

The Internet: a way of life

Say goodbye to dial-up

by Mike Parry

If you are reading this article, it is highly probable that you have a computer with some type of connection to the Internet. According to <http://www.internetworldstats.com/>, Internet usage worldwide has grown an average of 182% over the last five years, with no end in sight. Here, we will discuss some basic ways to use the Internet, a rationale for transitioning from dial-up to broadband, some potential security risks, and what you can do right now to make sure your computer is safe when you're online.

Just a Few of the Possibilities

If you love to shop, the Internet can be your best friend. Go to your favorite search engine (mine happens to be Google), type the name of a product you're thinking of buying, and then add the word "reviews" (i.e., "Honda CRV Reviews"). By the way, to a search engine, putting quotes around words means they must appear together to qualify as a "hit" – which, in this case, means the difference between 560 results (with quotes) and 1.5 million results (without quotes)...but that's a topic for another time. In addition to research, you can find Internet-based companies which do not have "brick and mortar" stores and can often offer better prices because of lower overhead.

The Internet can also enhance your job and make life easier. For example, after our 2004 three-hurricane season in central Florida, a management team told me how easy it would have been to post a few pictures of their condo's structural damage on a web site – if only they had one! This way, out-of-town owners could have seen for themselves the extent of the damage instead of calling. A picture truly speaks a thousand words.

Can you be found on the Internet? Do you have a web site? How do you stay in touch with "seasonal" residents? Do you spend more time on the phone or corresponding via email? For all its perceived evils, unlike a phone call, an email encourages users to summarize thoughts and not expect immediate replies. Many busy managers, in all sectors of industry, are "training" their clients to utilize email.

How Fast is Fast Enough?

Computers connect to the Internet through a modem, which originally got its name from its function, namely to "mo"dulate digital information into analog (sound) and then "dem"odulate it back to digital. With the advent of totally digital phone and cable TV connections, we now have "hi-speed" alternatives such as DSL and Cable. They still use a device called a modem, but the time-consuming digital-to-sound conversion is gone – it's more efficient and much faster. Broadband now offers

speeds 100 times that of the older dialup technologies. Information that once took minutes to transmit now only takes seconds.

In the past few years, the race for new subscribers has been between DSL which connects to you through the phone company, and Cable which connects through your cable TV provider. According to the Leichtman Research Group

(<http://www.leichtmanresearch.com>), DSL and Cable providers added about 2.6 million net additional subscribers in the third quarter of 2005 alone. As of that report, the top broadband providers now have 40.2 million high-speed Internet subscribers, with Cable having 58% of that market share. Not be outdone, "wireless" Internet providers, although having a long way to go to get the market share of the DSL and Cable providers, are making major inroads in many large metropolitan markets.

All three of these services feel they have the others beat when it comes to speed and reliability. I recommend you talk to various users and find out how often they experience outages. In some areas cable is much more reliable than DSL or wireless, while in other areas it could be the other way around. Where can you find information like that? The Internet, of course!

Here Come the Bad Guys!

We have already discussed the explosion of Internet users as well as the corresponding expansion of broadband subscribers. So it stands to reason that with more users online longer, the pool of potential targets for hackers is greater. That being said, I think you should consider leaving your computer connected to the Internet and on all the time. WHAT!? It may sound crazy but in today's online world you **must** have an up-to-date operating system, anti-virus program and anti-spyware program – period! Turning off your computer each night may remove you from the reach of hackers, but it also removes you from the downloadable updates today's software is designed to use to help keep you safe from those very hackers.

What Do Routers Do and Why Do You Need One?

In the same way physical structures have a unique "mailing" address, every computer on the Internet has a unique "IP" (Internet Protocol) address - made up of four numbers from 0 to 255 - separated by a period, i.e., 124.98.45.233. The creators of this addressing structure reserved three "blocks" of IP addresses and deemed them "private." That means "public" devices which direct the flow of Internet traffic all over the world will not forward traffic to or from these "private" addresses.

A router is a piece of hardware that stands between your Internet connection and your computer. Let's use an analogy: think of a router as the mailroom at a company with lots of employees, each with their own unique "private" ID number. All company correspondence goes through the mailroom

(router). While each outbound letter has the company's unique "public" return address, the wizards in the mailroom remember the "private" ID number of the sender and "route" responses back to the correct recipient via that private ID.

Even in that over-simplified example, it's easy to see the power of this "one-public" to "multiple-private" IP address structure. In just one of the three private address blocks (10.0.0.0 to 10.255.255.255) there are just over 16.5 million private addresses that each company can assign to its internal computers – all behind one "public" IP address. The three "private" IP blocks are:

- 10.0.0.0 through 10.255.255.255
- 172.16.0.0 through 172.31.255.255
- 192.168.0.0 through 192.168.255.255

So, is your computer's IP address "private" or "public?" Let's see: Windows:

1. Click the start button and choose the "Run" command.
2. For Windows 95, 98 or ME, enter "winipcfg" and click "OK."
3. For Windows NT, 2000 or XP, enter "cmd" and click "OK."

In the Command Prompt window that opens, enter "IPConfig" after the ">" prompt and press "ENTER."

Mac:

1. Mac OS X (any version)
 - a. Open "finder", under applications/utilities launch Network Utility.
 - b. Pull down network interface to the correct Ethernet interface.
 - c. Information and utilities are available from the tabs above.
2. Mac OS versions prior to OS X
 - a. Open Control panel and click to open TCP/IP.
 - b. Drag down to the correct Ethernet interface in the "Connect via:" pull down menu.

If your computer's IP address falls within one of the three private IP address blocks above, it is private - if not, it is public. If you have a public IP, don't panic! There may be a good reason which your computer professional can explain to you. If there is not a good reason or you *are* the computer professional, you may either need to purchase a router or correctly configure the one you have.

Gut Check

The Internet has brought a lot of change, the very thing we often fear the most. But savvy businesses and users every day are learning to mitigate the risks while embracing the possibilities. Are you?

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