Sir Tim Berners-Lee invented what we know today as the World Wide Web during his time at the European Particle Physics Laboratory, CERN. He has since gone on to found organizations which contribute to the development and furthering of Web and interoperable technologies.

Reproduced below is his 1996 declaration, introducing his invention to the world at-large. In it, he outlines the intentions behind his creation, offering an explanation of its functions and a vision for its future implementation.

Declaration presented by Tim Berners-Lee

I, Timothy J Berners-Lee, depose and state as follows:

1. I am the inventor of the World Wide Web and the Director of the World Wide Web Consortium (W3C). The W3C is a consortium of over 120 computer and communications companies who have come together to maintain and develop the technical standards that are at the heart of the World Wide Web. The W3C is operated within the Laboratory for Computer Science at the Massachusetts Institute of Technology.

BACKGROUND OF THE WORLD WIDE WEB

2. Purpose. I created the World Wide Web (W3) to serve as the platform for a global, online store of knowledge, containing information from a diversity of sources, and accessible to Internet users around the world. Though information on the Web is contained in individual computers, the fact that each of these computers is connected to the Internet through W3 protocols allows all of the information to become part of a single body of knowledge. It is currently the most advanced information system developed on the Internet, and embraces within its data model most information in previous networked information systems such as ftp, gopher, wais, and Usenet.

3. History. W3 was originally developed at CERN, the European Particle Physics Laboratory, and initially used to allow information sharing within internationally dispersed teams of researchers and engineers. Originally aimed at the High Energy Physics community, it has spread to other areas and attracted much interest in user support, resource recovery, and numerous other areas which depend on collaborative and information sharing. The Web has extended beyond the scientific and academic community to include business-to-business communication, political organizing and activism, community development, library collection management, art display and archiving, alternative dissemination mechanisms for a variety of popular music, and access to local, state and federal government information.

4. Basic Operation. The World Wide Web is a series of documents stored in different computers all over the Internet. Documents contain information stored in a variety of formats, including text, still images, sounds, and video. An essential element of the web in that any document has an

address (rather like a telephone number). Most web documents contain "links". These are short sections of text or image which refer to another document. Typically the linked text is blue or underlined when displayed, and when selected by the user, the referenced document is automatically displayed, wherever in the world it actually is stored.

Links for example are used to lead from overview documents to more detailed documents, from tables of contents to particular pages, but also as cross-references, footnotes, and new forms of information structure.

Many organizations now have "home pages". These are documents which provide a set of links designed represent the organisation, and through links from the home page, guide the user directly or indirectly to information about or relevant to that organisation.

As an example of the use of links, if this affidavit were to be put on a World Wide Web site, it's home page might contain links such as these:

- BACKGROUND OF THE WORLD WIDE WEB

- PUBLISHING ON THE WORLD WIDE WEB

- DESIGN AND ARCHITECTURE OF THE WORLD WIDE WEB

- MEANS FOR PROTECTING CHILDREN FROM INAPPROPRIATE MATERIAL AND AVOIDING UNWANTED MATERIAL

Each of these links takes the user of the site from the beginning of the affidavit, to the appropriate section within the document. Links may also take the user from the original Web site to another Web site on another computer connected to the Internet. These links from one computer to another, from one document to another across the Internet, are what unify the Web into a single body of knowledge, and what make the Web unique.

PUBLISHING ON THE WORLD WIDE WEB

5. Publishing. The World Wide Web exists fundamentally as a platform through which individuals and organizations can communicate through shared information. When information is made available, it is said to be published on the web. Publishing on the Web simply requires that the "publisher" has a computer connected to the Internet and that the computer is running W3 server software. The computer can be a simple as a small personal computer costing less than $1500 dollars or as complex as a multi-million dollar mainframe computer. Many Web publishers chose instead to lease disk storage space from someone else who has the necessary computer facilities, eliminating the need for actually owning any equipment oneself.

6. The Web, as a universe of network accessible information, contains a variety of documents prepared with quite varying degrees of care, from the hastily typed idea, to the professionally executed corporate profile. The power of the web stems from the ability of a link to point to any

document whatsoever its status or physical location. Like paper, the Web is a universal medium, with nothing built into its nature to constrain the organization or content when it is used.

7. Information to be published on the web must also be formatted according to the rules of the Web standards. These standardized formats assure that all Web users who want to read the material will be able to view it in. Web standards are sophisticated and flexible enough that they have grown to meet the publishing needs of many large corporations, banks, brokerage houses, newspapers and magazine which now publish "online" editions of their material, as well as government agencies, and even courts, which use the Web to disseminate important information to the public. At the same time, Web publishing is simple enough that thousands of individual users and small community organizations are using the Web to publish their own personal "home pages," the equivalent of individualized newsletters about that person or organization and available to everyone on the Web.

8. Web publishers have a choice to make their web sites open to the general pool of all Internet users, or close them, and thus make the information accessible only to those with advance authorization. Many publishers chose to keep their sites open to all in order to give their information the widest potential audience. In the event that the publishers chooses to maintain restrictions on access, this is generally accomplished by assigning specific user names and passwords as a prerequisite to access to the site. Or, in the case of Web sites maintained for internal use of one organization, access will only be allowed from other computers within that organization's local network. While these access restrictions are possible, there is no mechanism built into the World Wide Web which allows publishers to restrict access to adults alone, or to keep minors from accessing the publishers site.

9. Searching the Web. A variety of systems have developed which allow users of the Web to search particular information among all of the public sites that are part of the Web. Services such as Yahoo, Magellan, Altavista, Webcrawler, and Lycos are all services known as "search engines" which allow users to search for Web sites that contain certain categories of information, or to search for key words. For example, a Web user looking for the text of Supreme Court opinions would type the words "Supreme Court" into a search engine, and then be presented with a list of World Wide Web sites that contain Supreme Court information. This list would actually be a series of links to those sites. Having searched out a number of sites which might contain the desired information, the user would then follow each link, browsing through the information on each site, until the desired material is found. For many content providers on the Web, the ability to be found be these search engines is very important.

DESIGN AND ARCHITECTURE OF THE WORLD WIDE WEB

9. Common standards. The Web links together disparate information on an ever growing number of Internet-linked computers by setting common information storage formats (HTML) and a common language for the exchange of Web documents (HTTP). Though the information itself may be in many different formats, and stored on computers which are not otherwise compatible, the

basic Web standards provide a basic set of standards which allow communication and exchange of information. Despite that fact that numerous types of computers are used on the web, and the fact that many of these machines are otherwise incompatible, those who "publish" information on the Web are able to communicate with those who seek to access information with little difficulty because of these basic technical standards.

10. A distributed system with no centralized control. Running on tens of thousands of individual computers on the Internet, the Web is what is known as a distributed system. The Web was designed so that organizations with computers containing information can become part of the Web simply by attaching their computers to the Internet and running appropriate World Wide Web software. No single organization controls any membership in the Web, nor is there any centralized point from which individual web sites or services can be blocked from the Web. From a user's perspective, it may appear to be a single, integrated system, but in reality it has no centralized control point.

11. Contrast to closed databases. The Web's open, distributed, decentralized nature stands in sharp contrast to most information systems that have come before it. Private information services such as Westlaw, Lexis/Nexis, Dialog, etc. have contained large storehouses of knowledge, and, can be accessed from the Internet with the appropriate passwords and access software. However, these databases are not linked together into a single whole, as is the World Wide Web.

12. Success of Web in research, education, and political activities. It is my observation that the World Wide Web has become so popular because of its open, distributed, and easy-to-use nature. Rather than requiring those who seek information to purchase new software or hardware, and to learn a new kind of system for each new database of information they seek to access, the Web environment makes it easy for users to jump from one set of information to another. By the same token, the open nature of the Web makes it easy for publishers to reach their intended audiences without having to know in advance what kind of computer each potential reader has, and what kind of software they will be using.

MEANS FOR PROTECTING CHILDREN FROM INAPPROPRIATE MATERIAL AND AVOIDING UNWANTED MATERIAL

13. World Wide Web community sees the need to enable parents to protect children. With the rapid growth of the Internet, the increasing popularity of the Web, and the existence of material online that may be inappropriate for children, the World Wide Web community saw the need to build systems that enable parents to control the material which comes into their homes and may be accessible to their children. The World Wide Web Consortium launched the PICS ("Platform for Internet Content Selection") program in order to develop technical standards that would support parents' ability to filter and screen material that their children see on the Web. Given the nature of the Web, PICS developers determined that the most effective point of control over the flow of content to children is at the user end of the information chain, rather than at the content provider

end. User control, as implemented through the PICS standards, gives parents the means to select which content is appropriate for their own children, and which content should be blocked.

14. User control is more effective than information provider control because Web site operators who publish information have no ability to verify the age, or in many cases even the identity, of those who access the publisher's Web site.

15. No Age Verification Standards. At present, I am not aware of any methods in the technical standards that make up the World Wide Web which would enable a Web site operator or publisher to establish the age of a user attempting to access a Web site. Establishing age through credit card verification is burdensome for all Web site operators and not practical for those Web sites which do not otherwise have a commercial relationship with their users. I believe that non-commercial Web sites would be forced to shut down if required to check the ages of their users through credit card verification. Even commercial sites will face significant burden if credit card verification is required before all user access. The cost of each verification by a credit card clearinghouse is , I understand, between $1 and $2. Sites which have thousands or millions of 'hits' per day, will certainly face significant cost if such age verification is required.

16. The web was designed with a maximimum target time to follow a link of one tenth of a second. Response times greater than this have been shown to reduce human effectiveness in solving problems when using systems of linked information. Practical web document retrieval times are currently between that and a few seconds. When rating the usability of the web, users have in a recent survey indicated that speed of access is their foremost concern.

17. The Web is a international system: an example of one of its many uses is the provision of health information to developing countries. Any system of adult verification would need to work efficiently internationally.

I declare under penalty of perjury that the foregoing is true and correct.

Timothy J Berners-Lee

Date: 28 February 1996