HISTORICAL LOCATION OF THE WORLD WIDE WEB

The exact locations at CERN where the Web was invented by Tim Berners-Lee's is designated by a plaque in a corridor in building 2, but no specific offices are indicated. Thomas Madsen-Mygdal also has a gallery showing locations in building 31 and 513, but there are very few places on the web documenting these places. Information and photo courtesy of David Galbraith, co founder Yelp

HISTORY OF THE INTERNET AND THE WORLD WIDE WEB
The Origins of the Internet

Conceptualizing data communication which is transmitting data between two different places and connected by an electromagnetic medium, such as radio wave or an electrical wire predates the first computers.

These early data communication systems were usually limited to point to point communication between two end devices similar to Telegraph systems and telex machines.

The earlier computers used the technology at the time to allow communication between a central processing unit and it's remote terminals. As the technology evolved new systems were devised to allow communication over longer distances and with higher speeds. By using these technologies it was possible to exchange data such as documents and files between remote computers. This point to point communication had it's limitations because it did not allow direct communication between any two non-related systems. Also, the military considered it unsafe because there were no alternatives for the communication in case of an enemy attack.

To solve the initial problems, research programs explored communications between physically separate systems, leading to the development of the packet switching model of digital networking. These laboratory research efforts included Vinton G. Cerf at Stanford University, Donald Davies (NPL), Paul Baran (RAND Corporation), and Leonard Kleinrock at MIT and at UCLA. The research led to the development of several packet-switched networking solutions in the late 1960s and 1970s, including ARPANET, Telenet, and the X.25 protocols.

Soon, public access networking systems grew in popularity but were still separate networks with limited gateways between other networks.

This led to the use of packet switching to develop a protocol for internetworking, where multiple different networks could connect together into a super-framework of networks called the Internet Protocol Suite. This spread of internetworking began to form into a global network that would be named the Internet and based on standardized protocols implemented in 1982.

Using the Internet spread quickly across advanced telecommunication networks of developed commercial countries, and then was used by the rest of the world as it became the international standard for the global network.

After privately run commercial Internet service providers in the 1980s were introduced, and popular use of the Internet expanded in the 1990s, the Internet has had an immense impact on cultures and commerce. This includes the rise of near instant communication by electronic mail (e-mail), text based discussion forums, and the World Wide Web.

History of the World Wide Web

The World Wide Web WWW or the Web is a global information medium which users can read, create and publish thorough their computers that are connected to the Internet. The term(s) often mistaken as a synonym for the Internet, but the Web is a service that operates over the Internet as e-mail does. Internet history is significantly older than that of the World Wide Web.

1980 - 1991: Development of the World Wide Web

The World Wide Web (WWW) project aimed to allow all links to be accessible to any information anywhere for high energy physicists to share data, news, and documentation.

In 1980, Tim Berners-Lee, an independent contractor at the European Organization for Nuclear Research (CERN), Switzerland, built ENQUIRE, as a database of people and software models. He also built this to experiment with hypertext so that each new page of information in ENQUIRE would be linked to an existing page.

In 1984 Berners-Lee wrote a proposal for "a large hypertext database with typed links", to address the problems of physicists from around the world needing to share data with no common machines and no common presentation software, but it generated little interest. His boss, Mike Sendall encouraged Berners-Lee to begin implementing his system on a newly acquired NeXT workstation. He considered several names, including Information Mesh, The Information Mine (TIM) or Mine of Information (MOI), but settled on World Wide Web.

An enthusiastic collaborator, Robert Cailliau, joined Berners-Lee and pitched their ideas of pairing hypertext with the Internet to the European Conference on Hypertext Technology in September 1990, but found no supporters.

By late 1990, Berners-Lee had built everything necessary for a working Web which included HyperText Transfer Protocol (HTTP), the Hypertext Markup Language (HTML), the first Web browser (named World Wide Web, the first HTTP server software, the first web address (http://info.cern.ch), and the first Web pages that described the project itself. Berners-Lee browser could access Usenet newsgroups and FTP files, however it could run only on the NeXT.

Nicola Pellow created a simple text browser that could run on almost any computer called the Line Mode Browser. To encourage use within CERN, Bernd Pollermann put the CERN telephone directory on the web that users previously had to log onto the mainframe to look up phone numbers.

Paul Kunz from the Stanford Linear Accelerator Center visited CERN in September 1991, and brought the Next software back to SLAC, where librarian Louise Addis adapted it for an operating system on the IBM mainframe to display SLAC's catalog of online documents. This was the first web server in North America.

On August 6, 1991, Berners-Lee posted a short summary of the World Wide Web project on the alt.hypertext newsgroup which also marked the date of the Web as a public service on the Internet.

1992 - 1995: Growth of the WWW
Students at the University of Kansas adapted a text-only browser named Lynx to access the web. Lynx was available on UNIX and DOS. Some web designers in 1992, unimpressed with glossy graphical websites thought a website not accessible through Lynx wasn't worth visiting.

Early browsers - The turning point for the World Wide Web was the introduction of the Mosaic web browser in 1993. Funding for Mosaic came from a program initiated by then-Senator Al Gore's High Performance Computing and Communication Act of 1991 aka the Gore Bill.

In November 1992, the NCSA at the University of Illinois established a website. In December 1992, the work began on Mosaic. They released an X Window browser in February 1993 which gained popularity due to its strong support of integrated multimedia, and the authors' rapid response to user bug reports and recommendations for new features. The first Microsoft Windows browser was Cello, for the Legal Information Institute at Cornell Law School to provide legal information. Cello was released in June 1993.

Mosaic Communications Corporation was established in 1993 to develop the Mosaic browser commercially. The company changed its name to Netscape in April 1994, and the browser was developed further as Netscape Navigator.

Web organization - In May 1994 the first International WWW Conference, was held at CERN and the conference has been held every year since. In April 1993 CERN agreed that anyone could use the Web protocol and code royalty-free. Their decision was based in part as a reaction to the University of Minnesota announcing that it would begin charging license fees for its implementation of the Gopher protocol.

In September 1994, Berners-Lee founded the World Wide Web Consortium (W3C) at the Massachusetts Institute of Technology supported from the Defense Advanced Research Projects Agency (DARPA) and the European Commission. It's purpose was to create standards and recommendations to improve the quality of the Web. Berners-Lee made the Web available freely, with no patent and no royalties due. The W3C decided that their standards must be based on royalty-free technology, so they can be easily adopted by anyone. By the end of 1994, while the total number of websites was still minute compared to present standards, quite a number of notable websites were already active, many of whom are the precursors or inspiring examples of today's most popular services.

1996 - 1998: Commercialization of the World Wide Web
By 1996 it became apparent to most publicly traded companies that having a public Web presence was necessary.