

## Connecting to the Internet

### What do I need to connect to the Internet?

The first step in connecting to the Internet is a computer with a traditional modem or NIC, WebTV, or a wireless modem.

After you are put in contact with the Internet through these devices you will need access through an Internet service provider. The service provider equips you with an IP address, and once you choose a Username and Password you are ready to go.

### How can I connect to the Internet?

Connecting to the Internet requires a modem. Modem choices include Dial-up, Cable, DSL, Satellite, and T1 connections. Once you have installed a modem in your computer you have several choices for service providers. Most service providers use banners to offer lower prices, and sometimes free service. Banners are advertisements that pop up while you use their service, or when someone visits the provided web space.

#### Dial-up 56K Modems

Service prices range from \$7.95 to \$24.95 per month and utilize PPP [Point-to-Point] protocols. PPP can manage the transmission of data over everything from coaxial cables to satellite signals to fiber optic lines. Essentially, PPP lets your computer act as and be recognized as another node on the Internet, meaning part of the Internet itself. As a layer, it of course piggybacks on the Internet Protocol (IP) and Transmission Control Protocol (TCP).

**America Online (AOL)** offers plans ranging in price from \$4.95 per month for time-restricted access, to \$23.90 per month for unlimited access. All AOL accounts an email

## NOTICE:

This may be the last printed edition of the Newsletter.  
See page 4 for details.

address and web space, as well as access to AOL's Instant Messenger.

[www.aol.com](http://www.aol.com)

**RCN** provides unlimited Access to the Internet, two email addresses, 56K access and free technical support.

RCN accounts also include a Netscape or Explorer browser and 10MB of web space. For dial-up modems RCN charges \$215.40 for 1 year prepaid, or \$19.95 per month.

[www.rcn.com](http://www.rcn.com)

**Earthlink** offers plans ranging from \$21.95 per month to \$26.95 per month. All Earthlink accounts include 8-10 email addresses, 10MB of web space, and unlimited Internet access. Earthlink's pricier plan features no-wait priority tech support.

[www.earthlink.com](http://www.earthlink.com)

**Prodigy** provides low-usage Internet access for \$9.95 per month and unlimited plans ranging from \$19.95 per month to \$198 for 1 year prepaid. All accounts include an email address.

[www.prodigy.com](http://www.prodigy.com)

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For more information call: 718-788-1086

Or visit:

[LibertyComputingCenter.com](http://LibertyComputingCenter.com)

**NetZero** provides free service with banners for up to 40 hours per month. NetZero also provides users with an email account. It typically takes much longer to connect with free services and it is often difficult to reach helpful customer service unless you utilize the service provider's pay services.  
[www.netzero.com](http://www.netzero.com)

There are thousands of options when choosing an Internet service provider. For more listings go to [www.thelist.com](http://www.thelist.com).

#### Cable Modems

Cable Internet access is growing in popularity. Cable connections provide you with a continuous connection to the Internet as opposed to a static IP. Many cable carriers provide Cable Internet access, but prices and availability will vary.

When you choose cable internet access, a cable installer is dispatched to split your cable line and place a second cable jack (if necessary) in the room where your personal computer is located. This cable line connects to a cable modem.

In order to connect the cable modem to your personal computer, your computer must have a 10BaseT Ethernet connector. While these connectors are standard on many business computers and high-end personal computers, older home computers are less likely to have these connectors. A 10BaseT Ethernet card can be provided as part of the installation. A computer consultant is then dispatched to install the software needed to access the Internet.

The price of cable Internet access varies from market to market. On average, the service runs \$39.95 per month. This fee is in addition to the regular monthly cable subscription. The monthly fee includes unlimited access to the online service and the Internet (without hourly fees). The average price for the one-time installation is \$100.00.

**Time Warner** provides Road Runner high-speed Internet service. For more information visit: [roadrunner.com](http://roadrunner.com)

#### DSL Connections

Refers collectively to all types of digital subscriber lines, the two main categories being ADSL(asymmetric digital subscriber line) and SDSL(symmetrical digital subscriber line). Two other types of xDSL technologies are High-data-rate DSL (HDSL) and Symmetrical DSL (SDSL).

DSL technologies use sophisticated modulation schemes to pack data onto copper wires. They are sometimes referred to as last-mile technologies because they are used only for connections from a telephone switching station to a home or office, not between switching stations. xDSL is similar to ISDN inasmuch as both operate over existing copper telephone lines (POTS) and both require the short runs to a central telephone office (usually less than 20,000 feet). However, xDSL offers much higher speeds - up to 32 Mbps for downstream traffic, and from 32 Kbps to over 1 Mbps for upstream traffic.

**Earthlink** offers download speeds of up to 1.5Mbps, upload speeds of up to 128Kbps, eight email accounts, and free web space for \$49.95 per month.  
[www.earthlink.com](http://www.earthlink.com)

**Verizon** offers packages for DSL service that range in price from \$49.95 per month to \$79.95 per month. Verizon DSL connection range in speed from 768/128Kbps to 1/128Kbps.  
[verizon.com](http://verizon.com)

For links to hundreds of DSL providers go to [www.thelist.com](http://www.thelist.com).

#### DSS

DSS (digital satellite system) is a network of satellites that broadcast digital data. An example of a DSS is DirecPC, which broadcasts digital television signals. DSS's are expected to become more important as the TV and computer converge into a single medium for information and entertainment. Download is via satellite at speeds up to 400kbps.

**DirecPC** offers ISP service ranging in price from \$29.95 per month to \$69.99 per month. If you provide your own ISP DirecPC offers service for \$19.95 per month. All accounts feature up to five email accounts.  
[www.direcpc.com](http://www.direcpc.com)

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#### **NEXT ISSUE:**

#### ***Information Storage and Sharing***

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## T1

A T1 connection is a dedicated phone connection supporting data rates of 1.544Mbits per second. A T1 line actually consists of 24 individual channels, each of which supports 64Kbits per second. Each 64Kbit/second channel can be configured to carry voice or data traffic. Most telephone companies allow you to buy just some of these individual channels, known as fractional T1 access.

T1 lines are a popular leased line option for businesses connecting to the Internet and for Internet Service Providers (ISPs) connecting to the Internet backbone. The Internet backbone itself consists of faster T3 connections. T1 lines are sometimes referred to as DS1 lines.

## Free Access

Free Internet access is available through local libraries and community centers.

## What are the different protocols?

Computers and the Internet communicate using a variety of protocols. Protocols act as a universal translator allowing computers from different countries, using different languages, and operating systems, such as DOS, Windows, Mac, and Unix, to communicate.

**PPP** (point to point) is the Internet Standard for transmission of IP packets over serial lines. PPP supports async and sync lines. PPP lets your computer act as and be recognized as another node on the Internet. As a layer, it of course piggybacks on the Internet Protocol (IP) and Transmission Control Protocol (TCP).

**HTTP** (HyperText Transfer Protocol) is the underlying protocol used by the World Wide Web. HTTP defines how messages are formatted and transmitted, and what actions Web servers and browsers should take in response to various commands. For example, when you enter a URL in your browser, this actually sends an HTTP command to the Web server directing it to fetch and transmit the requested Web page. HTTP is called a stateless protocol because each command is executed independently, without any knowledge of the commands that came before it. This is the main reason that it is difficult to implement Web sites that react intelligently to user input. This shortcoming of HTTP is being addressed in a number of new technologies, including ActiveX, Java, JavaScript and cookies. Currently, most Web browsers and servers support HTTP 1.1. One of the main features of HTTP 1.1 is that it supports persistent connections. This means that once a browser connects to a Web server, it can receive multiple files through the same connection. This should improve performance by as much as 20%.

**FTP** (File Transfer Protocol) is the file transfer protocol in the Internet's TCP/IP protocol suite. You use FTP to copy (not really transfer) files from one computer to another. Both computers have to be connected to the Internet or another computer network using the Internet's TCP/IP communications protocols (like the ADN-ii). Your computer and the remote computer that you're exchanging files with must "talk" FTP

**IRC** (Internet Relay Chat) is a chat system developed by Jarkko Oikarinen in Finland in the late 1980s. IRC has become very popular as more people get connected to the Internet because it enables people connected anywhere on the Internet to join in live discussions. Unlike older chat systems, IRC is not limited to just two participants. To join an IRC discussion, you need an IRC client and Internet access. The IRC client is a program that runs on your computer and sends and receives messages to and from an IRC server. The IRC server, in turn, is responsible for making sure that all messages are broadcast to everyone participating in a discussion. There can be many discussions going on at once; each one is assigned a unique channel.

**Telnet** is a terminal emulation program for TCP/IP networks such as the Internet. The Telnet program runs on your computer and connects your PC to a server on the network. You can then enter commands through the Telnet program and they will be executed as if you were entering them directly on the server console. This enables you to control the server and communicate with other servers on the network. Telnet is a common way to remotely control Web servers.

**United Internet Services, Inc.  
in conjunction with  
Liberty Computing Center and  
LightHead.com  
is due to launch a High Tech Incubator  
in Brooklyn, New York.**

For more information about this and other projects please visit:

[LibertyComputingCenter.com/incubator.htm](http://LibertyComputingCenter.com/incubator.htm)

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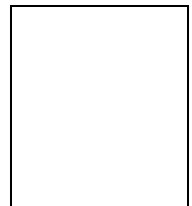
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