

## **Internet 101**

*From the January/February 2003 issue of the OFA Bulletin*

Okay, so everyone but you is talking about the Internet and spending countless hours each day sending e-mail messages. Don't worry, there's still hope. It's never too late to jump on board the "Information Superhighway," and this article will help you learn how.

Actually, you're not alone. Many OFA members are still not connected to the Internet. They may not have Internet access, or a web site, or even a computer in their business. Lucky for you, getting connected is not only easier nowadays, it's also better than it was just a few years ago.

So before we talk about what you need to "get connected," let's take a quick look at the Internet, including a brief history about how it all began.

### **What is the Internet and Where Did It Come From?**

Did you know that the Internet has been around since the mid-1960s? It actually took root during the Cold War out of a need to develop a solid-state, bomb-proof communications system for the United States military. The concept was to decentralize information processing by developing a network of computers linked throughout the country. Thus, if one or more locations were attacked, the remaining computers could keep the network running.

At first, only government "think tanks" and large universities were linked, and the Internet served as an emergency military communication systems. The operation was coordinated by the Department of Defense's Advanced Research Project Agency (ARPA) and was referred to as ARPANET.

Over time, the Internet transformed from a military pipeline to a communication and research tool for scientists and scholars. For most of the 1970s and 1980s, the Internet was nothing more than a cryptic system of interconnected computers. To use it, you would have to enter text commands; there was no "user-friendly" interface.

The 1980s brought the advent of the personal computer (PC). More and more businesses and individuals were becoming computer literate. As the general public began using computers, two key companies locked onto the idea of making computers easier to use: Apple and Microsoft.

Apple's Macintosh® computer system, released in 1984, was the first mass-produced system to offer a “user-friendly” visual interface. Then Microsoft followed suit just a few years later with the Windows® operating system. With computers becoming easier to use and more people using them, it was just a matter of time before people would want to connect to the Internet – in particular, those at colleges and universities who were already using large mainframe computers to connect.

### **What's the Different Between the “Web” and the “Internet”?**

Think of the World Wide Web (WWW) as the illustrated version of the Internet. It began in the late 1980s, when physicist Dr. Berners-Lee wrote a small computer program for his own personal use. This program allowed pages within his computer to be linked together using keywords. It soon became possible to link documents in different computers, as long as they were connected to the Internet. The document formatting language used to link documents is called HyperText Markup Language (HTML). The Web remained primarily text based until 1992. That year, Marc Andreessen developed a new computer program called the NCSA Mosaic (National Center for Supercomputing Applications at the University of Illinois) and gave it away! The NCSA Mosaic was the first web browser. The browser made it easier to access the different website pages that had started to appear. Soon, people around the world were sharing documents and adding millions of new pages each day.

By the early 1990s, the growth of websites and pages on the Internet was remarkable. But what really brought mainstream America onto the Internet was a host of new programs and online services that made it easy and affordable to get connected.

### **Let's Get Connected!**

So now that you have a little background on the Internet, let's review how to get connected. I often find metaphors helpful to illustrate a new or complex topic, so I'll use

one here to help you make sense of everything. For purposes of this discussion, I'll assume that you already have a personal computer. If you do not, the folks at Dell and Gateway are standing by to help!

You can think of the Internet, literally, as a highway. It's truly an information highway that connects computers around the world. The roads of this highway are comprised of communication lines that run underground, aboveground, and through the air. Many of them are the same ones used to provide telephone or cable television service. And, just like highways, some can handle more traffic than others – allowing you to travel faster.

In order for you to get connected to this highway, you need to find the nearest on-ramp. (At this point I should mention that our highway isn't a "freeway" – rather, it's a toll road.) The on-ramp is synonymous with the term "Internet Service Provider," or ISP for short. You need to have someone provide you with a means for getting on the Internet, and an ISP does precisely that. Put simply, an ISP provides the communication line that connects your personal computer to the Internet. This is typically a phone line, cable line, or satellite connection.

And, as you might imagine, your local telephone and cable service providers are eager to help you get connected. So what are the pros and cons of each type of connection? See Table 1 for a snapshot.

Which ISP you choose depends on your preference, budget, and product availability. If you're on a super-tight budget and plan to use the Internet for personal or occasional use, dial-up access may be the choice to begin with, even though it is the slowest and most tedious means of connecting. If you plan to use the Internet for business, DSL or cable access would be a better alternative. DSL is typically as expensive, with roughly the same speed. But our experience has biased us toward cable access, because of its excellent track record of reliability. You may not have to weigh each of these options, because many areas still do not have cable modem access. Call your cable or satellite television provider to find out.

Now back to our metaphor. Once you've picked the right "on-ramp" to get on the information superhighway, now you need a vehicle to make the journey. In this case, our vehicle is the software program that you use on your computer to travel from point to

point. This program is called a web browser. The good news is that web browsers are free and are typically preinstalled on your computer. The top three web browsers are: Microsoft Internet Explorer®, also referred to as simply “IE”; Mozilla Firefox®; and America Online®, which has a built-in web browser software. When you sign-up for the America Online® service, they provide their own proprietary software and also serve as your ISP (they provide the connection). This is one reason why their popularity exploded in the 1990s. For all other services, you had to first purchase the monthly Internet connection and then assemble the software necessary to connect to and browse the Internet.

But we’ve come a long way. Now you can purchase an Internet connection, and all the software that you need comes installed on your system. That includes web browsing software as well as e-mail software. So before we end our journey, let’s talk briefly about e-mail.

### **How Do I Send and Receive Email?**

You can send and receive electronic mail using the Internet. Much like a web browser, e-mail software is free and typically preinstalled on your computer. When you sign-up for internet service from an ISP, they will give you an e-mail box that is stored on one of their computer systems (a.k.a. “mail servers”).

Other people can send mail to you even when you are not connected, because your mailbox at your ISP is always online. Think of it like having a post office box. While you are “away,” mail collects in your post office box. Then, at your convenience, you can pick up the mail at any time. This is precisely how your e-mail works. When you sit down at your computer and connect to the Internet, you use an e-mail program to check your online post office box. If new messages are present, the e-mail software downloads the messages to your computer. You can then read and respond to the messages using the e-mail software on your computer. It’s that simple!

Remember, it wasn’t easy the first time you got behind the wheel of a vehicle, so don’t expect to master the Internet, web browsing, and e-mail all at once. But it’s a great view, so enjoy the drive.

**Table 1. Pros and cons of Internet service providers.**

<b>Service (example)</b>	<b>Communication Method</b>	<b>Pros</b>	<b>Cons</b>
<b>Dial-up</b>	Uses ordinary phone line	Very affordable; typically under \$25/month	Slow connection speed; may not be able to connect during busy times; may take awhile to connect; requires use of a phone line while you are connected
<b>DSL</b>	Uses ordinary phone line	Faster than dial-up; claims to be as fast or faster than cable; typically \$30-\$50/month	Line phone service, it can be unreliable
<b>Cable</b>	Uses the same line as your cable television service	Very fast; never busy signal; instant connection; “always on” connection; doesn’t require separate phone line	Most expensive alternative; not available in all areas; typically \$45+/month
<b>Satellite</b>	Uses the same signal as your satellite television service	Reasonably fast but somewhat limited speed; good for remote locations; prices similarly to DSL	Storms can interfere with signal