

INTERNET ACCESS

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It would be helpful to provide a brief historical summary of the Internet before jumping into the different means of accessing "The Net".

The Internet was developed primarily by Vinton Cerf, an American computer scientist, in 1973 as a part of a United States Department of Defense Advanced Research Projects Agency project managed by American Engineer, Robert Kahn. In 1984, the project was turned over to the private sector and to government research and scientific agencies for further development. In 1993, the Internet was turned over to the public and by early 1995 access was available in over 180 countries and there were over 30 million users. It is expected that 100 million computers will be connected to the public Internet by the year 2000.

The public Internet can be accessed in several different ways: through a LAN, by a host, terminal access or gateway access. A LAN is a Local Access Network where there are a group of computers and other devices that are spread over a relatively limited area and connected by a communications link. This also allows you to communicate with any other computer on the network. If you access by a host, it is usually done through a LAN or with telephone lines and modems combined with Internet software on a personal computer. Terminal access is usually done by a telephone line and a modem and it is used with terminal-emulation software on a personal computer. This also allows you to interact with another computer that is an Internet host (explained later). Gateway access is similar to terminal access, but it is provided through on-line or similar services or other networks such as Bitnet, Fidonets, or UUCP nets that allow users to minimally exchange e-mail with the Internet.

The Internet is made by using different kinds of electronic transport media including optical fiber, telephone lines, satellite systems, and LAN's. Most computers that are connected to the Internet are called hosts. The function of hosts is to interface users (PC's) to other hosts in the Internet. Other devices that are called routers which route data, usually in data "packets" to other computers. Networks and computers that are part of the global Internet have unique registered addresses and get access from Internet service providers.

There are many different services that the Internet provides. The World Wide Web (WWW) allows you to create and use point-and-click hypermedia presentations. Documents are joined across the Internet to form a wide variety of information that can be browsed easily through the WWW. E-Mail is a service that allows a message to be sent from one computer to another. Gopher allows you to create and use computer file directories which are joined through the Internet for other users to browse. File Transfer Protocol allows you to transfer computer files between host computers. This is still the primary use of the Internet. UseNet enables users to distribute news messages among thousands of structured newsgroups.

Most of the existing telecommunications providers and an explosion of new companies have begun offering Internet access service. A sample of these companies include:

- America Online
- AT&T
- Bell Atlantic
- Cable and Wireless

Digex
Erol's
MCI Communications
Pacific Telesis Group
Sprint
U.S. West
UUNET

A good example of the effects that the Internet is having on technological development in the business world can be shown with MFS Communications and UUNET Technologies. These companies are about to merge, planning a new way to access the Internet that would solve telephone network congestion. Users can now be connected through MFS's local networks (the users) directly to UUNET's Internet network. This provides a direct, dedicated line to the Internet. Also, it bypasses the conventional telephone company network switch, allowing users to access the Internet at 128 Kbps which is four times faster than today's 28.8 Kbps modem. This connection eliminates congestion among local phone lines. This new DSL (Digital Subscriber Line) service is expected to be available in early 1997 in selected markets, followed by a nationwide rollout.

The WWW is providing the introduction of news business tools and uses that may lead to billions of dollars worth of business transactions through the Internet in the future.