**Word Section**

**Internet,** in computer science, an open interconnection of networks that enables connected computers to communicate directly. There is a global, public Internet and many smaller-scale, controlled-access internets, known as *enterprise internets.* In early 1995 more than 50,000 networks and 5 million computers were connected via the Internet, with a computer growth rate of about 9 percent per month.

**Services**

The public Internet supports thousands of operational and experimental services. Electronic mail (e-mail) allows a message to be sent from one computer to one or more other computers. Internet e-mail standards have become the means of interconnecting most of the world's e-mail systems. E-mail can also be used to create collaborative groups through the use of special e-mail accounts called reflectors, or exploders. Users with a common interest join a mailing list, or alias, and this account automatically distributes mail to all its members.

The World Wide Web allows users to create and use point-and-click hypermedia presentations. These documents are linked across the Internet to form a vast repository of information that can be browsed easily.

Gopher allows users to create and use computer file directories. This service is linked across the Internet to allow other users to browse files.

File Transfer Protocol (FTP) allows users to transfer computer files easily between host computers. This is still the primary use of the Internet, especially for software distribution, and many public distribution sites exist.

The Usenet service allows users to distribute news messages automatically among thousands of structured newsgroups. Telnet allows users to log in to another computer from a remote location. Simple Network Management Protocol (SNMP) allows almost any Internet object to be remotely monitored and controlled.

**Connection**

Internets are constructed using many kinds of electronic transport media, including optical fiber, telephone lines, satellite systems, and local area networks. They can connect almost any kind of computer or operating system, and they are self-aware of their capabilities. An internet is usually implemented using international standards collectively called Transmission Control Protocol/Internet Protocol (TCP/IP). The protocols are implemented in software running on the connected computer. Most computers connected to the internet are called *hosts.* Computers that route data, or data packets, to other computers are called *routers.* Networks and computers that are part of the global Internet possess unique registered addresses and obtain access from Internet service providers.

There are four ways to connect to the public Internet: by host, network, terminal, or gateway access. Host access is usually done either with local area networks or with the use of telephone lines and modems combined with Internet software on a personal computer. Host access allows the attached computer to fully interact with any other attached computer—limited only by the bandwidth of the connection and the capability of the computer.

Network access is similar to host access, but it is usually done via a leased telephone line that connects to a local or wide area network. All the attached computers can become Internet hosts.

Terminal access is usually done via telephone lines and modems combined with terminal-emulation software on a personal computer. It allows interaction with another computer that is an Internet host.

Gateway access is similar to terminal access but is provided via on-line or similar proprietary services, or other networks such as Bitnet, Fidonets, or UUCP nets that allow users minimally to exchange e-mail with the Internet.

**Development**

The Internet technology was developed principally by American computer scientist Vinton Cerf in 1973 as part of a United States Department of Defense Advanced Research Projects Agency (DARPA) project managed by American engineer Robert Kahn. In 1984 the development of the technology and the running of the network were turned over to the private sector and to government research and scientific agencies for further development.

Since its inception, the Internet has continued to grow rapidly. In early 1995, access was available in 180 countries and there were more than 30 million users. It is expected that 100 million computers will be connected via the public Internet by 2000, and even more via enterprise internets. The technology and the Internet have supported global collaboration among people and organizations, information sharing, network innovations, and rapid business transactions. The development of the World Wide Web is fueling the introduction of new business tools and uses that may lead to billions of dollars worth of business transactions on the Internet in the future.[[1]](#footnote-2)

1. "Internet," *Microsoft® Encarta® 99 Encyclopedia.* © 1993-1999 Microsoft Corporation. All rights reserved. [↑](#footnote-ref-2)