

A Brief History of the Internet

¹The Internet today is a widespread information infrastructure, the initial prototype of what is often called the National (or Global or Galactic) Information Infrastructure. Its history is complex and involves many aspects - technological, organizational, and community. And its influence reaches not only to the technical fields of computer communications but throughout society as we move toward increasing use of online tools to accomplish electronic commerce, information acquisition, and community operations.

A Brief History of the World Wide Web

A global collection of text, graphics and sound resources on the Internet. At the end of the 1980s, one man's vision of a new way to store and retrieve data launched the technological journey to where we are today.



BEFORE THE DAWN

1945 Vannevar Bush wrote in Atlantic Monthly about a memory extension — Memex — which was a photo-electrical-mechanical device that linked documents on microfiche.

1958 In response to the launch of Sputnik, the U.S. Defense Department established Advanced Research Projects Agency (ARPA), which eventually would focus on computer networking and communications technology.

1962 Doug Engelbart devised NLS — "oNLine System" — for browsing and editing information. In the process, he invented the computer mouse.

1965 Ted Nelson coined the name hypertext for a complex, changing, indeterminate file structure. Donald Davies at the UK National Physical Laboratory coined the terms packet and packet switching.

1969 ARPA started what would become the Internet when it created ARPANET connecting the University of California at Los Angeles (UCLA) with SRI International at Menlo Park, California, and then the University of California at Santa Barbara and the University of Utah. ARPANET used packet switching for network robustness and disaster survivability.

1971 File Transfer Protocol (FTP) is established. Fifteen sites were connected to ARPANET.

1974 TCP/IP becomes the Internet Protocol Suite. The term Internet was coined to describe a single global TCP/IP network.

1978 Amateur radio operators began experimenting with packet radio transmitting ASCII encoded data over VHF amateur radio frequencies using homebuilt equipment.

1979 USENET established for global discussion groups.

1980 Tim Berners-Lee, at CERN in Switzerland, wrote a notebook program called ENQUIRE — "Enquire-Within-Upon-Everything" — which linked computer information points. CERN is the European Organization for Nuclear Research founded in 1952. The name is an acronym for the French Conseil Européen pour la Recherche Nucleaire or European Council for Nuclear Research. Earlier forms of text messaging become electronic mail, commonly called email or e-mail.

¹ <http://www.internetsociety.org/internet/what-internet/history-internet/brief-history-internet>

1983 The Domain Name System (DNS) is invented. Generic top-level domain categories are .gov, .edu, .com, .mil, .org and .net.

1985 The country code .us is established as a top-level domain for the United States.

1989 British engineer Tim Berners-Lee at CERN wrote "Information Management: A Proposal" and "HyperText and CERN." He proposed what was to become the World Wide Web.

1990 Tim Berners-Lee invented the World Wide Web, HTML, and a text browser. He used a NeXT computer to write a global hypertext system and create a hypertext graphical user interface (GUI) browser and "what you see is what you get" editor. He made up the name World Wide Web. Other names considered were Information Mesh, Mine of Information, and Information Mine. He established the first successful communication between an Hypertext Transfer Protocol (HTTP) client and server via the Internet. The first web page was <http://nxoc01.cern.ch/hypertext/WWW/TheProject.html>

1993 Marc Andreessen, Eric Bina and others at NCSA displayed first graphical browser, Mosaic. Other browsers were Midas, Erwise, Viola and one for Mac. CERN donated the WWW technology to the world. More than 200 Web servers were online. The Web and Mosaic were publicized by The New York Times, The Guardian, and The Economist.

1994 Two million computers connected to the Internet were used mostly by academics, scientists, and corporate researchers. An Information Superhighway Summit hosted by the Academy of Television Arts and Sciences and the USC Annenberg School Center for the Digital Future brought together government, technology, media, and entertainment leaders. Some major proprietary electronic services opened online services to the public. Marc Andreessen and Jim Clark left NCSA to found Mosaic Communications, then changed its name to Netscape.

- World Wide Web Consortium founded.
- More than 1,500 servers were online.
- David Filo and Jerry Yang created Yahoo.

University of North Carolina college station WXYC became the first radio station in the world to broadcast its signal over the Internet.

Print newsmagazine Space Today migrated to online publication as Space Today Online.

1995 Amazon.com bookstore appears. Netscape IPO. Sergey Brin and Larry Page planned the future Google. The first wiki was written.

1996 Microsoft Internet Explorer appeared. Hotmail was the first Web e-mail site.

1997 Web had one million sites, entered everyday American life. U.S. Senate hearings on browser competition. Blogging began.

1998 Netscape released its code, spawning Mozilla open-source browser. Google opened and answered 10,000 search queries per day. The Internet Corporation for Assigned Names and Numbers (ICANN) takes over from the U.S. government overseeing the Internet Assigned Numbers Authority (IANA).

1999 Microsoft overtook Netscape in browser competition. AOL bought Netscape. Google performed three million searches per day. Blogger publishing service is launched.

2000 Seventy million computers were connected to the Internet. The dot-com market peaked, then crashed spectacularly. Google answered 18 million search queries per day.

2001 Wikipedia opened. Google answered more than 100 million searches per day. Apple released the first iPod. The file-sharing service Kazaa founded.

2002 AOL had 34 million members.

2003 More than three billion Web pages. New browsers include Apple Computer's Safari and others including Amaya, Camino, Lynx, Opera and Phoenix. The virtual world Second Life was born. MySpace started. WordPress blog publishing and content management system opens. Skype voice calling over the Internet begins. Apple introduces the on-line music service iTunes.

2004 Tenth anniversary of the Web's general availability to the public. Newest browser is Firefox by Mozilla. It and Apple Computer's iPod pocket-sized MP3 music player are all the rage. Facebook started collecting friends. Podcasting commenced. Flickr image hosting website opens. Digg was founded. Mass use of Voice over Internet Protocol – VoIP – begins.

2005 More than eight billion Web pages. Online technology is in two-thirds of American homes. Three-quarters of Americans go online spending an average 12.5 hours there per week. Television viewing declines among Internet users. High-speed always-on broadband access to the Internet is changing dramatically how we related to the Web – how often we go online, what we do online, how long we stay online. YouTube began storing and retrieving videos. Google Earth is a virtual globe, map and geographical Internet site.

2006 Twitter began issuing tweets. Google has indexed more than 25 billion web pages, 400 million queries per day, 1.3 billion images, and more than a billion Usenet messages.

2007 Apple released the iPhone multimedia and Internet smartphone.

2008 Google released the Chrome web browser.

2009 It's estimated that a quarter of Earth's population uses the Internet. Google sees one trillion unique URLs – after eliminating duplicate entries. The Internet has at least 27 billion web pages and could have as many as 58 billion web pages. They change so many times a day it has become nearly impossible to count. Microsoft's Bing joins Yahoo and Google as major search engines on the Internet.

2010 Apple released the iPad tablet computer. It's estimated the population of Internet users is 1.97 billion. The Internet has surpassed newspapers as a primary way for Americans to get news, according to the Pew Internet and American Life Project. The Internet is the third most popular news platform, with many users looking to social media and personalized feeds for news. National and local TV stations are strong, but the Internet is ahead of national and local newspapers. The majority of news consumers use two to five websites per day for news. The proliferation of spyware, malware, cyber attacks and security leaks concerns Internet users. The Federal Communications Commission establishes the first net neutrality rules.

2011 The Internet can be accessed virtually anywhere allowing great flexibility in working hours and location. Working collaboratively via the Internet and the sharing of ideas, knowledge and skills is widespread. Educational materials from pre-school to post-doctoral are available on the Web. China, India, Russia, Indonesia and Brazil represent about 45 percent of Earth's population. However, their 600 million Internet users are only 30 percent of the two billion Internet users around the world. It's estimated their Internet users will double to 1.2 billion by 2015 while the global total increases to some four billion users.