Cruising the Information Superhighway

Basics of the Internet

By Richard G. Ensman Jr.

Pick up any national news-magazine these days and you’ll read all about the up-and-coming “Information Superhighway.” From discussions of sophisticated fiber optic communication networks to the anticipated proliferation of cable television stations to vast electronic libraries, the superhighway seems to be on everyone’s lips.

In conceptual terms, the superhighway will be a massive electronic network offering an array of entertainment, shopping, information and communication services to homes and businesses via computer or some futuristic version of the television set. This superhighway is coming soon, say the communication experts. In 1998, 1999 or early in the next century, they insist.

But hold on. The Information Superhighway—at least an information superhighway—already exists. It’s called the Internet, a huge network of computer-based information and communication resources accessible to almost anyone with a computer and a modem. Whether the Internet will be the precursor to the superhighway of tomorrow, or remain an electronic roadway in its own right, the Internet of today helps us understand what the Information Superhighway of the future will be like.

The Internet wasn’t formed as a highly accessible superhighway. It was originally established by the U.S. Department of Defense in the late 1960s as a defense research network and a fail-safe communication system that could be fully activated in the event of war or public emergency. The Internet was, and is, nothing more than a collection of supercomputers, telephone cable and satellite transmission systems that relay data to and from thousands of points across the globe.

It is important to remember from the outset that the Internet isn’t a “network” in the conventional sense. Rather, it is a “network of networks” that consists of some 8,000 to 10,000 different computer services and networks, operated by government, industrial and not-for-profit organizations. Just as traditional highways can be accessed by a variety of secondary roads and access ramps, the Internet can be accessed through any of these networks by anyone with a computer, modem and telephone line.

As a consequence, its use has broadened considerably since the late 1960s. Today, educational institutions, business firms, researchers, computer buffs and people from just about every walk of life use the Internet as a communications and information retrieval tool.

Once Connected

Once you’re connected to the Internet, you’re part of an electronic community consisting of well over 15 million users. You have access to an estimated 10,000 information sources and databases covering every field of human endeavor. You can, at least in theory, gain access to libraries and experts in more than 50 nations around the globe.

Connect to the Internet and you’ll gain the ability to communicate with other users through electronic mail. You can transfer computer files to other Internet users around the world. You’ll be able to search information sources for articles, graphics and even original research material—and, frequently, pull the full text of the material into your own computer system with the touch of a few keystrokes. In short, you’ll travel today’s Information Superhighway—the most powerful information resource known to mankind in the 1990s.

Planning the Trip

Because no one “owns” the Internet, you can’t obtain an Internet “account” or “subscription.” You cannot even obtain an “official road map” to this vast superhighway.

For starters, though, all you need for a cruise on the Internet is a computer, a telephone, a modem and Internet access. “Access” simply means that a network operator—a business, an educational institution or an on-line information service such as CompuServe, America Online or Delphi, for instance—has assigned you an Internet “address.”
or code, that enables you to send and receive information via the network.

Access is much easier to obtain than you think. If you’re affiliated with an educational institution or major corporation, ask if you can obtain an Internet address; you’ll probably be able to do so at no charge. Some colleges and universities offer “guest accounts” on their computer systems to community residents for a small fee; these guest accounts can usually be used to access the Internet. Some metropolitan communities offer full or limited Internet access via not-for-profit communication or computing organizations, or library systems. Search, of course, for a local access source; this will ultimately save you costly long-distance telephone charges.

If you can’t find a local organization that will provide you with access, you can easily subscribe to an on-line service, usually for under $15 a month. While on-line services may require you to pay some surcharges for Internet access, the costs are usually quite modest. If you’re interested in this option, the name and telephone numbers of the larger on-line services are noted at the end of the article. On-line services, incidentally, usually provide you with a local access number.

Your Internet address will consist of a “domain,” which is a series of numbers and letters that identify you, your host computer, the organization providing you access and the national affiliation of the organization. You’ll use this address to enter and navigate through the Internet.

Maps and Road Signs

The Internet, remember, is an amalgamation of thousands of different computers, organizations and networks. It is not a menu-driven service that provides quick and easy access to every destination in the network and there’s no one to call for advice when you get lost on your Internet trip.

No one, you see, “governs” the Internet. While the volunteer-driven Internet Society attempts to establish guidelines and protocols for Internet use, it doesn’t have the authority or resources to make hard-and-fast rules, approve or disapprove of the content offered by the networks comprising the Internet, or even build up-to-the-minute “road signs” directing casual users to the breathtaking variety of destinations on the superhighway.

So now you’ve got access to the Internet. How do you find your way around? Here are a few suggestions.

First, you can use one or more of the commercially published Internet guidebooks. These books list many of the popular Internet destinations and provide the appropriate addresses. But these books can quickly become out of date since Internet offerings and addresses...
change constantly and no one routinely reports these changes to any central authority.

Next come the Internet discussion groups. These discussion groups, or “listservs,” consist of 100, 200 or even several thousand people who are interested in a particular topic. Those in the group will exchange ideas, data and chat with each other through an elaborate computer bulletin board and e-mail system. If you belong to a group on international marketing, for instance, other members of the group can tell you about a variety of Internet destinations that deal with this topic.

Then come gophers. These electronic gateways provide simple menus to sections of the Internet, directing you to your destination quickly and efficiently. Usually set up at specific Internet locations or “nodes,” like government offices, universities or business libraries, they allow you to navigate through topical collections of resources without a lot of guesswork or Internet knowledge. A number of businesses and universities are developing other forms of menu-driven access tools; these will undoubtedly become much more common in the years ahead.

As you become more proficient in navigating the Internet, you’ll accumulate a collection of addresses of special interest to you. Besides locating addresses as the result of your own Internet travel, you’ll find them in computer publications, professional meetings and even
routine business correspondence. Friends or acquaintances may pass Internet addresses along to you. All these addresses could—and should—become part of your personal Internet address book. They'll allow you to get to your destination of choice within a matter of seconds.

The Internet is a vast network of electronic roads, boulevards, dead ends and circles that seemingly take you everywhere—and nowhere. The more addresses you collect, the easier your Internet trips will be.

**Where All Roads Lead**

No one knows whether the Internet will gradually evolve into the much-touted Information Superhighway envisioned by elected representatives and industrial leaders, or whether other superhighways will be sponsored and constructed by public and private sources.

But some trends are readily apparent. First, the traditional differentiation among media will soon be a thing of the past. Whatever form the superhighway eventually takes, users almost certainly will be able to make telephone calls, watch videos, search databases, read electronic magazines, shop and exchange written messages from a single electronic receptacle, which may be a cross between the traditional computer, telephone and television set.

Second, tomorrow’s superhighway will be much easier to navigate than today’s Internet. While the sheer size of the superhighway will make a “master menu” all but impossible, new navigational software will be available to help both serious and casual users locate—and reach destinations quickly.

Third, the superhighway will give people from all walks of life access to an incredible array of communication and information resources. Business leaders will obtain data on market trends and conditions through the network each day. Employees will use the network to communicate with each other. Sales reps will use it to market products and services. Children will use it to complete homework assignments. Tomorrows superhighway will offer thousands of electronic newspapers and magazines, continuing education to people in their own homes and offices, huge electronic shopping malls, on-line conferences and much more.

Finally, and most important, tomorrow’s Information Superhighway will touch everyone. Business people, government leaders, educators, children and consumers all will be traveling on the superhighway, obtaining and exchanging information, buying and selling products, meeting new people, living life.

The Internet is already here, and the technology already exists for a dramatic expansion—or realignment—of this vast roadway. Already you can take trips to thousands of destinations with a few strokes of your fingertips. As the years progress, your fingertips will hold even more power, as they access the huge band of fiber optic cable, satellites and computers that will comprise the superhighway of the 21st century. Then, your fingertips will take you wherever you want to go, anywhere in the world.

**Etiquette for the Casual User**

Although no one governs or “runs” the Internet in the literal sense of the word, a variety of Internet customs have developed over the years. Follow them, and you’ll make your Internet travels more pleasurable and productive:

- When you’re on line, observe the habits of other users. That’s the best way to learn Internet etiquette.
- Always clearly identify yourself when communicating with other users.
- Use uppercase and lowercase characters. Capitalizing your message is considered an act of rudeness and anger.
- Don’t leave inappropriate messages on bulletin boards or send them via e-mail. If you’re participating in a bulletin board on productivity, for instance, don’t insert comments about your vacation last month.
- Keep your messages brief.
- Avoid unsolicited commercial appeals. While some commercial development of the Internet is inevitable, most Internet users dislike junk e-mail—and will tell you so by means of tersely worded “flame messages.”
- If you notice inappropriate or
Where to Find More Information

Reading Materials
- Directory of Directories on the Internet, Gregory Newby (Meckler).
- How the Internet Works, Joshua Eddings (Ziff-Davis).
- Internet for Dummies, John Levine and Carol Baroudi (IDG Books).
- Navigating the Internet, Richard Smith and Mark Gibbs (Sams).
- The Instant Internet Guide: Hands-on Global Networking, Brent Healop and David Angell (Addison-Wesley).
- The Internet White Pages, James McBride and Seth Godin (IDG Books).
- The Internet Yellow Pages, Harley Hahn and Rick Stout (Osborne McGraw-Hill).

Accessing the Internet
If you want to cruise the Internet, you’ll first need access, preferably local access. Check with area colleges, libraries and not-for-profit agencies offering telecommunications services. They may be able to provide you with inexpensive (or even free) access to the Internet. Commercial on-line services also offer limited and full access to the Internet, although some cost is involved. To gain access to the Internet through an on-line service, you must be a service subscriber. If you want to learn more about these online services, here are the largest: America On-line (800) 827-6364; CompuServe, (800) 846-8199; Delphi (800) 695-4005; Genie (800) 638-9636; Prodigy (800) 776-3449.

problematic usage, report it whenever possible to the operator of the network you are using. For instance, if you are accessing a university library, and unusual messages keep popping up on your screen, you may be encountering a security problem. Let the library know.
- Observe copyright laws. It’s perfectly acceptable to electronically publish brief passages from a printed (or electronic) work, provided credit is given. But transmitting entire volumes of material probably violates the copyright laws.
- Remember that when you’re communicating via e-mail or through bulletin boards, you’re communicating with other people. Treat them as courteously as you’d like to be treated. CD

About the Author
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