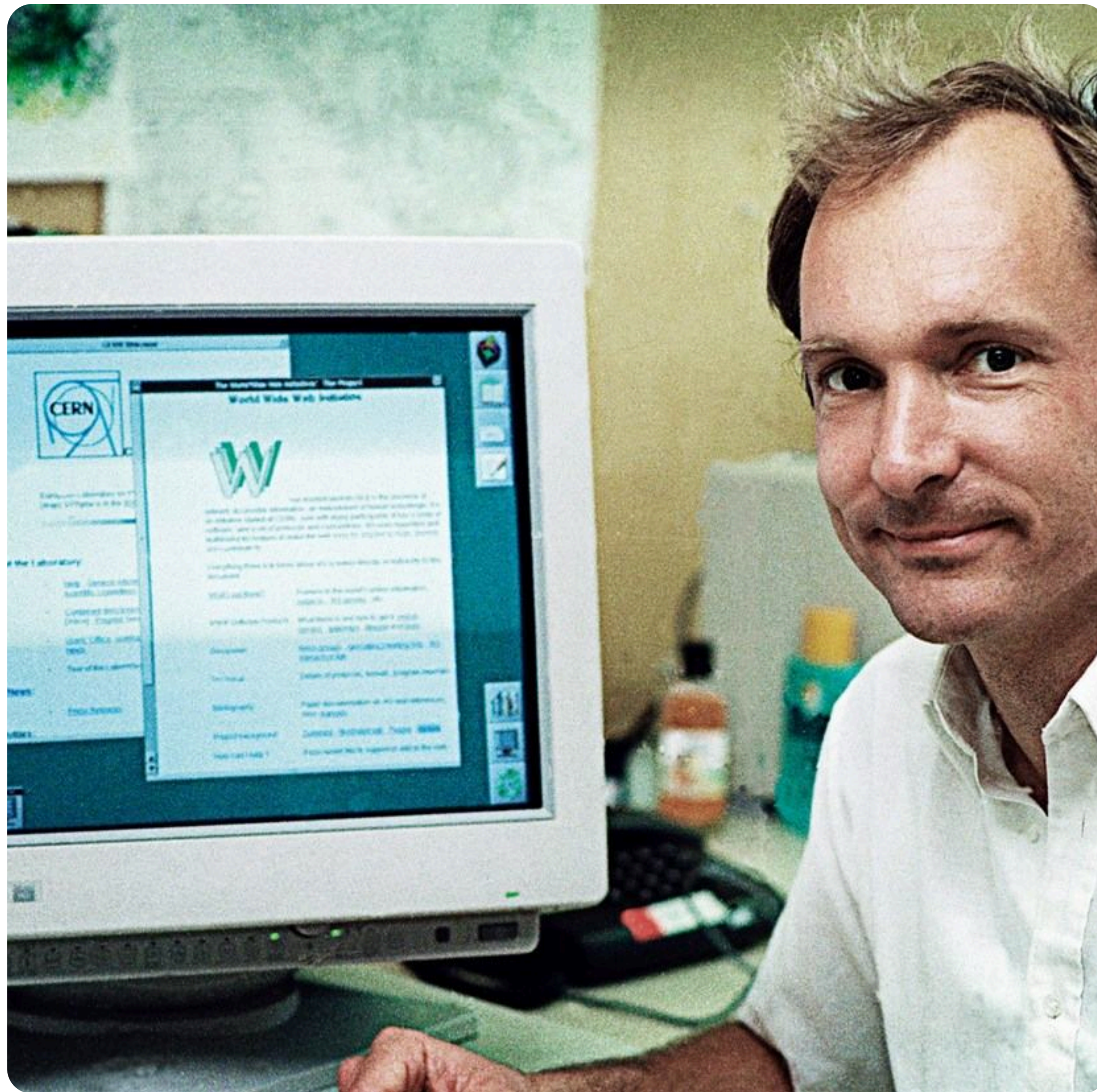


Web History

The Story, Intro to HTML, Internet vs web, The browsers war



The invention of the web

- Tim Berners-Lee at CERN, 1990s
- Sharing files required physical effort
- Invented web for easy file sharing
- Called it the World Wide Web

CERN DD/OC

Information Management: A Proposal

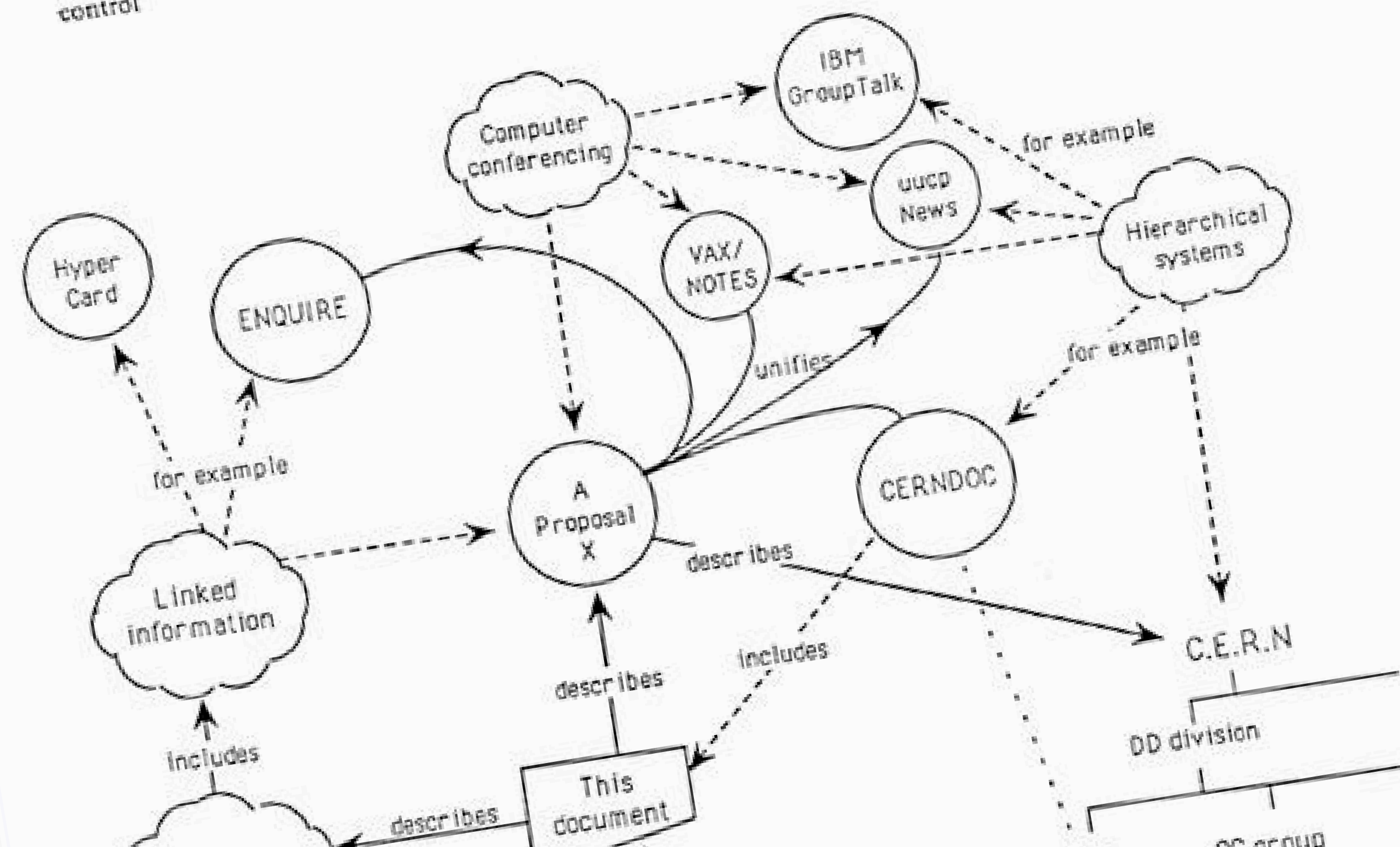
Tim Berners-Lee, CERN/DD
March 1989

Information Management: A Proposal

Abstract

This proposal concerns the management of general information about accelerators and experiments at CERN. It discusses the problems of loss of information about complex evolving systems and derives a solution based on a distributed hypertext system.

Keywords: Hypertext, Computer conferencing, Document retrieval, Information management, Project control



The First Proposal

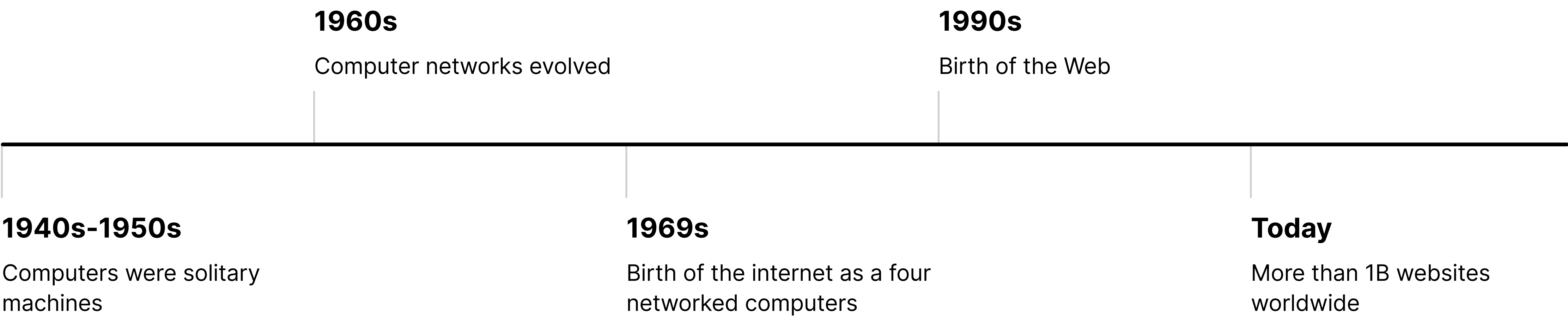
- Included HTML files with links
- A browser to view HTML files
- HTTP protocol for file transfer



WWW (Word Wide Web)

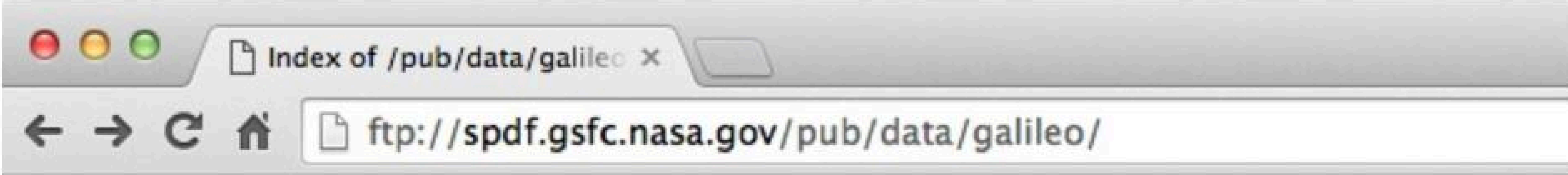
- Webpage: document viewed in a browser
- Site: collection of related webpages
- Server: delivers webpages to browsers

Evolution of the Web








Early versions of the Internet

- Internet was much Simpler
- Documents were plain Text
- Used FTP to transfer files



The screenshot shows a web browser window with a single tab titled "Index of /pub/data/galileo". The address bar displays the FTP URL "ftp://spdf.gsfc.nasa.gov/pub/data/galileo/". Below the browser window, the title "Index of /pub/data/galileo/" is repeated. A table lists the contents of the directory, including a parent directory link, three text files, and a subdirectory.

Index of /pub/data/galileo/			
	Name	Size	Date Modified
	[parent directory]		
	00readme.txt	2.4 kB	5/9/05, 12:00:00 AM
	aaa_planetary_data_at_nssdcftp.gsfc.nasa.gov.html	531 B	9/16/15, 12:00:00 AM
	galileo_update.txt	1.4 kB	2/24/99, 12:00:00 AM
	traj/		2/12/99, 12:00:00 AM

FTP:



HTML Documents

- HTML: standard markup for web documents
- Hypertext: text with links to other content
- Document markup: adds info on links, formatting, images

World Wide Web

The WorldWideWeb (W3) is a wide-area [hypermedia](#) information retrieval initiative aiming to give universal access to a large universe of documents.

Everything there is online about W3 is linked directly or indirectly to this document, including an [executive summary](#) of the project, [Mailing lists](#) , [Policy](#) , November's [W3 news](#) , [Frequently Asked Questions](#) .

[What's out there?](#)

Pointers to the world's online information, [subjects](#) , [W3 servers](#), etc.

[Help](#)

on the browser you are using

[Software Products](#)

A list of W3 project components and their current state. (e.g. [Line Mode](#) ,X11 [Viola](#) , [NeXTStep](#) , [Servers](#) , [Tools](#) , [Mail robot](#) , [Library](#))

[Technical](#)

Details of protocols, formats, program internals etc

[Bibliography](#)

Paper documentation on W3 and references.

[People](#)

A list of some people involved in the project.

[History](#)

A summary of the history of the project.

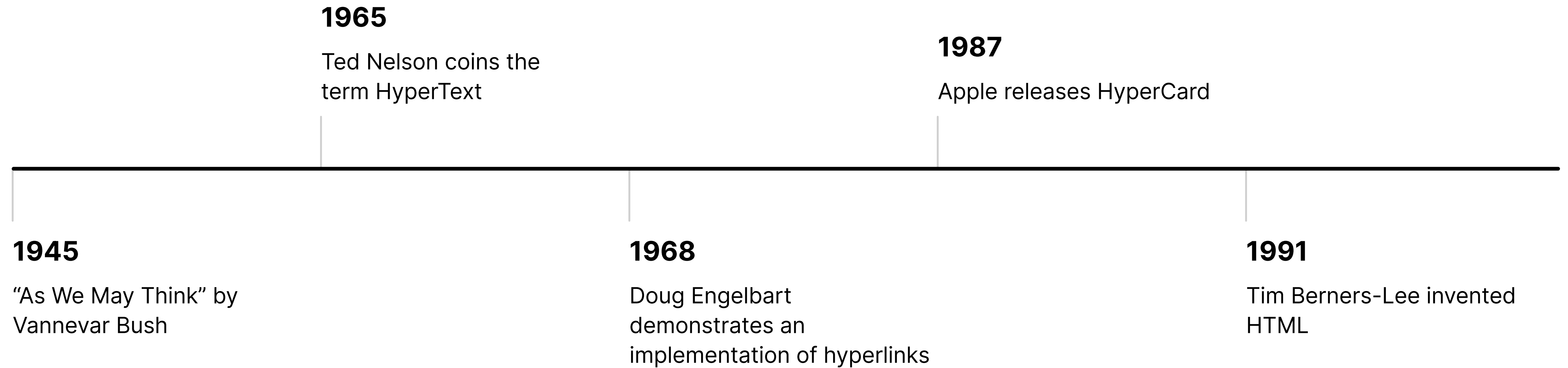
[How can I help ?](#)

If you would like to support the web..

[Getting code](#)

Getting the code by [anonymous FTP](#) , etc.

Previous work on Hypertext



Early 1990s

HTTP

web server

webpage

website

HTML

browser

	The period when the web was first developed.
	The language used for a text file that describes a webpage.
	Web document that is viewed in a web browser.
	Collection of related webpages.
	A program that serves webpages to browsers.
	The protocol for transferring files among computers via the web.
	A program for viewing webpages.

Early 1990s	The period when the web was first developed. People/companies began obtaining personal computers throughout the 1980s, and networks were growing. Connecting those computers intelligently was becoming important.
HTML	The language used for a text file that describes a webpage. The HyperText Markup Language has text with links (hypertext) to other files on the web.
webpage	Web document that is viewed in a web browser. A webpage may link to other webpages.
website	Collection of related webpages. A website may be composed of any number of webpages.
web server	A program that serves webpages to browsers. Popular web servers today include Apache, IIS, and nginx.
HTTP	The protocol for transferring files among computers via the web. Short for HyperText Transfer Protocol. A protocol is a set of rules.
browser	A program for viewing webpages. A browser displays HTML files in a formatted way.

Web vs. Internet

- Most internet traffic today is web traffic
- Internet: interconnected computers using rules
- Web: one specific use of the internet
- Internet also transmits email, music, video, and more

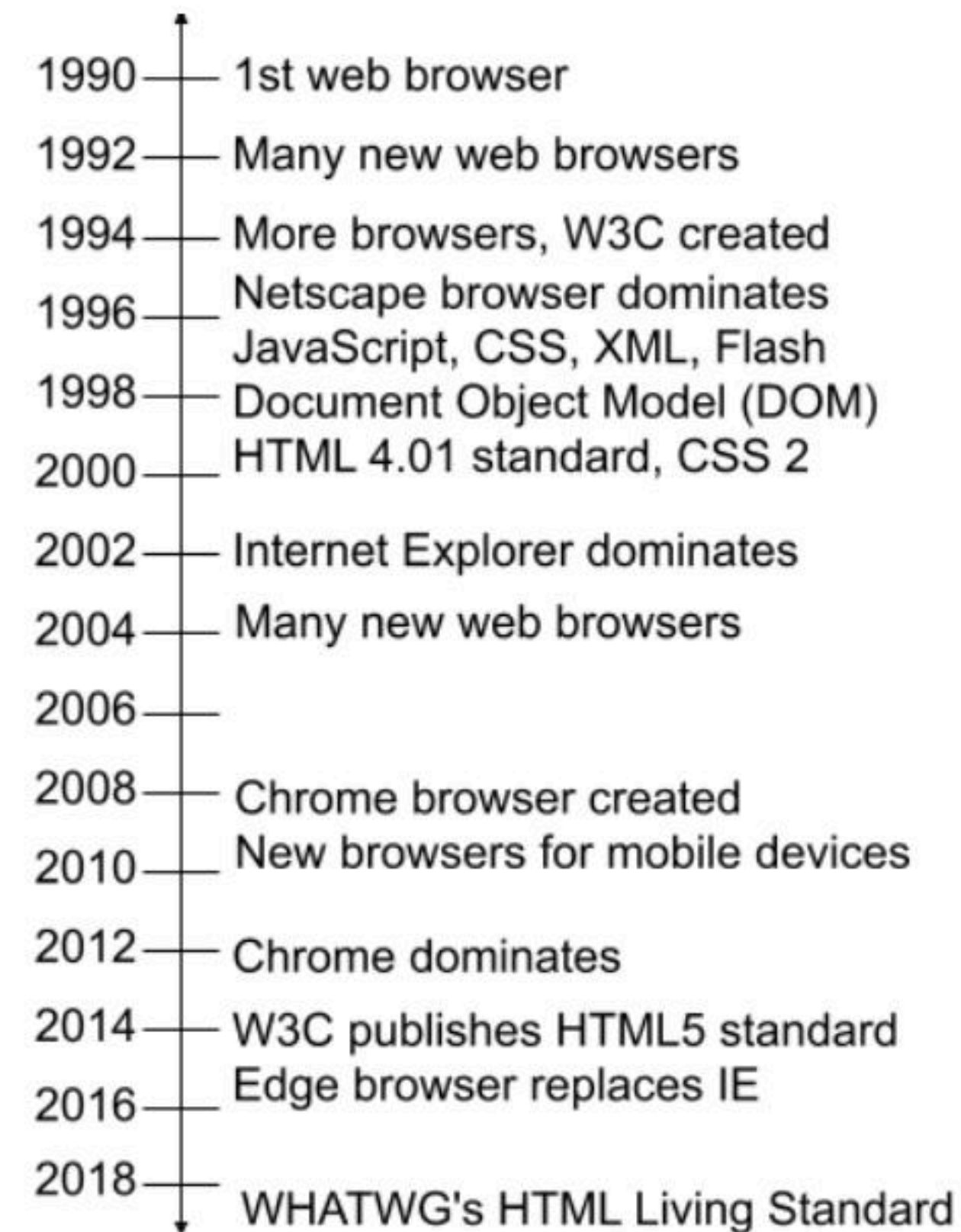


Web Browser

- Web browser: downloads and displays HTML documents
- Enables interaction via hyperlinks
- Uses HTML to understand document structure and meaning

Browsers War

- Early browser competition focused on user experience
- Developers added interactive features
- Features often worked only in specific browsers, causing compatibility issues



1st Browser War: 1995-2002

- Fight for market share
- Constant new features
- Many page/browser incompatibilities
- Internet Explorer wins

2nd Browser War: 2004-2013

- Fight for market share
- Performance and standards compliance become more important than new features
- Chrome wins

Standardization



- Webpage-browser incompatibility led to standardization
- W3C sets web standards, including HTML
- HTML5 is the final W3C HTML standard

Standardization



W3C

World Wide Web
Consortium



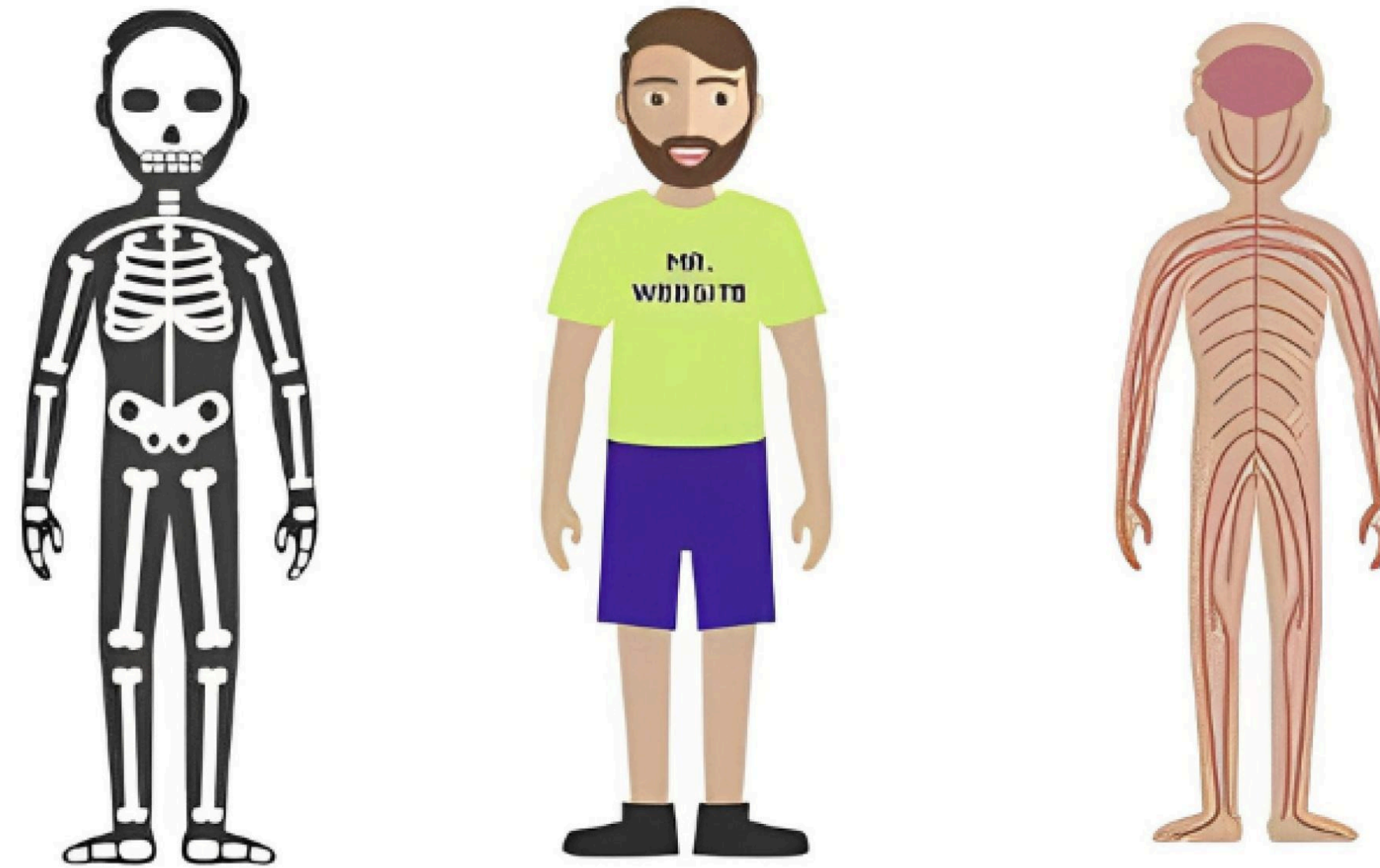
WHATWG

Web Hypertext
Application Technology
Working Group

HTML Living Standard

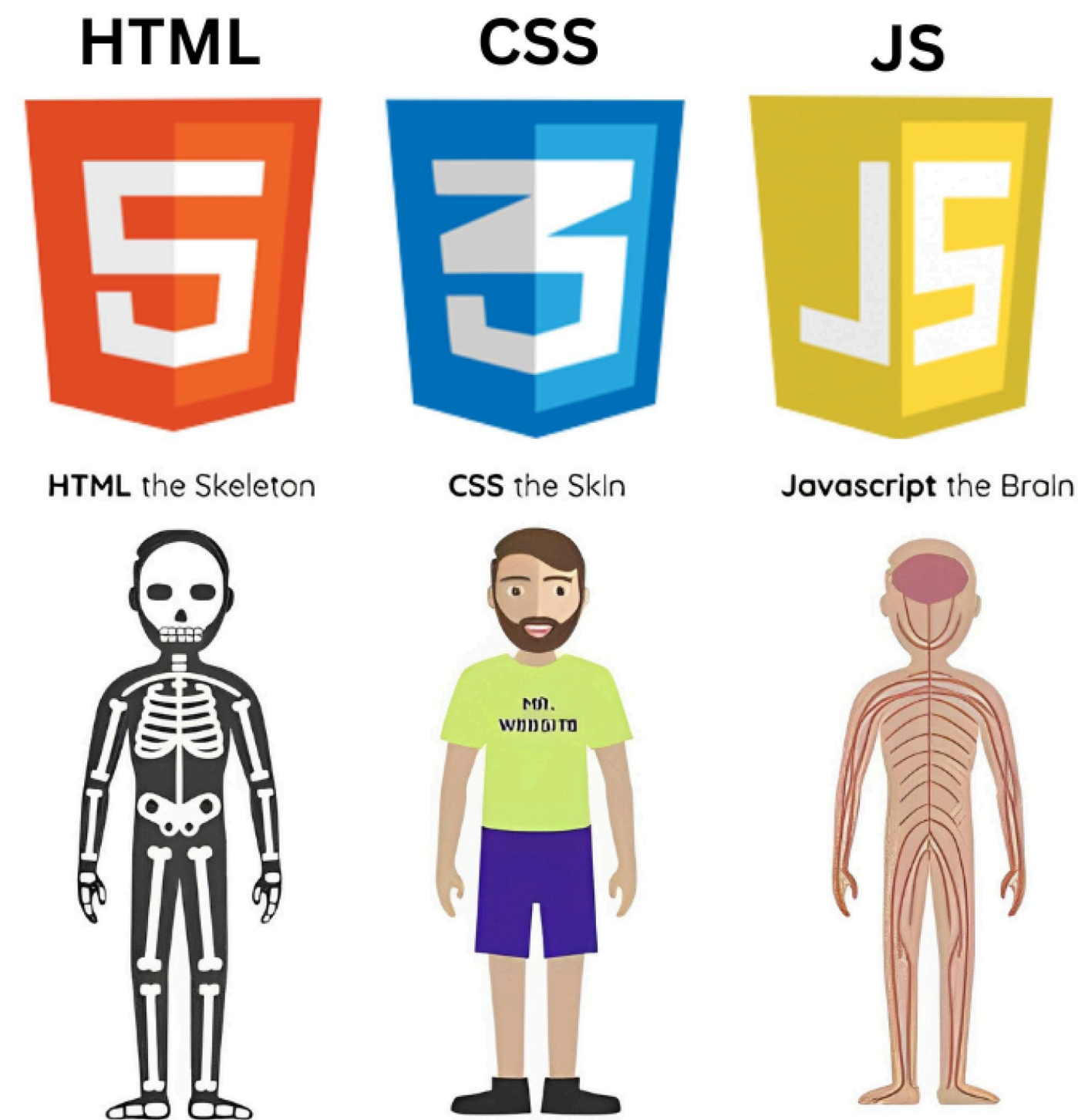
- HTML Living Standard ensures consistency across browsers
- Browser competition focuses on speed, standards compliance, and features
- Proprietary extensions are no longer the main focus





Separation of duties

- Shift to separate structure, presentation, and interaction
- Early markup controlled both structure and appearance
- Mixing these complicates compatibility across devices



A Modern Web Page

- HTML defines the structure and content of a webpage.
- CSS specifies the layout and visible appearance.
- JavaScript describes the dynamic behaviors and actions of a webpage.

JavaScript

HTML

CSS



Specifies document structure



Manages document presentation



Enables document interaction

HTML

Specifies document structure

HTML is used to specify the purpose of each part of a document. Each web browser has a default stylesheet that controls how the page is displayed, but HTML does not specify how the document parts are displayed.

CSS

Manages document presentation

CSS consists of a set of style rules about how to display the parts of a document.

JavaScript

Enables document interaction

JavaScript is a programming language that can manage any part of the document and interact with external servers to send and receive information. JavaScript sometimes also runs on web servers.

Key Takeaways

- The web and internet are two different concepts
- A browser is a software that displays and renders web pages
- A web page consists of three parts: HTML, CSS & JS.