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Ask Anything

Marc Andreessen

American software engineer

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Ask Anything

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Marc Andreessen Marc Andreessen (centre) with fellow Netscape officers Jim Barksdale (left) and James Clark (right) [\(more\)](#)

Marc Andreessen (born July 9, 1971, [Cedar Falls, Iowa](#), U.S.) is an American-born [software](#) engineer who played a key role in creating the [Web browser Mosaic](#) and who cofounded [Netscape Communications Corporation](#).

While still in [grammar school](#), Andreessen taught himself BASIC, a programming language, so that he could design a program that   later attempted to  and on becoming an electrical engineer, but that changed when he entered the [University of Illinois](#) at



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of his peers created Mosaic, a user-friendly browser application that [integrated](#) graphics and point-and-click simplicity to make it easier for nontechnical people to navigate the Web. Mosaic was a huge success. NCSA made it available free of charge over the Internet, and more than two million copies were downloaded within a year.

What do you think?

- [Is the Internet](#)

Explore the ProCo

After graduating in 1993 with a [bachelor's degree](#) in [computer science](#), Andreessen headed to [California's Silicon Valley](#) to work for a small company that made security products for use in [electronic commerce](#). Soon he was contacted by [James Clark](#), the founder and former president of Silicon Graphics, Inc. Clark was searching for an exciting new venture, and he found it with Andreessen. In April 1994 the duo founded [Mosaic](#) Communications Corporation (later rechristened Netscape Communications). Andreessen recruited the original masterminds behind Mosaic and set out to create the “monster” software, which they initially dubbed Mozilla (meaning Mosaic Killer). It was commercially launched as [Netscape Navigator](#) and, almost overnight, became the most popular browser used on the Web, taking over 75 percent of the market share by mid-1996.



Britannica Quiz

Computers and Technology Quiz

Netscape’s main objective was to enable individuals and companies around the globe to exchange information. And, as vice president of [technology](#), Andreessen earned the role of setting the company’s technical path as it prepared to ride the “bandwidth tidal wave,” which Andreessen predicted would transform the [wireless communications](#) industry.

The software company reported [revenues](#) totaling \$55 million for the first quarter of 1996, and that same year Andreessen graced the cover of *Time* magazine. On February 18, 1999, he became chief technology officer at [America Online](#), Inc.

(AOL), which had purchased Netscape the previous year. Andreessen, however, left AOL after only seven months. He then founded LoudCloud, Inc. (later called Opsware), in October 1999; it was acquired by Hewlett-Packard in 2007. In October 2004 Andreessen, along with Gina Bianchini, created [Ning](#), which means “peace” in Chinese. Andreessen served as chairman of the company, which allows users to create social networks to fit their interests.

Quick Facts

Born: July 9, 1971, [Cedar Falls, Iowa](#), U.S. (age 54)

Founder: [Netscape Communications Corp.](#) • [Ning](#)

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Internet

computer network

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Ask Anything

Quick Summary

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Top Questions

What is the Internet?



Who were key people involved with the creation of the Internet?



How does the Internet work?



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Internet, a system [architecture](#) that has revolutionized [mass communication](#), [mass media](#), and commerce by allowing various [computer networks](#) 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. And that number is growing, largely due to the prevalence of “smart” technology and the “[Internet of Things](#),” where computer-like devices connect with the Internet or interact via [wireless networks](#). These “things” include [smartphones](#), appliances, thermostats, lighting systems, irrigation systems, security cameras. vehicles, even cities.





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](#) networks. It supports human communication via [social media](#), [electronic 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](#).



What do you think?

- [Is the Internet “Making Us Stupid?”](#)

Explore the ProCon debate

The Internet has also 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](#).)

Origin and development

Early networks

The first computer networks were dedicated special-purpose systems such as SABRE (an airline reservation system) and AUTODIN I (a defense command-and-control system), both designed and [implemented](#) in the late 1950s and early 1960s. By the early 1960s computer manufacturers had begun to use [semiconductor](#) technology in commercial products, and both conventional batch-processing and [time-sharing](#) systems were in place in many large, technologically advanced companies. Time-sharing systems allowed a computer's resources to be shared in rapid succession with multiple users, cycling through the queue of users so quickly that the computer appeared dedicated to each user's tasks despite the existence of many others accessing the system "simultaneously." This led to the notion of sharing computer resources (called host computers or simply hosts) over an entire network. Host-to-host interactions were [envisioned](#), along with access to specialized resources (such as [supercomputers](#) and mass storage systems) and interactive access by remote users to the computational powers of time-sharing systems located elsewhere. These ideas were first realized in [ARPANET](#), which established the first host-to-host network connection on October 29, 1969. It was created by the Advanced Research Projects Agency (ARPA) of the [U.S. Department of Defense](#). ARPANET was one of the first general-purpose computer networks. It connected time-sharing computers at government-supported research sites, principally universities in the [United States](#), and it soon became a critical piece of [infrastructure](#) for the [computer science](#) research [community](#) in the United States. Tools and applications—such as the simple mail transfer [protocol](#) (SMTP, commonly referred to as e-mail), for sending short messages, and the file transfer [protocol](#) ([FTP](#)), for longer transmissions—quickly emerged. In order to achieve cost-effective interactive communications between computers, which typically communicate in short bursts of data, ARPANET employed the new technology of [packet switching](#). Packet switching takes large messages (or chunks of computer data) and breaks them into smaller, manageable pieces (known as packets) that can travel independently over any available circuit to the target destination, where the pieces are reassembled. Thus, unlike traditional voice communications, packet switching does not require a single dedicated circuit between each pair of users.



How does the Internet really work? How does the Internet really work? This video lets you ride shotgun with a packet of data...(more)

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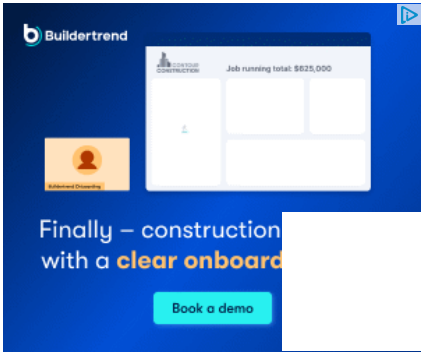
What Do You Actually Know About the Internet?

Commercial packet networks were introduced in the 1970s, but these were designed principally to provide efficient access to remote computers by dedicated terminals. Briefly, they replaced long-distance [modem](#) connections by less-expensive “virtual” circuits over packet networks. In the United States, Telenet and Tymnet were two such packet networks. Neither supported host-to-host communications; in the 1970s this was still the province of the research networks, and it would remain so for many years.



[DARPA](#) (Defense Advanced Research Projects Agency; formerly ARPA) supported [initiatives](#) for ground-based and satellite-based packet networks. The ground-based packet [radio](#) system provided mobile access to computing resources, while the packet satellite network connected the United States with several European countries and enabled connections with widely dispersed and remote regions. With the introduction of packet radio, connecting a mobile terminal to a computer network became [feasible](#). However, time-sharing systems were then still too large, unwieldy, and costly to be mobile or even to exist outside a climate-controlled computing [environment](#). A strong motivation thus existed to connect the packet radio network to ARPANET in order to allow mobile users with simple terminals to access the time-sharing systems for which they had authorization. Similarly, the packet satellite network was used by DARPA to link the United States with satellite terminals serving the United Kingdom, Norway, Germany, and Italy. These terminals, however, had to be connected to other networks in European countries in order to reach the end users. Thus arose the need

to connect the packet satellite net, as well as the packet radio net, with other networks.



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