



The World Wide Web

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Who is Sir Tim Berners-Lee?

- He proposed a hypertext-based system for researchers to share knowledge in 1980 while working as a particle physicist at the European Organization for Nuclear Research (CERN).
- As CERN was the world's largest Internet node (circa 1989), Berners-Lee further proposed combining hypertext with the Internet. This is considered the birth of the World Wide Web.



The First Website

- Berners-Lee launched the first website on August 6, 1991 (<http://info.cern.ch/>). It was an informational page detailing how the World Wide Web works and how one could build web pages and web servers. The URL of the first website is still active, although there are no screenshots of the original page.



The First Website

- Berners-Lee made his website on the NeXT computer, which was the first web server, hypermedia browser, and web editor.
- <http://www.youtube.com/watch?v=24WqXehCueg>



What else is on the Internet besides the World Wide Web?

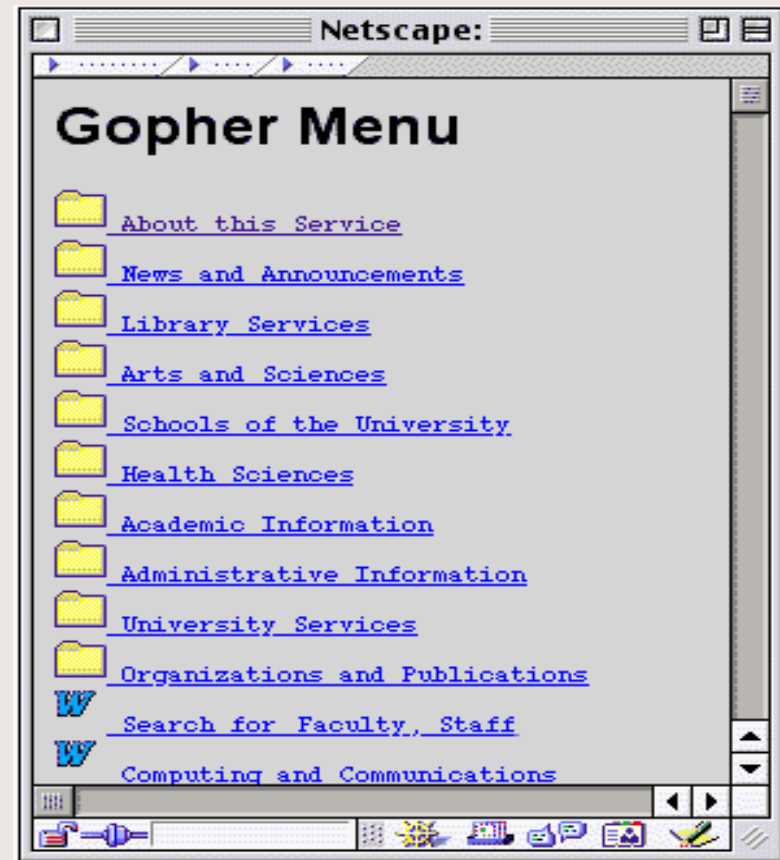
- E-mail – the sending of electronic messages between two computers. Can be Internet based or internal.
- Usenet – a global message board with over 14,000 forums about a variety of topics.
- Instant messaging – a means of engaging in private chat sessions in real time using the Internet.
- File Transfer Protocol – the protocol that enables one to exchange files using the Internet.

How does the World Wide Web work?

1. The user types or clicks on a hyperlinked URL.
2. The web browser communicates with a name server to translate the URL into an IP address, which is used to connect to the server.
3. A HTTP request is sent to the web server at the IP address in question. The text is requested first and then any additional media that the page contains (e.g., pictures, video, sound).
4. The web page appears on the user's screen based on the various web formatting languages that comprise the page.

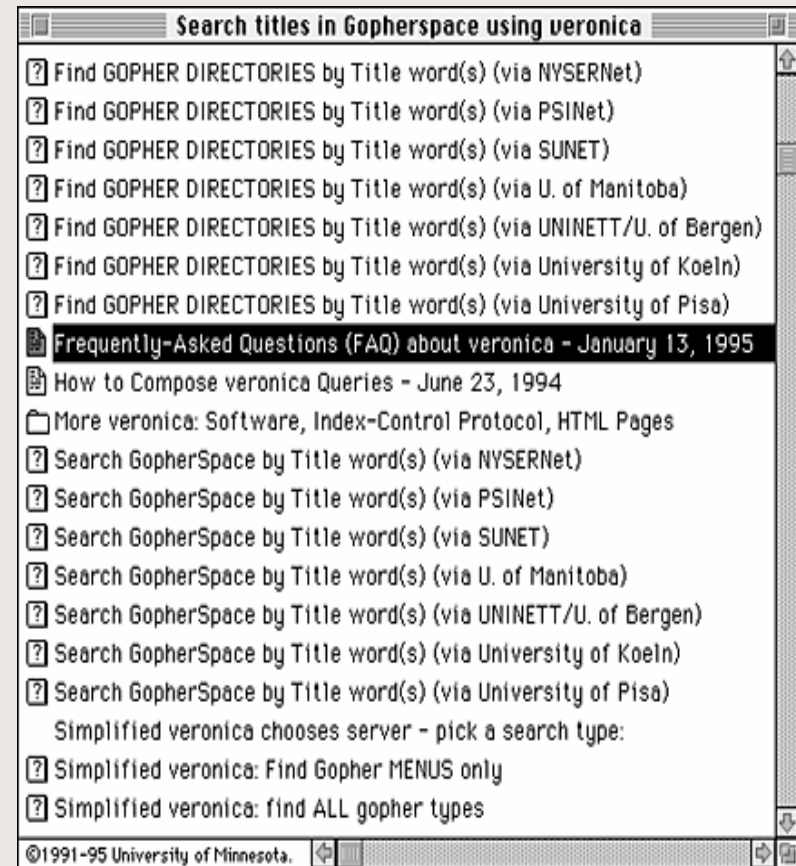
Competitors to the World Wide Web: Gopher

- Gopher was developed at the University of Minnesota in 1991. Like the World Wide Web, it was designed to enable users to easily access the Internet.



Competitors to the World Wide Web: Gopher

- Gopher is made up of hierarchical menus of hypertexted links. The content of the menus was determined by the servers.
- Two systems, VERONICA (Very Easy Rodent Oriented Net-wide Index of Computerized Archives) and JUGHEAD (Jonzy's Universal Gopher Hierarchy Excavation and Display) were developed so users could systematically search the menus. VERONICA searches all gopher servers, whereas JUGHEAD only searches one at a time.

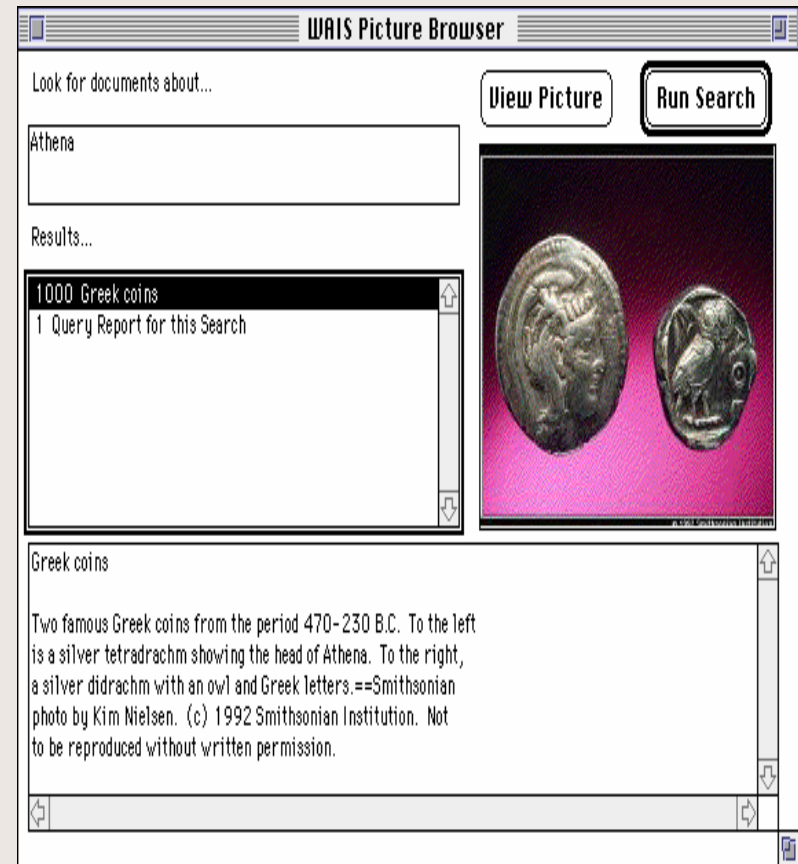


Competitors to the World Wide Web: Gopher

- The World Wide Web became more popular than Gopher because the former allowed for hyper linking within HTML files, which enhanced usability.
- The University of Minnesota was also considering copyrighting the Gopher system (unlike the World Wide Web which is open source), which prevented the spread of the technology.
- While most of Gopher servers were converted into HTML, it is still possible to access the Gopher root server through the University of Minnesota.

Competitors to the World Wide Web: Wide Area Information Servers (WAIS)

- WAIS is, “an indexing, searching, and retrieval tool that indexes a complete file instead of just the document title and allows users to search thousands of documents quickly and easily.” (definition from www.computerhope.com)
- WAIS was often used in conjunction with Gopher, in place of VERONICA or JUGHEAD.



Competitors to the World Wide Web: Wide Area Information Servers (WAIS)

- WAIS was originally designed for business executives to share full-text documents. The four companies that participated in the original WAIS project were Dow Jones & Co., Thinking Machines Corporation, Apple Computers, and KPMG Pear Marwick. It was search-based rather than browse-based, but was still cruder to operate than a web browser's search engine.

World Wide Web Consortium

- The World Wide Web Consortium, founded by Sir Tim Berners-Lee, is the organization responsible for creating standards for the World Wide Web to ensure its long-term growth. Examples of this body's work include standardizing HTML, JavaScript, and CSS.

Questions

- Why did the World Wide Web succeed, whereas Gopher failed? If the World Wide Web had not been invented, could Gopher have succeeded?
- Why do so many people refer to “the Internet” when they are really talking about the “World Wide Web”?

Sources

- <http://www.w3.org/People/Berners-Lee/>
- <http://info.cern.ch/>
- http://en.wikipedia.org/wiki/Tim_Berners-Lee#_note-3
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- http://www.codeghost.com/gopher_history.html
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- <http://www.knowalot.com/nova/gopher.html>
- <http://www.computerhope.com/jargon/w/wais.htm>
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- <http://computer.howstuffworks.com/web-server2.htm>

The End!

- Gopher says,
“Bye now!”

