

Introduction to the Internet

MUMT 621

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Introduction to the Internet

- What is the Internet?
- History of the Internet
- What is the web?
- The Internet network

What is Internet?

- The difference between:
 - intranet – within an organization, e.g., McGill VPN
 - extranet – network available to specific organizations outside of an organization
 - internet – set of interconnected networks
 - The Internet – the global network of computers

History of the Internet

Who invented the Internet?

Did Al Gore invent the Internet?

Did Al Gore invent the Internet?



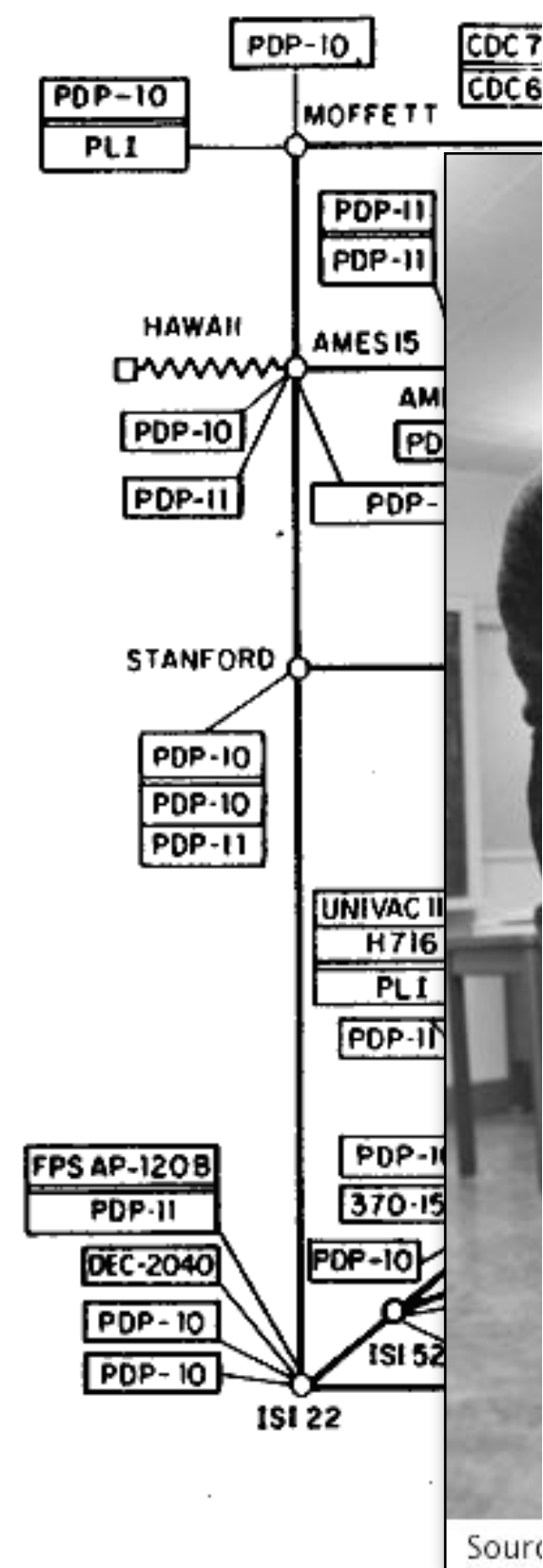
History of the Internet

- In defence of Al Gore:
 - <http://www.eecs.umich.edu/~fessler/misc/funny/gore.net.txt>
- “Al Gore was the first political leader to recognize the importance of the Internet and to promote and support its development.” — Bob Kahn and Vint Cerf (2 October 2000)

THE C PROGRAMMING LANGUAGE

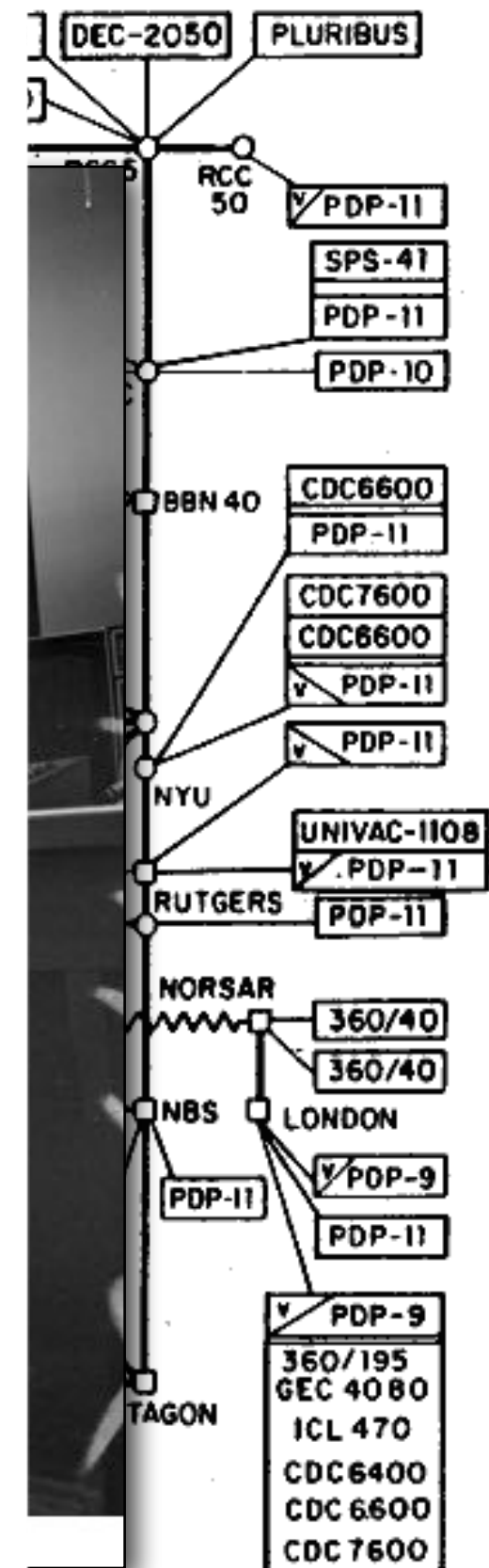
Brian W. Kernighan • Dennis M. Ritchie

PRENTICE HALL SOFTWARE SERIES



(PLEASE NOTE
INFORMATION)

NAMES SHOWN



History of the Internet: Commercialization

- 1990's: Emergence of Internet Service Providers (ISPs)
- 1995: Complete commercialization (no restriction to carry commercial traffic)
 - public e-mail (e.g., AOL: 1991)
 - instant messaging (~1997)
 - VoIP (Voice over Internet Protocol) (e.g., Skype: 2003)
 - WWW (1993)

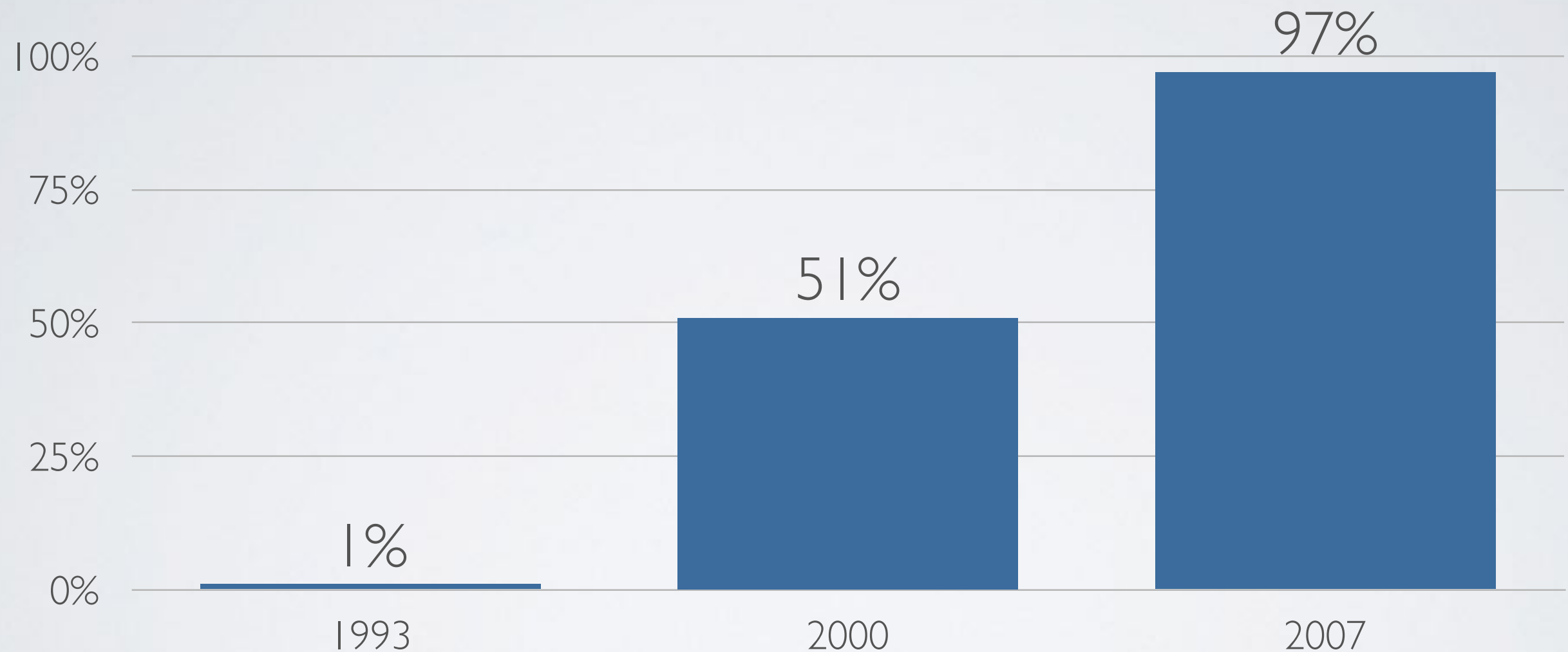
Quiz!

List the following in the order of appearance on the Web:

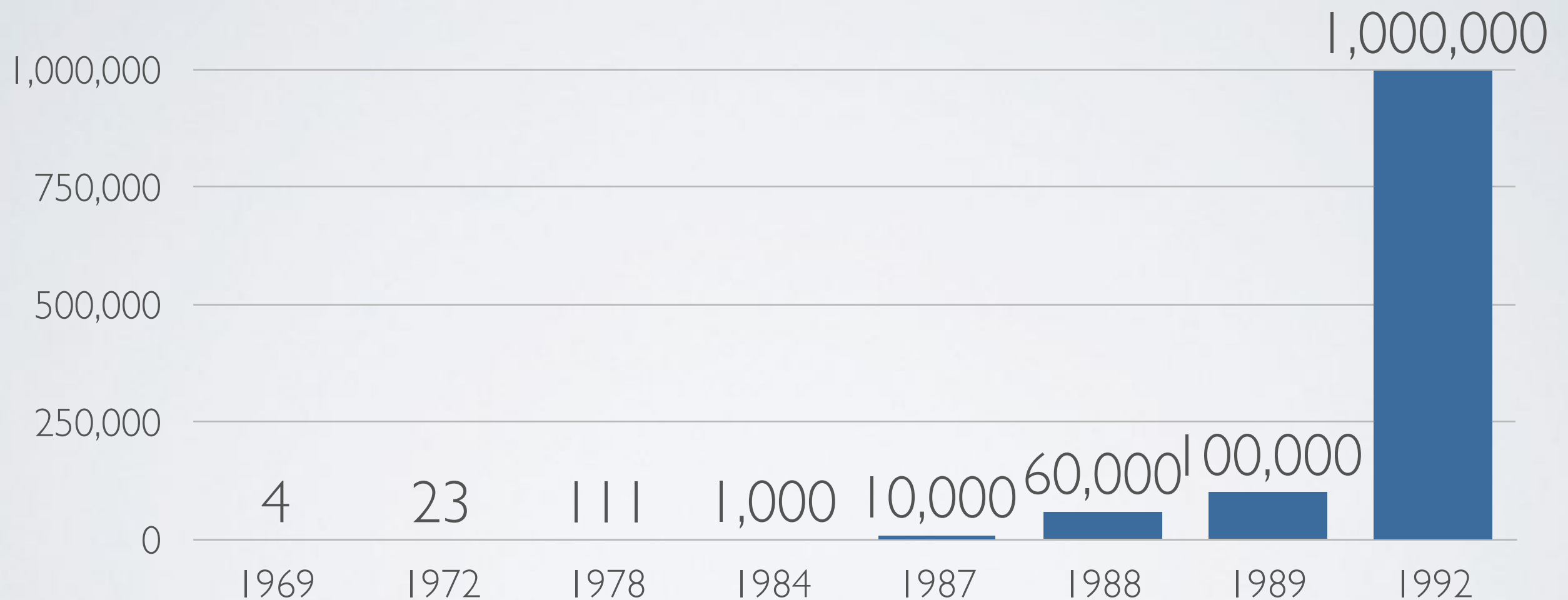
Amazon, Facebook, Instagram, TikTok, Twitter / X, WeChat, What'sApp, Wikipedia, YouTube

- Amazon (1997)
- Wikipedia (2001)
- Facebook (2004)
- YouTube (2005)
- Twitter / X (2006)
- What'sApp (2009)
- Instagram (2010)
- WeChat (2011)
- TikTok (2016)

The percentage of two-way telecommunication carried on the Internet



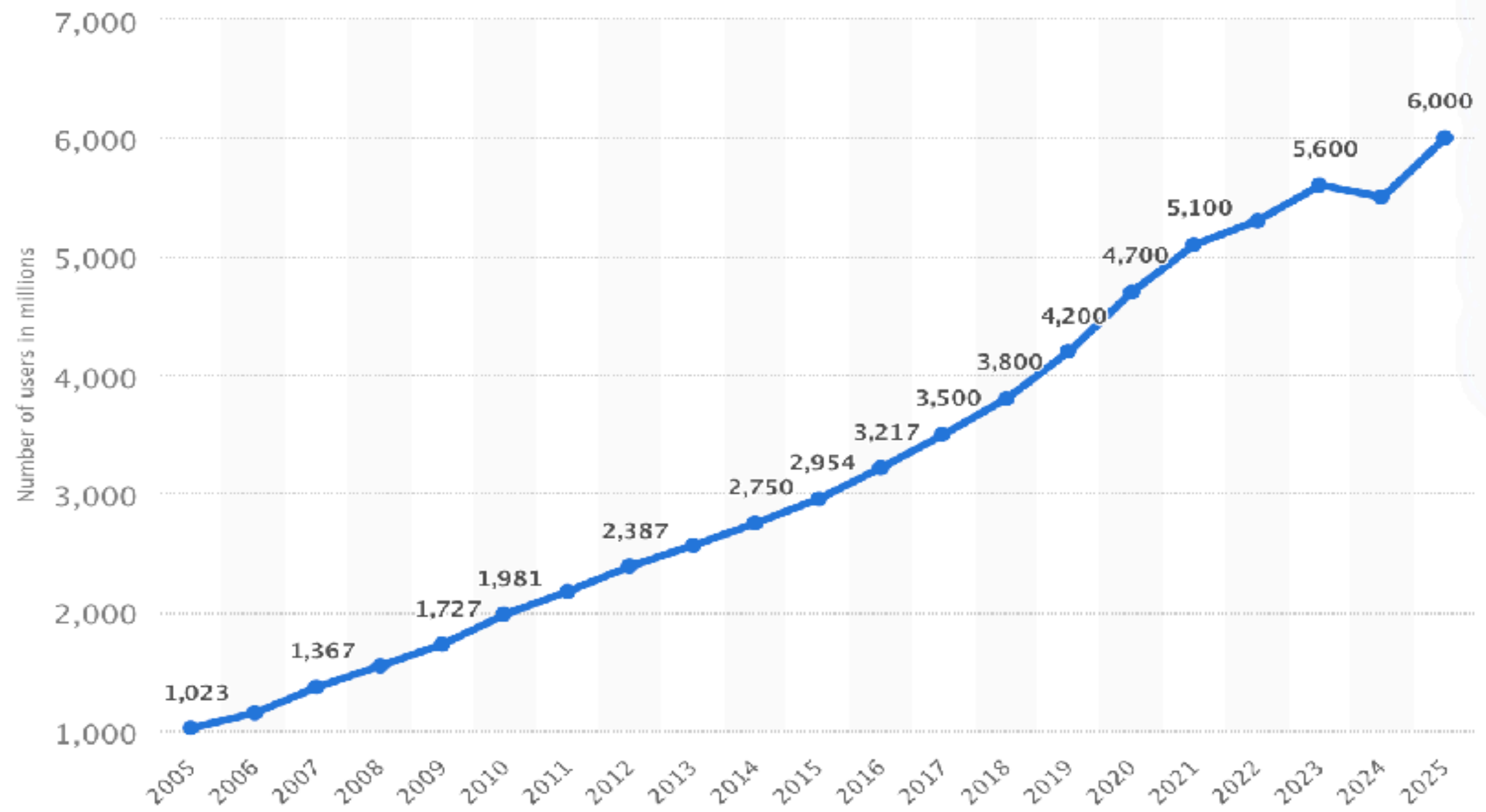
The number of computers on the Internet (2021: over 4 billion)



Number of internet users worldwide from 2005 to 2025

(in millions)

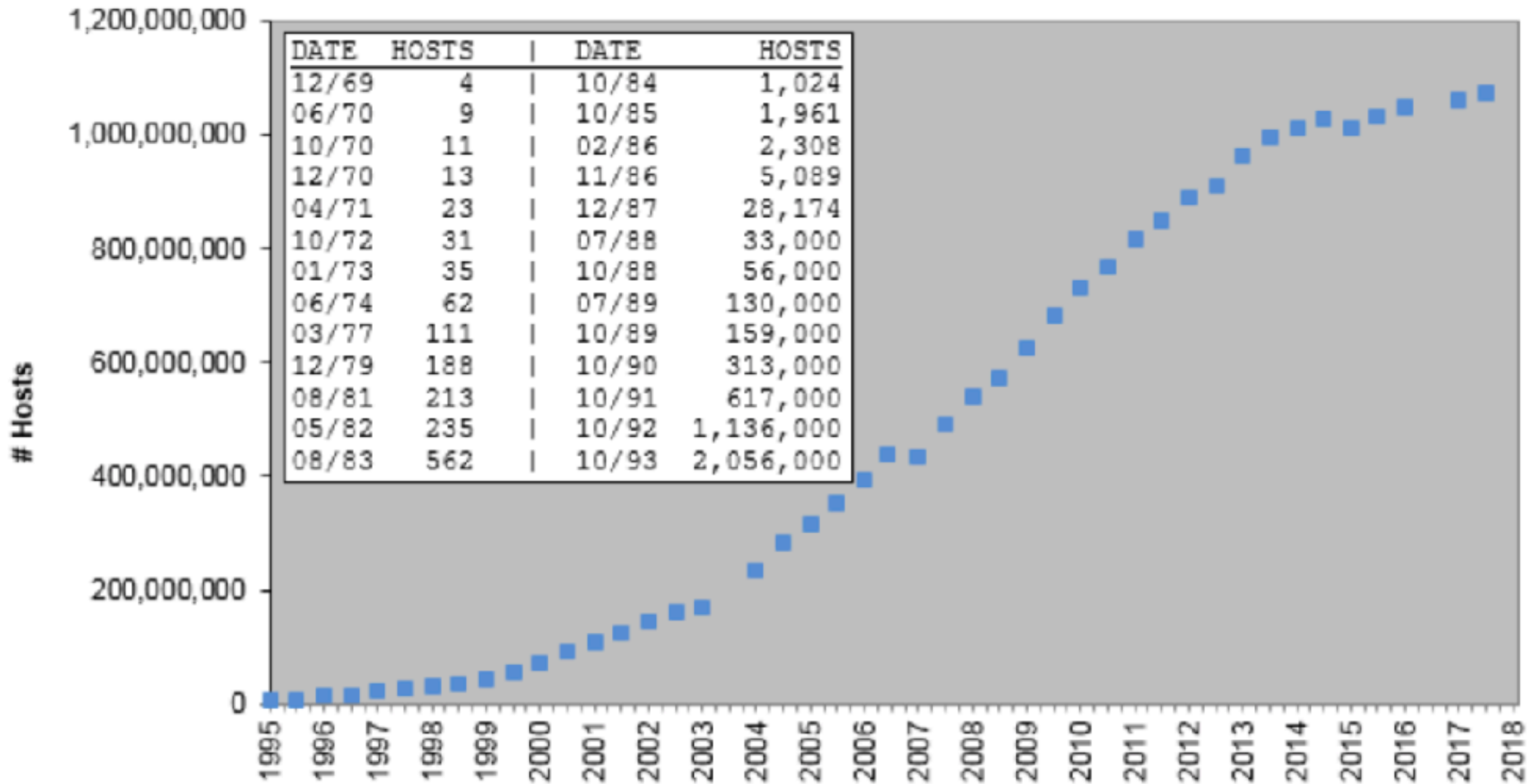
 **Zoomable Statistic:** Select the range in the chart you want to zoom in on. 



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Internet Hosts

Hobbes' Internet Timeline Copyright ©2018 Robert H Zakon
<https://www.zakon.org/robert/internet/timeline/>



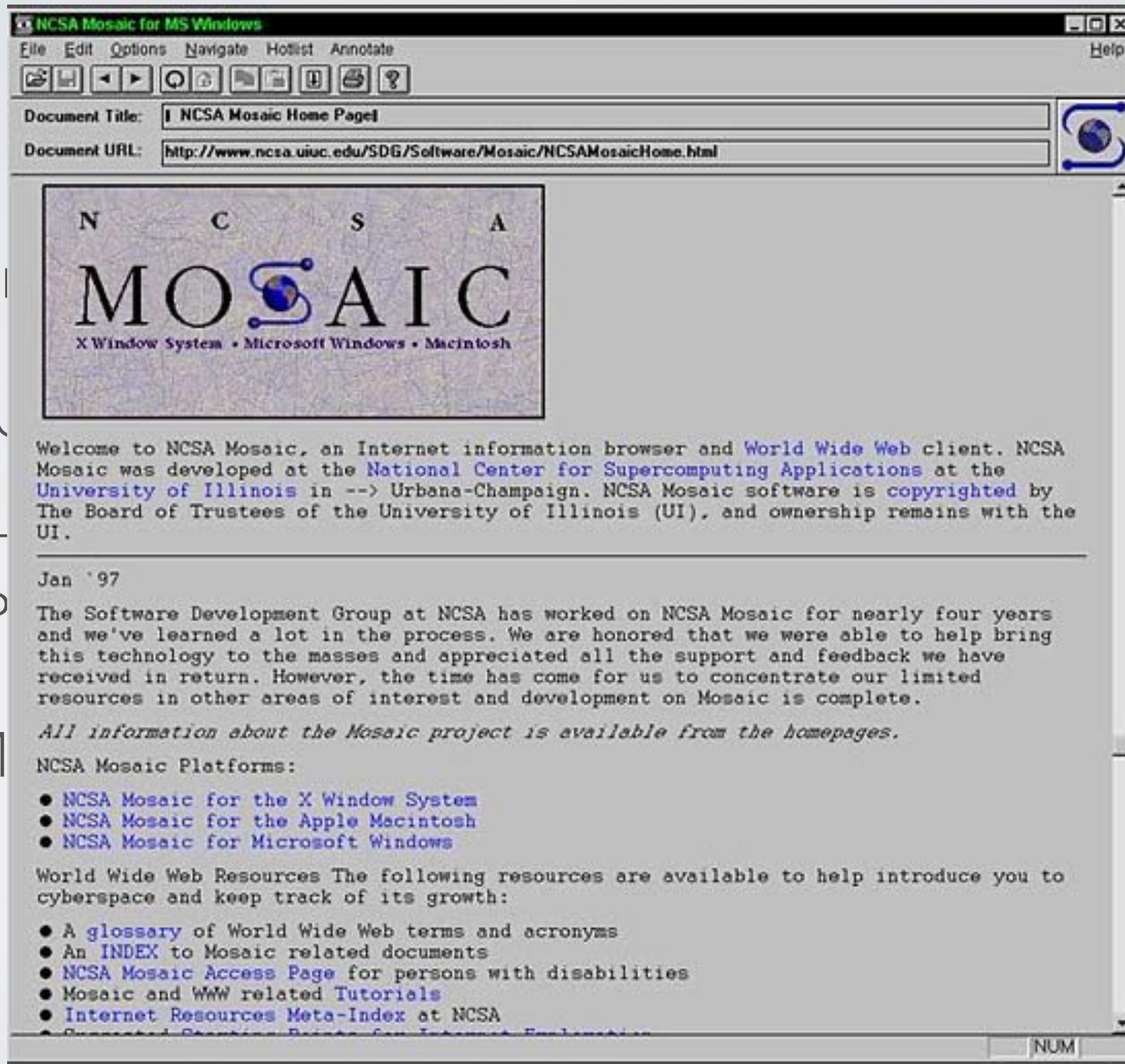
- <http://www.internetworldstats.com/stats.htm>

History of World Wide Web: Precursors

- 1990: Archie search engine
 - Developed at McGill to search FTP sites (~200 sites)
- 1991: WAIS (Wide Area Information Server)
- 1991: Gopher (search documents)

History of WWW

- 1990: Sir
- URI (U
- HTML
- HTTP
- 1993: M



pt

History of WWW: Search Engines

- 1993: Excite



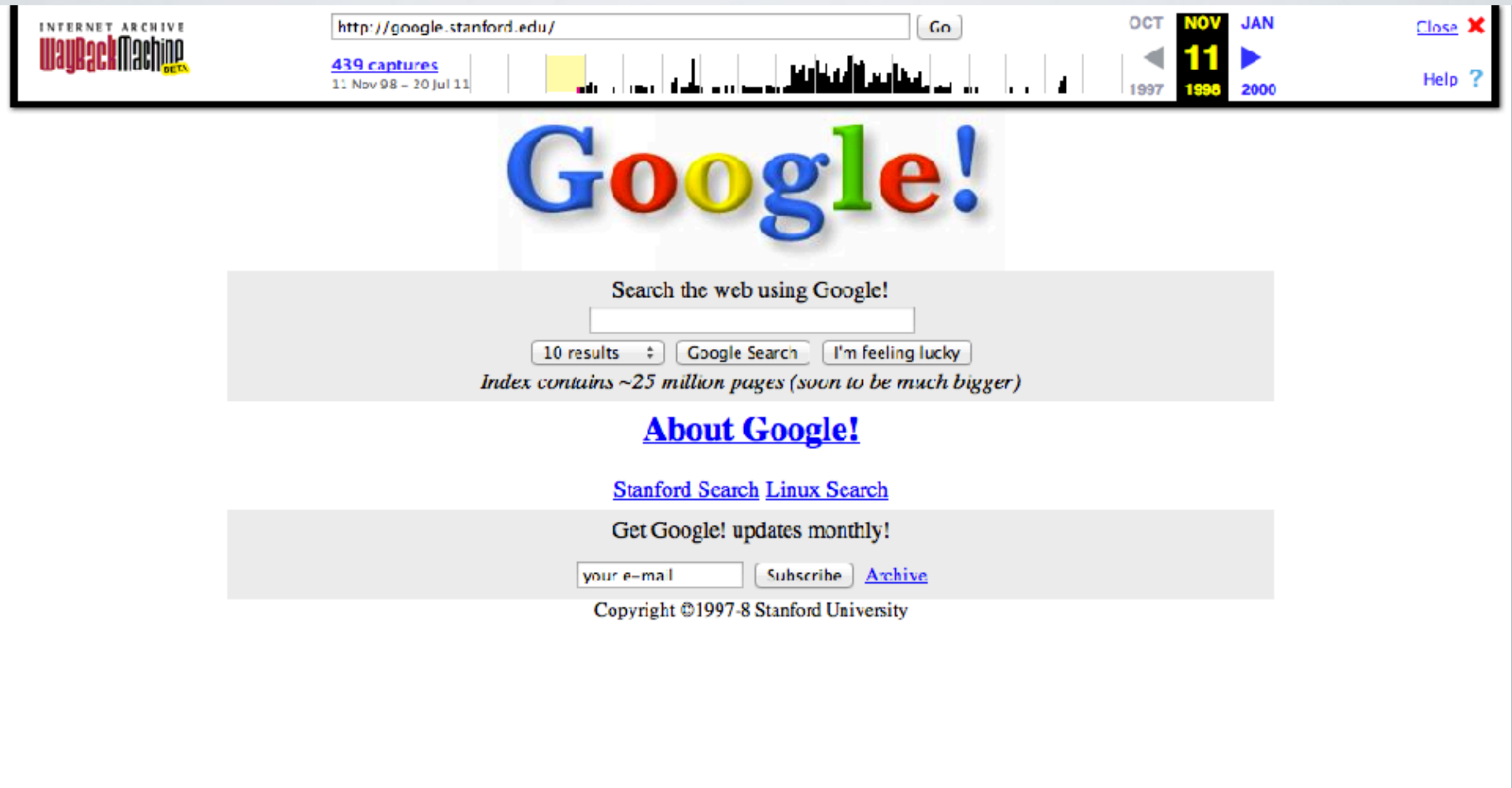
- 1994: Yahoo; WebCrawler (first full-text search engine), Lycos

- 1995: Infoseek, AltaVista (natural language inquiries)



- 1997: Google

Google.com | 1998/11/11



- 2012: “Google has indexed over 30 trillion pages” [wikipedia]
- 2016: “Google’s search knows about over 130 trillion pages” [searchengineland.com]

Questions

- What is an IP (Internet Protocol) address?
- What is a domain name?
- What is a packet?
- What is TCP/IP (Transmission Control Protocol/Internet Protocol)?
- What is UDP (User Datagram Protocol)?
- What is a web browser?
- What is the World Wide Web?
- What is cloud computing?
- How does your cell phone connect to the Internet (two ways)?