

A Little History of the World Wide Web

See also [How It All Started](#) presentation materials from the [W3C 10th Anniversary Celebration](#) and [other references](#).

from 1945 to 1995

1945

Vannevar Bush writes [an article](#) in [Atlantic Monthly](#) about a photo-electrical-mechanical device called a Memex, for memory extension, which could make and follow links between documents on microfiche

1960s

Doug Engelbart prototypes an "oNLine System" (NLS) which does hypertext browsing editing, email, and so on. He invents the mouse for this purpose. See the [Bootstrap Institute library](#).

Ted Nelson coins the word Hypertext in *A File Structure for the Complex, the Changing, and the Indeterminate*. 20th National Conference, New York, [Association for Computing Machinery](#), 1965. See also: Literary Machines. Note: There used to be a link here to "Hypertext and Hypermedia: A Selected Bibliography" by Terence Harpold, but the site hosting the resource did not maintain the link.

Andy van Dam and others build the Hypertext Editing System and FRESS in 1967.

1980

While consulting for CERN June-December of 1980, Tim Berners-Lee writes a notebook program, "Enquire-Within-Upon-Everything", which allows links to be made between arbitrary nodes. Each node had a title, a type, and a list of bidirectional typed links. "ENQUIRE" ran on Norsk Data machines under SINTRAN-III. See: [Enquire user manual as scanned images](#) or as [HTML page\(alt\)](#).

1989

March

["Information Management: A Proposal"](#) written by [Tim BL](#) and circulated for comments at [CERN](#) (TBL). Paper "HyperText and CERN" produced as background ([text](#) or [WriteNow](#) format).

1990

May

Same [proposal](#) recirculated

September

Mike Sendall, Tim's boss, Oks the purchase of a NeXT cube, and allows Tim to go ahead and write a global hypertext system.

October

Tim starts work on a hypertext GUI browser+editor using the NeXTStep development environment. He makes up "WorldWideWeb" as a name for the program. (See [the first browser](#) screenshot) "World Wide Web" as a name for the project (over Information Mesh, Mine of Information, and Information Mine).

Project [original proposal](#) reformulated with encouragement from CN and ECP divisional management. Robert [Cailliau](#) (ECP) joins and is co-author of [new version](#).

November

Initial [WorldWideWeb program](#) development continues on the NeXT ([TBL](#)) . This was a "what you see is what you get" (wysiwyg) browser/editor with direct inline creation of links. The first web server was nxoc01.cern.ch, later called info.cern.ch, and the **first web page** <http://nxoc01.cern.ch/hypertext/WWW/TheProject.html> Unfortunately CERN no longer supports the historical site. Note from this era too, the [least recently modified web page](#) we know of, last changed Tue, 13 Nov 1990 15:17:00 GMT (though the URI changed.)

November

Technical Student Nicola [Pellow](#) (CN) joins and starts work on the line-mode browser. Bernd [Pollermann](#) (CN) helps get interface to CERNVM "FIND" index running. TBL gives a [colloquium](#) on hypertext in general.

Christmas

Line mode browser and [WorldWideWeb](#) browser/editor demonstrable. Acces is possible to hypertext files, CERNVM "FIND", and Internet news articles.

1991

February

[workplan](#) for the purposes of ECP division.

26 February 1991

[Presentation](#) of the project to the ECP/PT group.

March

Line mode browser (www) released to limited audience on "priam" vax, rs6000, sun4.

May

[Workplan](#) produced for CN/AS group

17 May

[Presentation](#) to "C5" Committee. General release of WWW on central CERN machines.

12 June

CERN [Computer Seminar](#) on WWW.

August

Files available on the net by FTP, posted on alt.hypertext ([6th](#), [6th](#), 19th Aug), comp.sys.next.announce ([20th](#)), comp.text.sgml and comp.mail.multi-media ([22nd](#)). Jean-Francois [Groff](#) joins the project.

October

VMS/HELP and WAIS gateways installed. Mailing lists www-interest (now www-announce) and www-talk@info.cern.ch (see [archive](#)) started. One year status report. Anonymous telnet service started.

December

Presented poster and demonstration at [Hypertext'91](#) in San Antonio, Texas (US). W3 browser installed on VM/CMS. CERN [computer newsletter](#) announces W3 to the [HEP](#) world.

Dec 12: Paul Kunz installs first Web server outside of Europe, at SLAC.

1992

15 January

Line mode browser release 1.1 available by anonymous FTP (see [news](#)). Presentation to AIHEP'92 at La Londe (FR).

12 February

Line mode v 1.2 annouced on alt.hypertext, comp.infosystems, comp.mail.multi-media, cern.sting, comp.archives.admin, and mailing lists.

April

29th April: Release of Finnish "**Erwise**" GUI client for X mentioned in [review](#) by TimBL.

May

Pei Wei's "**Viola**" GUI browser for X test version dated May 15. (See [review](#) by TimBL)

At CERN, Presentation and [demo](#) at [JENC3](#), Innsbruck (AT). Technical Student Carl [Barker](#) (ECP) joins the project.

- June
Presentation and demo at HEPVM (Lyon). People at FNAL (Fermi National Accelerator Laboratory (US)), NIKHEF (Nationaal Instituut voor Kern- en Hoge Energie Fysika, (NL)), DESY (Deutsches Elektronen Synchrotron, Hamburg, (DE)) join with WWW servers.
- July
Distribution of WWW through CernLib, including Viola. WWW library code ported to DECnet. Report to the Advisory Board on Computing.
- August
[Introduction of CVS](#) for code management at CERN.
- September
Plenary session demonstration to the HEP community at CHEP'92 in Annecy (FR).
- November
Jump back in time to a snapshot of the [WWW Project Page as of 3 Nov 1992](#) and the WWW project web of the time, including the list of all 26 reasonably reliable [servers](#), NCSA's having just been added, but no sign of Mosaic.
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1993

- January
By now, Midas (Tony Johnson, SLAC), Erwise (HUT), and Viola (Pei Wei, O'Reilly Associates) browsers are available for X; CERN Mac browser (ECP) released as alpha. Around 50 known HTTP servers.
- February
NCSA release first alpha version of Marc Andreessen's "Mosaic for X". [Computing seminar](#) at CERN. The University of Minnesota [announced](#) that they would begin to charge licensing fees for Gopher's use, which caused many volunteers and employees to stop using it and switch to WWW.
- March
WWW (Port 80 HTTP) traffic measures 0.1% of NSF backbone traffic. WWW presented at [Online Publishing 93](#), Pittsburgh.
- The Acceptable Use Policy prohibiting commercial use of the Internet [re-interpreted](#)., so that it becomes becomes allowed.
- April
April 30: Date on the declaration by CERN's directors that WWW technology would be freely usable by anyone, with no fees being payable to CERN. A milestone document.
- July
Ari Luotonen (ECP) joins the project at CERN. He implements access authorisation, proceeds to re-write the CERN httpd server.
- July 28-30
O'Reilly hosts first [WWW Wizards Workshop](#) in Cambridge Mass (US).
- September
WWW (Port 80 http) traffic measures 1% of NSF backbone traffic. NCSA releases working versions of Mosaic browser for all common platforms: X, PC/Windows and Macintosh.
- September 6-10: On a bus at a [seminar Information](#) at Newcastle University, MIT's Prof. David Gifford suggests Tim BL contact Michael Dertouzos of MIT/LCS as a possible consortium host site.
- October
Over 200 known HTTP servers. The European Commission, the Fraunhofer Gesellschaft and CERN start the first Web-based project of the European Union (DG XIII): WISE, using the Web for dissemination of technological information to Europe's less favoured regions.
- December
WWW receives IMA award. John Markov writes a page and a half on WWW and Mosaic in "The New York Times" (US) business section. "The Guardian" (UK) publishes a page on WWW, "The Economist" (UK) analyses the Internet and WWW.
Robert Cailliau gets go-ahead from CERN management to organise the First International WWW Conference at CERN.
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1994

January

O'Reilly, Spry, etc announce "Internet in a box" product to bring the Web into homes.

March

Marc Andreessen and colleagues leave NCSA to form "Mosaic Communications Corp" (later Netscape).

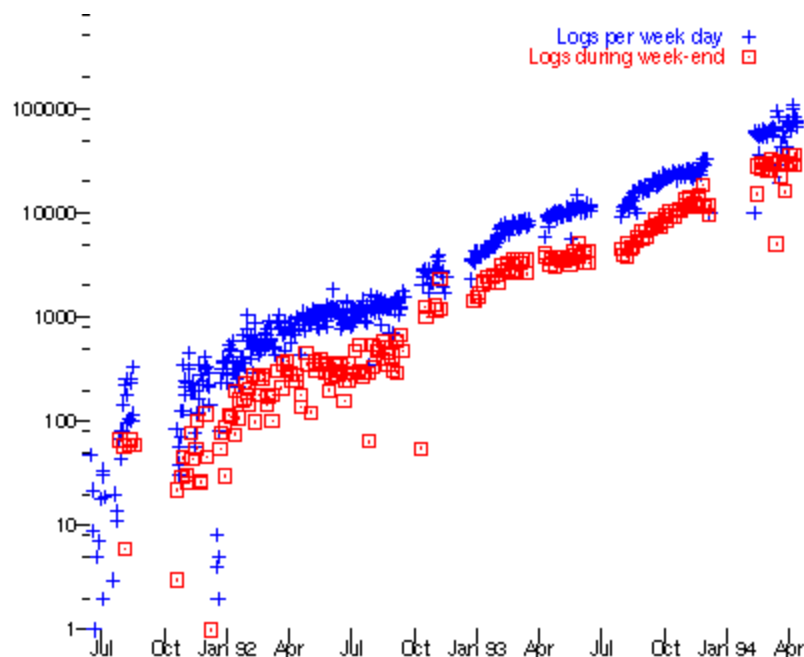
May 25-27

[First International WWW Conference](#), CERN, Geneva. Heavily oversubscribed (800 apply, 400 allowed in): the "Woodstock of the Web". VRML is conceived here. TBL's closing keynote hints at upcoming organization. (Some of Tim's [slides on Semantic Web](#))

June

M. Bangemann [report](#) on European Commission Information Superhighway plan. Over 1500 registered servers.

Load on the first Web server (info.cern.ch) 1000 times what it has been 3 years earlier.



July

MIT/CERN agreement to start W3 Organisation is announced by Bangemann in Boston. [MIT press release](#). Reports in Wall Street Journal, Boston Globe etc.

August

Founding of the [IW3C2](#): the International WWW Conference Committee, in Boston, by NCSA and CERN.

September

The European Commission and CERN propose the WebCore project for development of the Web core technology in Europe.

1 October

World Wide Web Consortium founded.

October

Second International WWW [Conference](#): "Mosaic and the Web", Chicago. Also heavily oversubscribed: 2000 apply, 1300 allowed in.

14 December

First W3 [Consortium Meeting](#) at M.I.T. in Cambridge (USA).

15 December

First meeting with European Industry and the European Consortium branch, at the [European Commission](#), Brussels.

16 December

CERN Council approves unanimously the construction of the [LHC](#) (Large Hadron Collider) accelerator, CERN's next machine and competitor to the US' already defunct SSC (Superconducting Supercollider). Stringent budget conditions are however imposed. CERN thus decides not to continue WWW development, and in concertation with the European Commission and [INRIA](#) (the Institut National pour la Recherche en Informatique et Automatique, FR) transfers the WebCore project to INRIA.

1995

February

the Web is the main reason for the theme of the G7 meeting hosted by the European Commission in the European Parliament buildings in Brussels (BE).

March

CERN holds a two-day [seminar](#) for the European Media (press, radio, TV), attended by 250 reporters, to show WWW. It is demonstrated on 60 machines, with 30 pupils from the local International High School helping the reporters "surf the Web".

April

Third International WWW [Conference](#): "Tools and Applications", hosted by the [Fraunhofer Gesellschaft](#), in Darmstadt (DE)

June

Founding of the [Web Society](#) in Graz (AT), by the Technical University of Graz (home of Hyper-G), CERN, the University of Minnesota (home of Gopher) and INRIA.

See also:

- [How It All Started](#) presentation materials from the [W3C 10th Anniversary Celebration](#)
- [T. Berners-Lee, "Weaving the Web" , Harper Collins 1999](#)
- [History of Internet and WWW: The Roads and Crossroads of Internet History](#)
1995-1998 by Gregory R. Gromov
- ... [List of Internet Histories \(from ISOC\)](#)

[Dan Connolly](#), 2000

[Webmaster](#)

feedback to [www-talk](#) ([archive](#)) and/or [site-comments](#) ([archive](#)), please

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created circa 1995 by [Robert Cailliau](#)