

Computer Tech Talk Getting on the Internet By Dennis Henson

What is the Internet?

The internet is a world-wide network of millions of computers connected to share information. You may know the internet as the "information super highway". The internet lets you send electronic mail, read electronic news and be informed without leaving your easy chair.

Internet History. One of the first transcontinental high-speed networks available to a larger group of users was developed by the Advanced Research Projects Agency (ARPA) (US DoD) and began operation in the 1970's. Called ARPANET, this network was used to connect research universities and government agencies promoting collaboration on joint projects. It became evident that the public sector could benefit from this kind of instantly available information conduit. The modern internet builds on the successful ideas pioneered in ARPANET. Use of the internet by the general public has grown rapidly from 16 million users worldwide in 1995 to over one billion users today*.

*statistics from internetworldstats.com

One bright fifth grade student recently asked me an insightful question, "Where is the internet?" I took him to one of our communications rooms and showed him a small piece of the internet: an internet control computer and some network switching hardware. I explained to him that there are internet management computers at our local schools, in our local phone company switching stations, in universities, government agencies, and in various locations around the world. After seeing our gear and imagining the enormity of the entire internet, his next question was "Who pays for all those computers?" Everyone pays in his part. As a user, you pay a monthly fee. Your service provider pays for multi-user service on a higher capacity connection. At the ultimate level, there are nine tier 1 (internet backbone) providers enabling very high-speed global communications.

Why go online? You can do some tasks on a personal computer (PC) not connected to

the internet. Compose, edit, and print documents with the help of a word processing program and a printer. Play the latest video games. Use your PC as an entertainment center. But to optimize the use of your home PC, you need a connection to the internet. I listed dozens of useful applications in a previous article of "Computer Tech Talk". From that article, the broad categories of applications that need the internet are: online finance, news, email, video conferencing, distance learning, buying and selling, and just plain finding out things you want to know.

How do you get on the Internet?

You pay an Internet Service Provider (ISP) a monthly fee to connect your home PC to the internet. You can use a "dial-up" or "broadband" connection. For dial-up, you must have a device called a modem installed in, or connected to your computer and to the wall phone jack. For broadband, you must have a network interface card (NIC) installed in or connected to your computer and connected to the broadband providers "modem" that in turn connects to the providers signal. In either case you need computer software installed on your PC for email and internet. Basic versions of this software are provided with the operating system when you buy a PC.

Dial-up. A dial-up connection is the least expensive internet access. There are many ISPs that provide local phone number dial-up access. In April of 2006, dial-up pricing varies from \$6.95 to \$21.95 per month for unlimited use. Beware that when you use a dial-up connection, your telephone line is "tied up" during your internet session. Speed of downloads will be 53 thousand information bits per second (bps) or slower. Don't expect to download the latest songs or large software updates for your computer or pictures in a timely manner using dial-up. Dial-up is the slowest internet connection. A single-family photo taken with a new digital camera (3 mega-pixels, uncompressed) can take over 22 minutes to download via dial-up (see download comparison).

(A)DSL Broadband.

Asymmetric Digital Subscriber Line (DSL) internet connections are provided by your local

telephone company. Unlike dial-up, DSL *does not* tie up your phone line while on the internet. In fact, the internet connection is "always on". DSL is considerably faster than dial-up. Advertised download speed pricing options vary from 384 thousand bps to 3 million bps (see download comparison). This fee is separate from your voice phone line charge. Contact your telephone provider to obtain DSL service. If you have a 433-number, call Duo-County. Duo-county has deployed 23 fiber optic nodes around Cumberland County. Most Duo-County customers are within 18,000 feet or less of a fiber node, and have DSL available for purchase. In Cumberland County, Alltel provides local telephone and DSL service in Burkesville, Marrowbone, and areas within a few miles of each town. If you have an 864-number, call Alltel or their local service technician.

In April of 2006, DSL service prices vary from \$24.95 to \$49.95 per month. Your local phone company must activate your DSL service and provide you with a digital interface box (modem) to connect between the wall phone jack and your computer NIC.

Cable Broadband. If you have access to cable TV in Cumberland County, Mediacom delivers high-speed internet service via fiber optic cable to a pole near you. Cable broadband is fast and is also "always on". The current price totals \$62.04 per month. The internet service is actually \$42.95, but you pay \$3.00 to lease the modem and you must subscribe to basic cable for an additional \$16.09. Advertised download speed is currently 5 million bps.

Photo Download Comparison**

TYPE	SPEED	Time to See
Dial-up	53 kbps	22.6 minutes
DSL 1	384 kbps	3.1 minutes
DSL 2	3000 kbps	24 seconds
Cable	5000 kbps	15 seconds

**Your speed may vary.

ISP pricing and speeds stated in this article are accurate April 4, 2006 based on ISP advertising. Introductory offers that expire are not included here. You may also have to pay a one time installation fee. Monthly fees are subject to change.

Questions and comments about this article may be emailed to:
hcs@mchsi.com