

<http://www.w3.org/People/Berners-Lee/ShortHistory>

In response to a request, a one page looking back on the development of the Web from my point of view. Written 1998/05/07 – Tim Berners-Lee

The World Wide Web: A very short personal history

There have always been things which people are good at, and things computers have been good at, and little overlap between the two. I was brought up to understand this distinction in the 50s and 60s and intuition and understanding were human characteristics, and that computers worked mechanically in tables and hierarchies.

One of the things computers have not done for an organization is to be able to store random associations between disparate things, although this is something the brain has always done relatively well. In 1980 I played with programs to store information with random links, and in 1989, while working at the European Particle Physics Laboratory, I proposed that a global hypertext space be created in which any network-accessible information could be referred to by a single "Universal Document Identifier". Given the go-ahead to experiment by my boss, Mike Sendall, I wrote in 1990 a program called "WorldWideWeb", a point and click hypertext editor which ran on the "NeXT" machine. This, together with the first Web server, I released to the High Energy Physics community at first, and to the hypertext and NeXT communities in the summer of 1991. Also available was a "line mode" browser by student Nicola Pellow, which could be run on almost any computer. The specifications of UDIs (now URIs), HyperText Markup Language (HTML) and HyperText Transfer Protocol (HTTP) published on the first server in order to promote wide adoption and discussion.

The dream behind the Web is of a common information space in which we communicate by sharing information. Its universality is essential: the fact that a hypertext link can point to anything, be it personal, local or global, be it draft or highly polished. There was a second part of the dream, too, dependent on the Web being so generally used that it became a realistic mirror (or in fact the primary embodiment) of the ways in which we work and play and socialize. That was that once the state of our interactions was on line, we could then use computers to help us analyse it, make sense of what we are doing, where we individually fit in, and how we can better work together.

The first three years were a phase of persuasion, aided by my colleague and first convert Robert Cailliau, to get the Web adopted. We needed Web clients for other platforms (as the NeXT was not ubiquitous) and browsers Erwise, Viola, Cello and Mosaic eventually came on the scene. We needed seed servers to provide incentive and examples, and all over the world inspired people put up all kinds of things.

Between the summers of 1991 and 1994, the load on the first Web server ("info.cern.ch") rose steadily by a factor of 10 every year. In 1992 academia, and in 1993 industry, was taking notice. I was under pressure to define the future evolution. After much discussion I decided to form the World Wide Web Consortium in September 1994, with a base at MIT in the USA, INRIA in France, and now also at Keio University in Japan. The Consortium is a neutral open forum where companies and organizations to whom the future of the Web is important come to discuss and to agree on new common computer protocols. It has been a center for issue raising, design, and decision by consensus, and also a fascinating vantage point from which to view that evolution.

With the dramatic flood of rich material of all kinds onto the Web in the 1990s, the first part of the dream is largely realized, although still very few people in practice have access to intuitive hypertext creation tools. The second part has yet to happen, but there are signs and plans which make us confident. The great need for information about information, to help us categorize, sort, pay for, own information is driving the design of languages for the web designed for processing by machines, rather than people. The web of human-readable document is being merged with a web of machine-understandable data. The potential of the mixture of humans and machines working together and communicating through the web could be immense.