**TEXT**

**HISTORY OF INTERNET**



 **Internet**, a system architecture that has revolutionized communications and methods of commerce by allowing various [computer networks](https://www.britannica.com/technology/computer-network) around the world to interconnect. Sometimes referred to as a “network of networks,” the Internet emerged in the United States in the 1970s but did not become visible to the general public until the early 1990s. By 2020, approximately 4.5 billion people, or more than half of the world’s population, were estimated to have access to the Internet.

 The Internet provides a capability so powerful and general that it can be used for almost any purpose that depends on information, and it is accessible by every individual who connects to one of its [constituent](https://www.merriam-webster.com/dictionary/constituent)  networks. It supports human communication via social media, [electronic mail](https://www.britannica.com/technology/e-mail) (e-mail), “chat rooms,” newsgroups, and audio and video transmission and allows people to work collaboratively at many different locations. It supports access to digital information by many applications, including the [World Wide Web](https://www.britannica.com/topic/World-Wide-Web). The Internet has proved to be a spawning ground for a large and growing number of “e-businesses” (including subsidiaries of traditional “brick-and-mortar” companies) that carry out most of their sales and services over the Internet. (See [electronic commerce](https://www.britannica.com/technology/e-commerce).)

# Foundation of the Internet

 The Internet resulted from the effort to connect various research networks in the United States and [Europe](https://www.britannica.com/place/Europe). First, DARPA established a program to investigate the interconnection of “heterogeneous networks.” This program, called Internetting, was based on the newly introduced concept of open architecture networking, in which networks with defined standard interfaces would be interconnected by “gateways.”

 In 1974 [Vinton Cerf](https://www.britannica.com/biography/Vinton-Cerf), then at [Stanford University](https://www.britannica.com/topic/Stanford-University) in California, and [this author](https://www.britannica.com/biography/Robert-Elliot-Kahn), then at DARPA, [collaborated](https://www.merriam-webster.com/dictionary/collaborated) on a paper that first described such a [protocol](https://www.merriam-webster.com/dictionary/protocol) and system architecture—namely, the transmission control protocol (TCP), which enabled different types of machines on networks all over the world to route and assemble data packets. TCP, which originally included the Internet protocol (IP), a global addressing mechanism that allowed routers to get data packets to their ultimate destination, formed the [TCP/IP](https://www.britannica.com/technology/TCP-IP) standard, which was adopted by the [U.S. Department of Defense](https://www.britannica.com/topic/US-Department-of-Defense) in 1980. By the early 1980s the “open architecture” of the TCP/IP approach was adopted and [endorsed](https://www.merriam-webster.com/dictionary/endorsed) by many other researchers and eventually by technologists and businessmen around the world.

 By the 1980s other U.S. governmental bodies were heavily involved with networking, including the [National Science Foundation](https://www.britannica.com/topic/National-Science-Foundation) (NSF), the Department of Energy, and the [National Aeronautics and Space Administration](https://www.britannica.com/topic/NASA) (NASA). While DARPA had played a [seminal](https://www.merriam-webster.com/dictionary/seminal) role in creating a small-scale version of the Internet among its researchers.



 By the late 1980s the network was operating at millions of bits per second. NSF also funded various nonprofit local and regional networks to connect other users to the NSFNET. A few commercial networks also began in the late 1980s.

 From the Internet’s origin in the early 1970s, control of it steadily devolved from government [stewardship](https://www.merriam-webster.com/dictionary/stewardship) to private-sector participation and finally to private custody with government oversight and forbearance. Today a loosely structured group of several thousand interested individuals known as the Internet Engineering Task Force participates in a [grassroots](https://www.britannica.com/topic/grassroots) development process for Internet standards. Internet standards are maintained by the nonprofit Internet Society, an international body with headquarters in Reston, Virginia. The Internet Corporation for Assigned Names and Numbers ([ICANN](https://www.britannica.com/topic/ICANN)), another nonprofit, private organization, oversees various aspects of policy regarding Internet domain names and numbers.