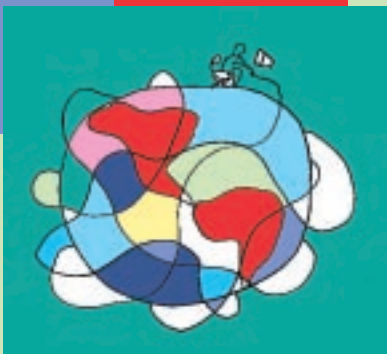
an introduction to the

Internet for investors



Introduction to the Internet

The Internet is a worldwide network of computers linked by telecommunication connections. From your home computer and through your telephone line, you can access information all over the world using companies that provide a variety of services for Internet users. You can learn, acquire information, purchase products, and invest your money on the Internet. Here are a few of the exciting topics this book will introduce you to.

With on-line trading you can invest your own money efficiently and cheaply.

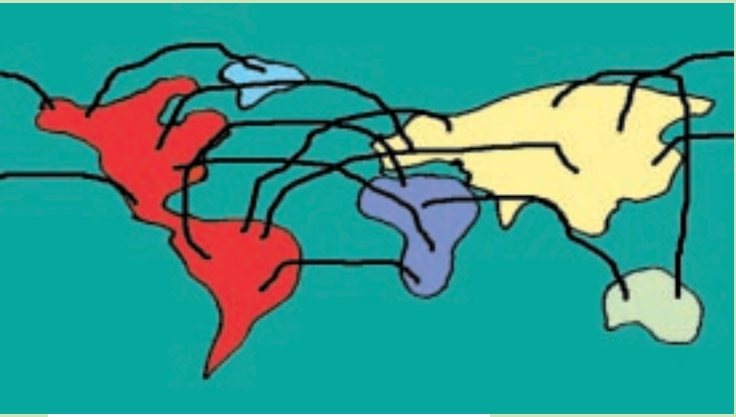
With on-line chatting you can communcate immediately with other Internet users.

Through electronic mail you can send messages around the globe quickly and economically

File transfer protocol (FTP) allows you to obtain software that is publicly available.

Creative World Wide Web sites on all imaginable topics can be accessed on the Internet.

Introduction to the Internet (cont'd)



STRUCTURE: The Internet is structured with a core of powerful supercomputers to which smaller networks are connected. Smaller networks are connected to each of those, and so on, until one of the networks reaches your home computer.

USEFUL TERMS:

Anonymous FTP
A way to log on to a remote computer using an FTP program.

Archive
A database of files stored on an FTP site.

BBS (Bulletin Board System)
A single network or computer that can be dialed directly in order to access services.

Client/Server
Client computers within a network request information, while server computers within a network store and deliver information.

FTP (File Transfer Protocol)
A protocol for transferring files on the Internet.

HTML (Hyper Text Markup Language)
The language used to write a web page.

IP (Internet Protocol) address
The address of a node in the computer network known to all other computers in the network.

ISP (Internet Service Provider)
A company that provides access to the Internet in some form, usually for money.

IRC (Internet Relay chat)
Networks where "live" conversations are held on the Net.

Newbie
A user who is new to the Internet.

PoP (Point of Presence)
The telephone number provided for users to dial in to their service provider.

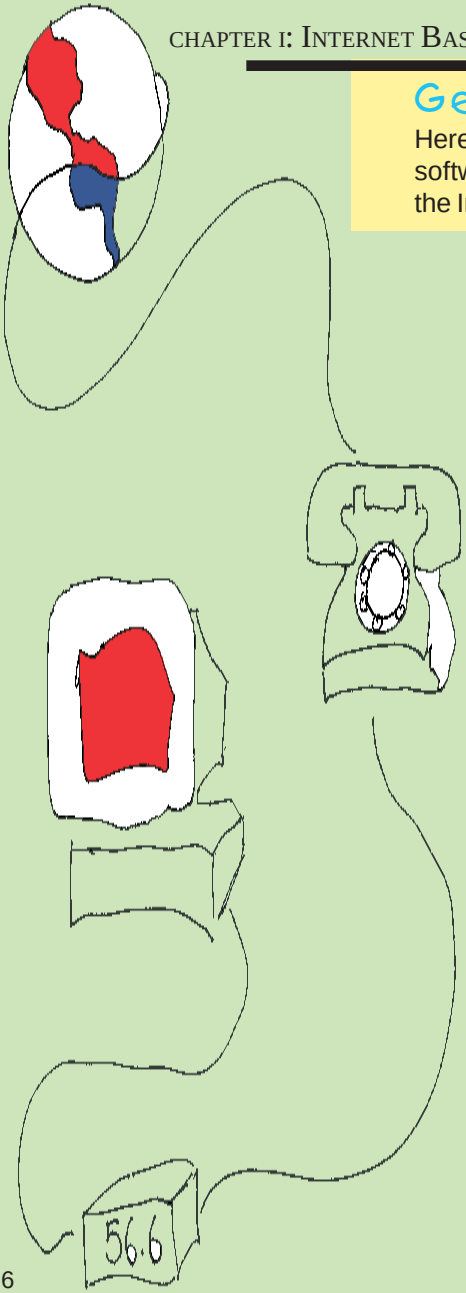
PPP (Point-to-Point Protocol)
A protocol which allows a computer to be a part of the Internet.

URL (Uniform Resource Locator)
An Internet address providing a standard way of referring to resources.

Usenet
Main network of newsgroups available on the Internet.

Web browser
A program for viewing and accessing information on the World Wide Web.

Web page
A page of information on the World Wide Web.



Getting Connected

Here are the essential hardware and software items you need to connect to the Internet:

PHONE LINE This is obvious, but you must remember to disable call-waiting before getting connected to the Internet.

MODEM (short for modulator-demodulator) This takes the binary code of 0's and 1's in your computer and translates it into analog signals that can be transmitted over the telephone and is now built-in to most new computers. Depending on the speed of the modem, getting information can be painstakingly slow, tolerable, or fast. If you need to purchase an external or internal modem (which is usually 50% cheaper than an external one), we recommend purchasing a minimum speed of 56K (kilobits per second) [Bits is a contraction of Binary digit; there are 8 bits to every byte]. At present, which soon will be past, the standard of technology is a V.90 56K modem. If you have a slower modem, upgrading is the answer.

Getting Connected (cont'd)

An **ISDN** (Integrated Services Digital Network) modem, which sends digital information at speeds of 64K or 128K over telephone lines, needs an ISDN link from your service provider as well as a special telephone connection. Presently, there are **cable modems**, which are hooked up to an upgraded cable television system and **DSL modems** (Digital Subscriber Line) which run over existing phone wires. Both cable and DSL modems do not interfere with your phone service. They eliminate modem dialing and log-on procedures, and they can provide full-time connection. To give you an idea of the speed of a cable or DSL modem, the average download rate for a 56K modem, depending on the local line connection, is 3 - 6 KBps (kilobytes per second) which translates to 1 MB (megabyte) of data every 4 minutes. For cable or DSL modems, the download rate is *minimally* 1 - 2 MBps (megabytes per second). Unfortunately, faster connections equal more money, and not every city has cable or DSL modem service. Check with your service provider or cable company.

Getting connected (cont'd)

Minimally, your PC should be a Pentium base or a compatible 586 processor. Your Macintosh should be a Performa series or higher. Either the PC or the Macintosh should have at least 32 MB RAM (random access memory). if your processor is older than three years, be sure to check the speed of your serial port. the serial port brings data (such as from a modem) into and out of your computer and you might need to upgrade your serial card. The 16550 UART (universal asynchronous receiver/transmitter) chip, a device which converts serial data (such as from a modem) to the computer's parallel data and vice versa, is the popular standard in recent years.

Service Providers & Software

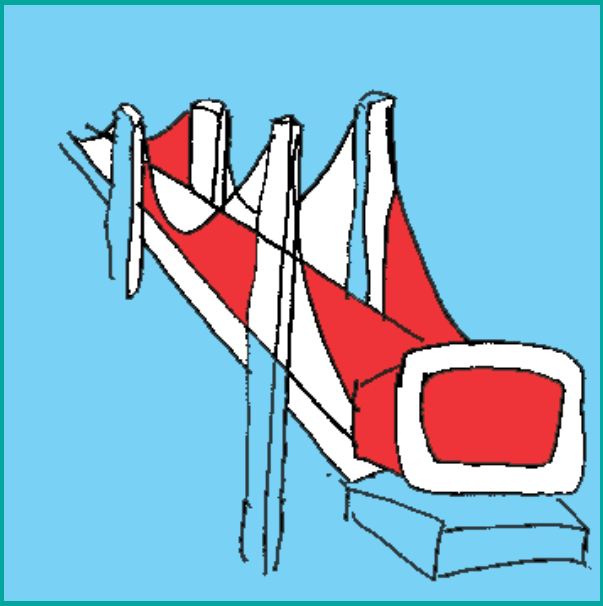
A PPP ACCOUNT, provided by an INTERNET SERVICE PROVIDER (ISP) or a COMMERCIAL ONLINE PROVIDER, allows any computer to become a 'node' on the Internet, that is, the computer becomes a host computer with two-way access to other computers on the Internet. **Note:** If you are looking for an ISP, be sure to find one which has a phone number that is local and untimed and that has phone support and PPP accounts.

More expensive, **full-service** Commercial Online Providers such as AOL (America Online) or CompuServe have certain advantages over ISPs such as AT&T Network Commerce Services or EarthLink. They not only provide Internet access, but also organize certain aspects of the Internet into menus and hyperlinked icons for the user, such as discussion forums, databases, investor services, financial resources, and so forth. These information resources can potentially save the user time.

SOFTWARE BUNDLES can be obtained for free when you purchase a new computer or when you sign up with an ISP. The bundles can include software for retrieving and sending electronic mail, browsing the World Wide Web, newsreading or chatting, handling Telnet and Gopher, retrieving videos and audio files (called Web Browser plug-ins or add-ons), building Web-pages, and so forth.

Service Providers & Software (cont'd)

Internet connection software, also called TCP/IP (transmission control protocol/ Internet protocol) program, which is now built-in to most new computers, is necessary for handling a PPP account.

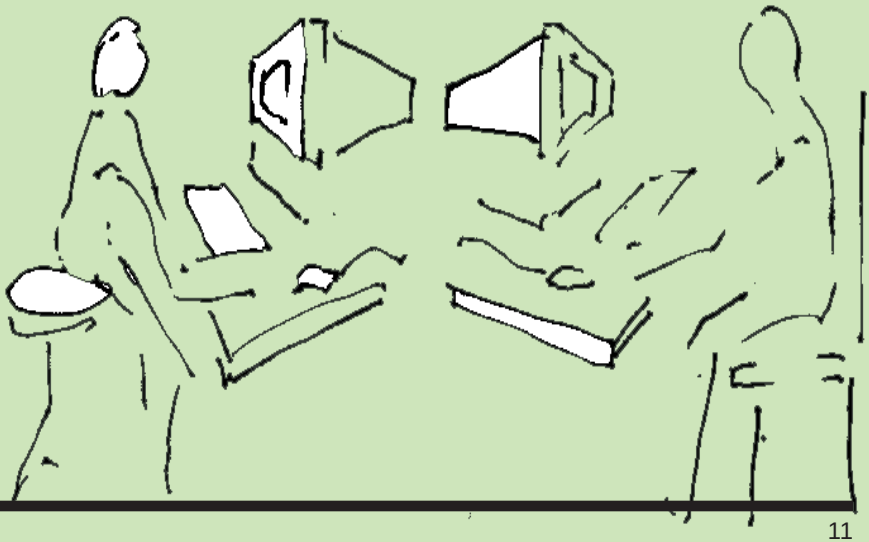


If needed for your TCP/IP program, information your ISP should provide:

- your user name
- your password
- the phone # to dial-in
- the start-up command, if any
- your numeric IP address for your computer (some ISP's give you a temporary one every time you call in)
- your ISP's DNS (domain name server) address (a numeric address)
- your domain name (your ISP's domain suffix such as aol.com)
- interface type or driver (such as PPP)

The advantages for choosing an ISP over a commercial provider are typically in the areas of cost, speed, flexibility, and accessibility. Many ISPs are local, but the trend of many ISPs is toward worldwide access. On the most basic level, an ISP will furnish a gateway to the Internet. But look for these features in choosing an ISP:

- toll-free or local telephone access
- unlimited access
- high ratio of access lines to users (one line for every 10 users)
- software package: Web browser, email & news reader
- FTP software, Web-page builders, even Gopher & Telnet programs
- rate discounts for long-term contracts



For ISPs, remember to ask such questions as:

? Does the monthly fee provide unlimited Internet access?

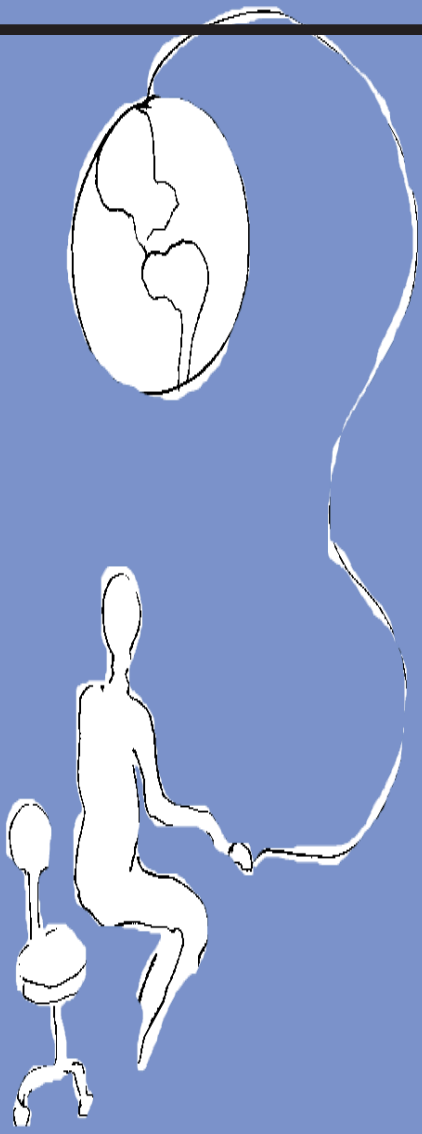
? What is the extent of the coverage and is it local and/or national?

? What type of customer service and support do they offer?

? What sorts of software is provided with your registration fee?

? Are the software packages for e-mail, web browsing, FTP easy to install?

? Is the e-mail account a POP3 (access from any computer) or a SMTP (simple mail transfer protocol) connection?



Providers

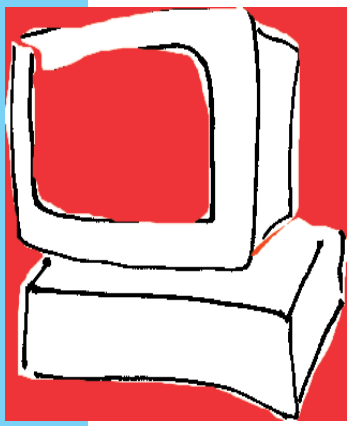
With all providers you should find out what types of telecommunication lines and/or modem speeds they support. These are the present options: 28.8, 33.6, 56K, 56K(X2), 56K(56Kflex), ISDN (integrated services digital network), Cable, V90, DSL (digital subscriber line).

Commercial Online Providers

America Online	www.aol.com
Compuserve 2000	www.compuserve.com
The Microsoft Internet Access	www.microsoft.com
Prodigy Internet	www.prodigy.com

Internet Service Providers

AT&T WorldNet	www.att.net
Concentric Network	www.concentric.net
EarthLink Sprint Network	www.earthlink.net
IBM Internet Connection	www.ibm.net
MindSpring	www.mindspring.net



Where to find an ISP?

ISPcheck	www.ispcheck.com
ISP Finder	ispfinder.com
Online Connection	www.barkers.org/online/Index.html
The List	thelist.Internet.com
ZDNet	www.zdnet.com /products/Internetuser