer complete access to the Internet (including use of e-mail, FTP, Archie, Gopher, WAIS, Veronica, and Web browsers). Other services are quickly following suit. See the sidebar for a listing of on-line services and the access they provide.

**How is the Internet changing?** Today, two major shifts are taking place in the way people structure and navigate the Internet. Both make the Internet easier to use.

First, the way information is structured is moving from a linear, hierarchical approach to a non-linear, hyperlink approach. This is a major change. Hyperlinked documents are



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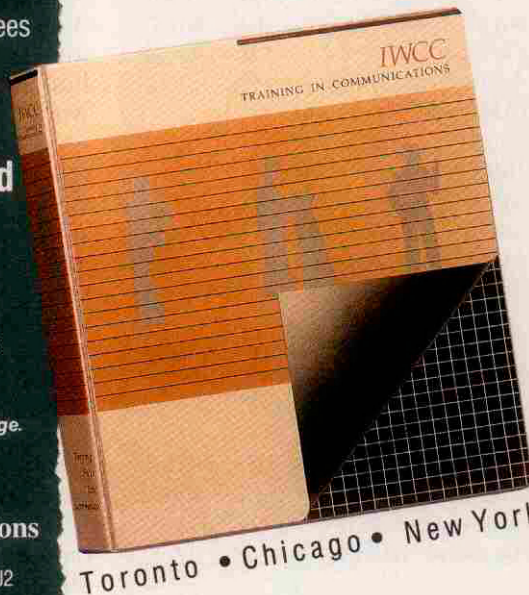
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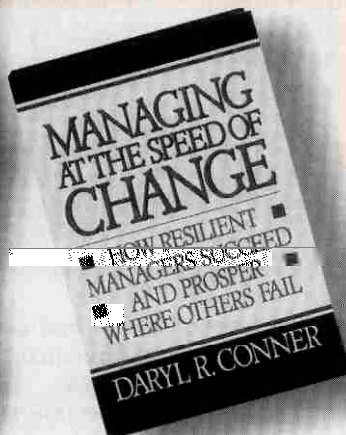
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accessible via the World Wide Web, sometimes referred to as WWW or simply the Web.

Hyperlinks allow a user with a type of software called a Web browser to follow a path (or line of investigation) effortlessly from document to document—no matter where the next document is located on the Internet. A hyperlink in one document might take you thousands of miles around the globe and automatically connect you to a server in a different country, where the related document is housed. Without hyperlinks, the process would be much slower—or even impossible.

Web browsers also represent a second (and related) major shift on the Internet. In general, Web browsers are GUIs (graphical user interfaces), specifically designed to allow the user to access the World Wide Web and to follow hyperlinks found there. (This may be a little confusing, because not all GUIs are Web browsers, and vice versa).

Mosaic was the first and best-known Web browser. It was created in 1993 by the National Center for Supercomputing Applications at the University of Illinois. There are many other Web browsers, including one called Cello.

IBM and Microsoft are now building their own Web browsers into their operating systems (Warp and Windows 95), a fact that attests to the strength of the technology's evolution. Many people believe that the combination of the World Wide Web and Web browsers will be the standard for structuring and navigating the Internet for years to come.

To learn more about the Internet, try out one of the commercial online services. Or pick up one of the references in the accompanying box (page 69).

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