

A Short History of the Internet and Web (Narrated)

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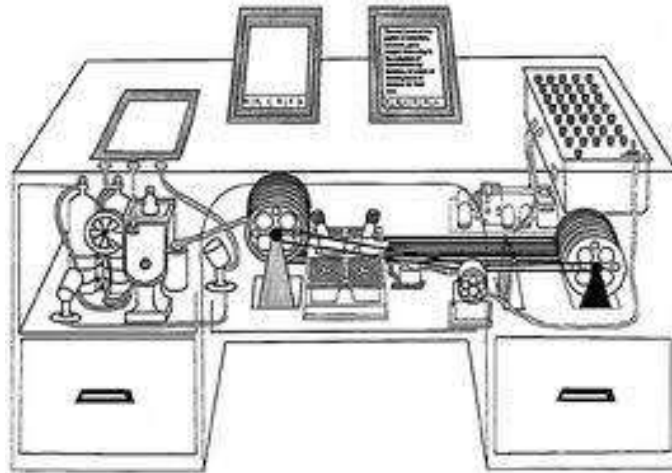


“We've all heard that a million monkeys banging on a million typewriters will eventually reproduce the entire works of Shakespeare. Now, thanks to the Internet, we know this is not true.”

- Robert Wilensky



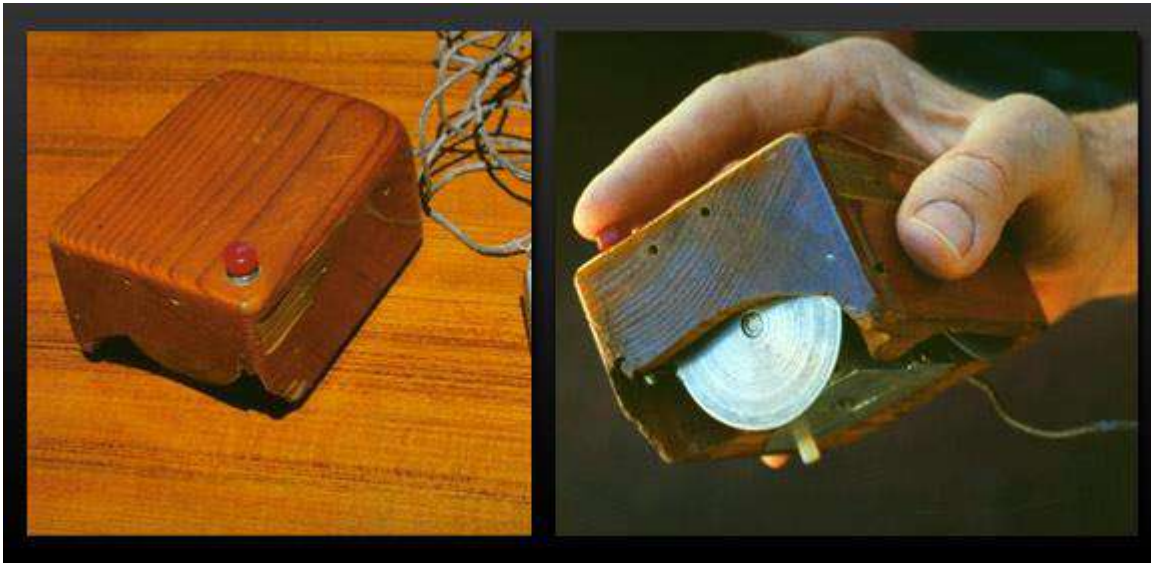
- 1945 – **Vannevar Bush** writes about “[memex](#)”, a futuristic, automatic, personal library system



- 1960s – Advanced Research Projects Agency (**ARPA**) does research on “internetwork”, connecting small and large networks



- 1968 – **Doug Engelbart** demonstrates NLS, a hypertext system that uses a “mouse”



[“The Demo”](#)

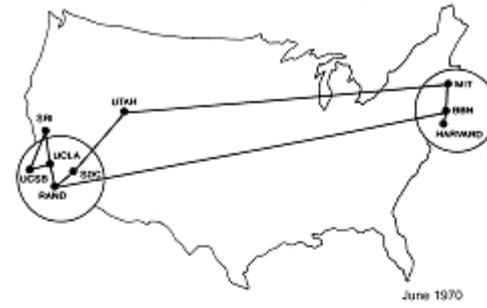


- 1969 – ARPANET goes online with 4 nodes

Dec 1969



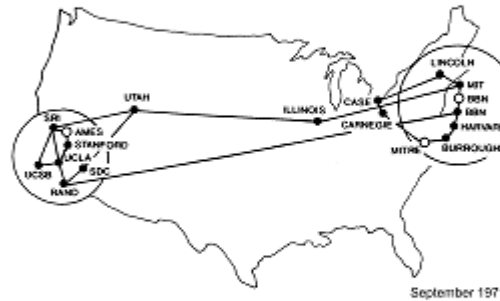
June 1970



Dec 1970



Sept 1971



Aug 1972



June 1975



- 1969 – **Request for Comments (RFC)** created for quickly disseminating ideas with other network researchers

Telnet allows user to login to a remote computer ([RFC 15](#))

- 1971 – Ray Tomlinson sends **first e-mail** (sent to himself and probably read “QWERTYUIOP”)

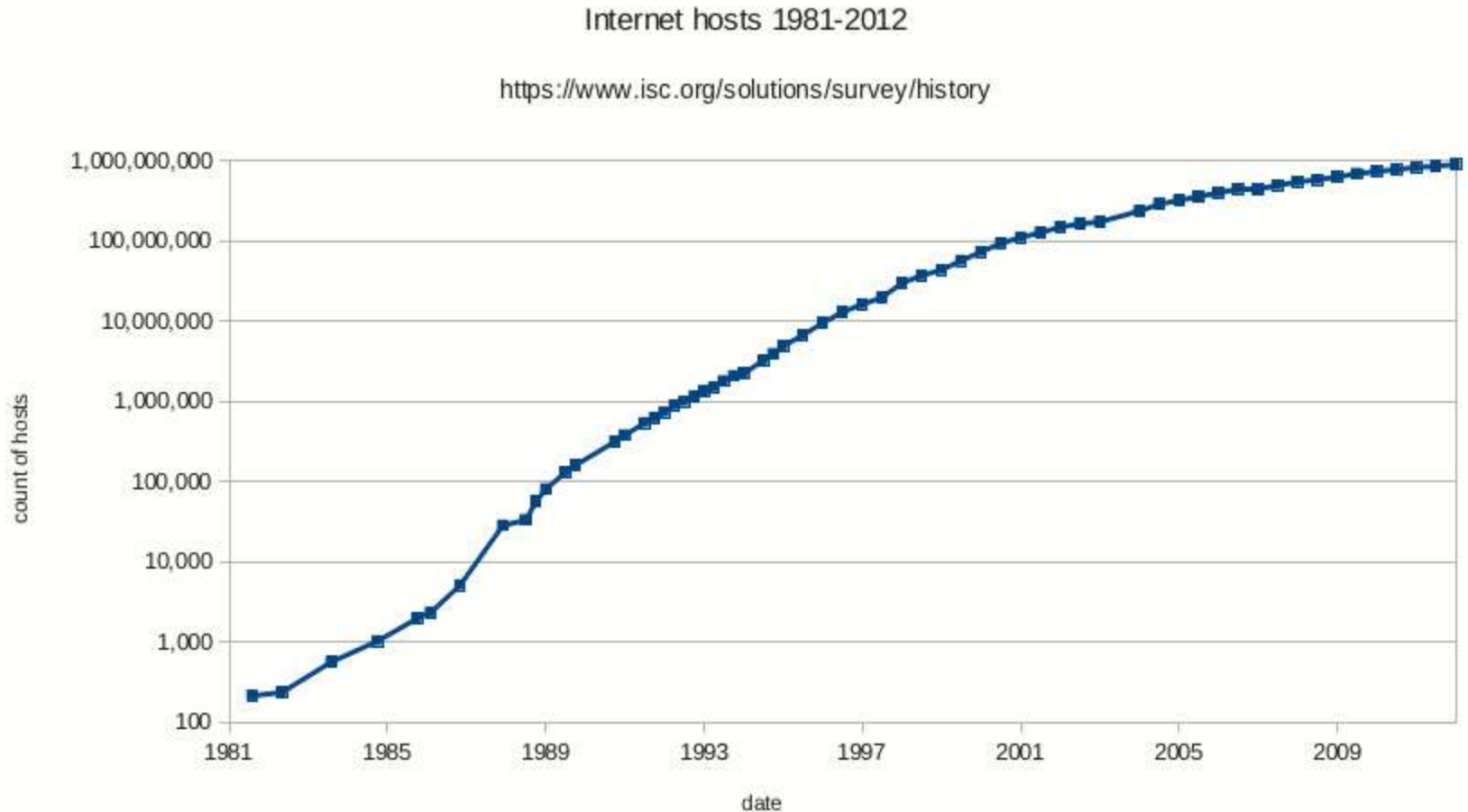
FTP (File Transfer Protocol) allows files to be transferred between computers ([RFC 114](#))



- 1981 – ARPANET (Internet) has **200 nodes**
- 1982 – **ARPANET** standardizes its use of TCP/IP (Transmission Control Protocol / Internet Protocol) to send data packets across the network
- 1983 – Domain Name System (**DNS**) developed
- 1985 – **NSFNET** established, would later become major part of the Internet backbone
- 1986 – Over **10,000 nodes** on ARPANET. US military portion of ARPANET splits off into MILNET (military-only network)



- 1988 – Over 100,000 nodes on Internet



http://en.wikipedia.org/wiki/File:Internet_host_count_1988-2012_log_scale.png



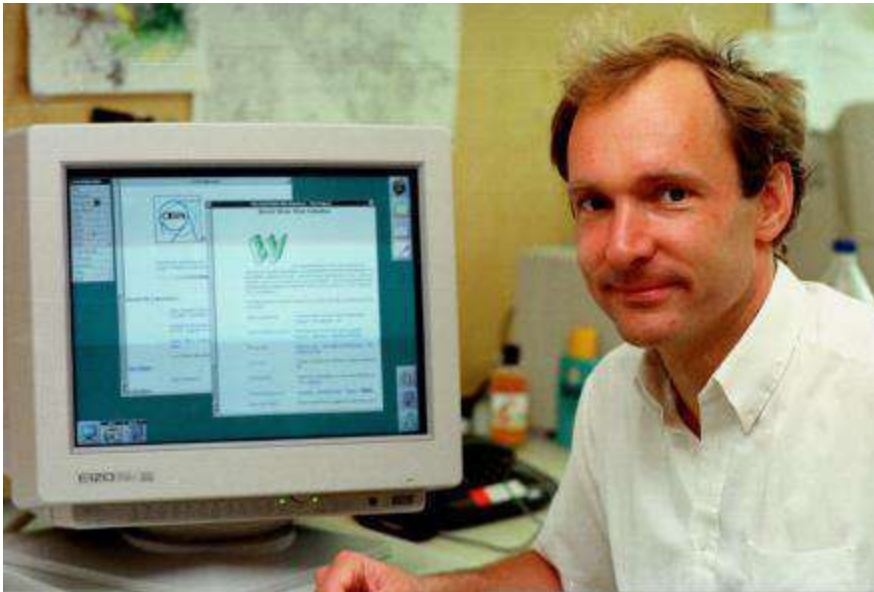
- 1988 – **First Internet worm** by Robert Tappan Morris crashes 6% of servers on Internet



IANA established to oversee global IP address allocation (and other)



- 1990 – [Tim Berners-Lee](#) and others at CERN develop the **WorldWideWeb (WWW)**, HTML documents transmitted over the Internet by a web server to web browsers using URIs and HTTP (1st web page online on Aug 6, 1991)



Images: <http://www.radford.edu/sjennings15/text.htm>
http://en.wikipedia.org/wiki/Tim_Berners-Lee



- 1992 – **ViolaWWW** browser for UNIX

50 web servers

- 1993 – 500 web servers


Mosaic web browser – multi-platform and 1st browser to display inline images, written by [Marc Andreessen](#)



Image: <http://en.wikipedia.org/wiki/File:NCSAMosaic1.0Mac.png>



- 1994 – **2,500 web servers**

WWW Consortium (**W3C**) began 

Netscape 1.0

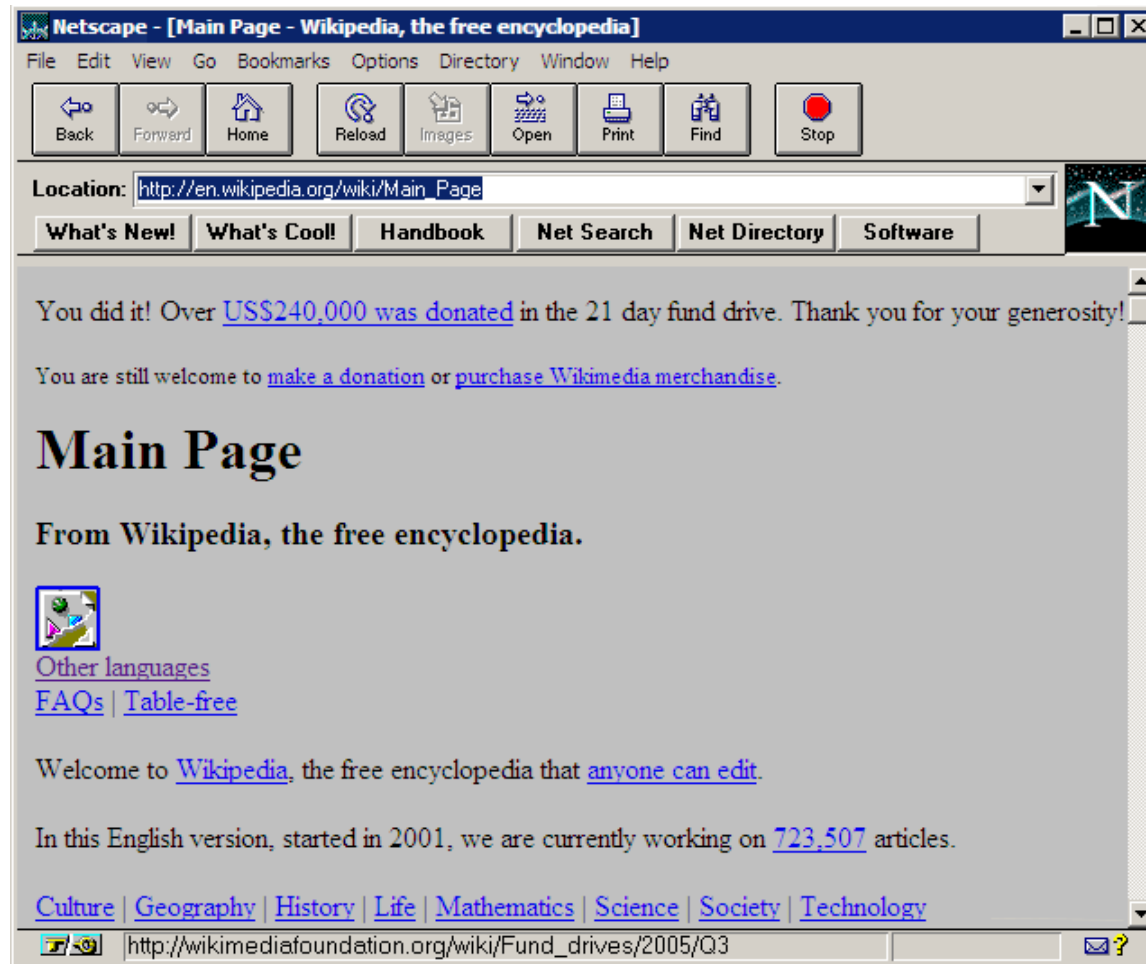


Yahoo! Web directory started by Jerry Yang and David Filo

YAHOO!



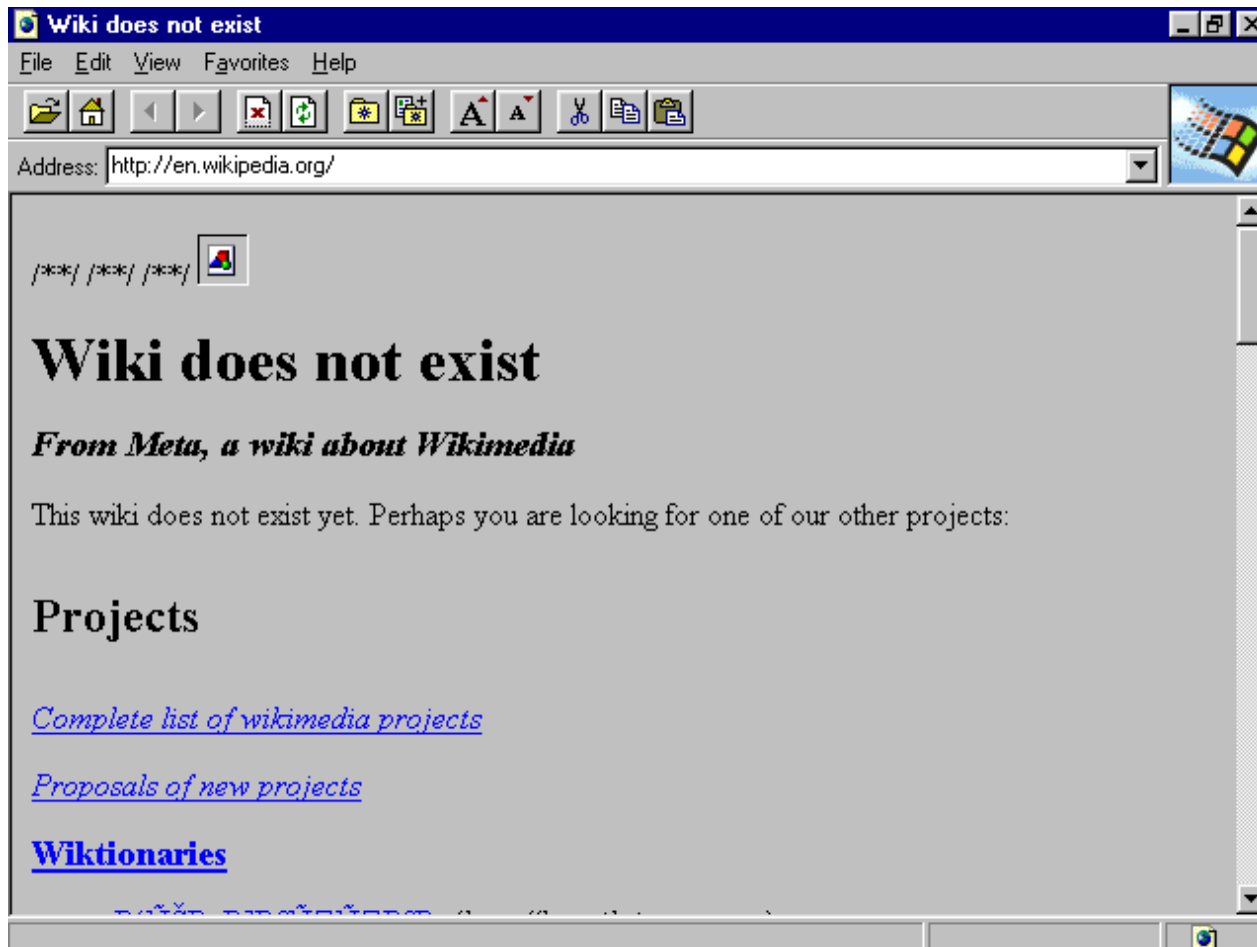
- 1995 – **Netscape 2.0** – Supported plug-ins, frames, Java applets, JavaScript



http://upload.wikimedia.org/wikipedia/en/archive/2/2d/20130405022914!Netscape_2.02.png



- 1995 - **Internet Explorer 1.0** released by Microsoft

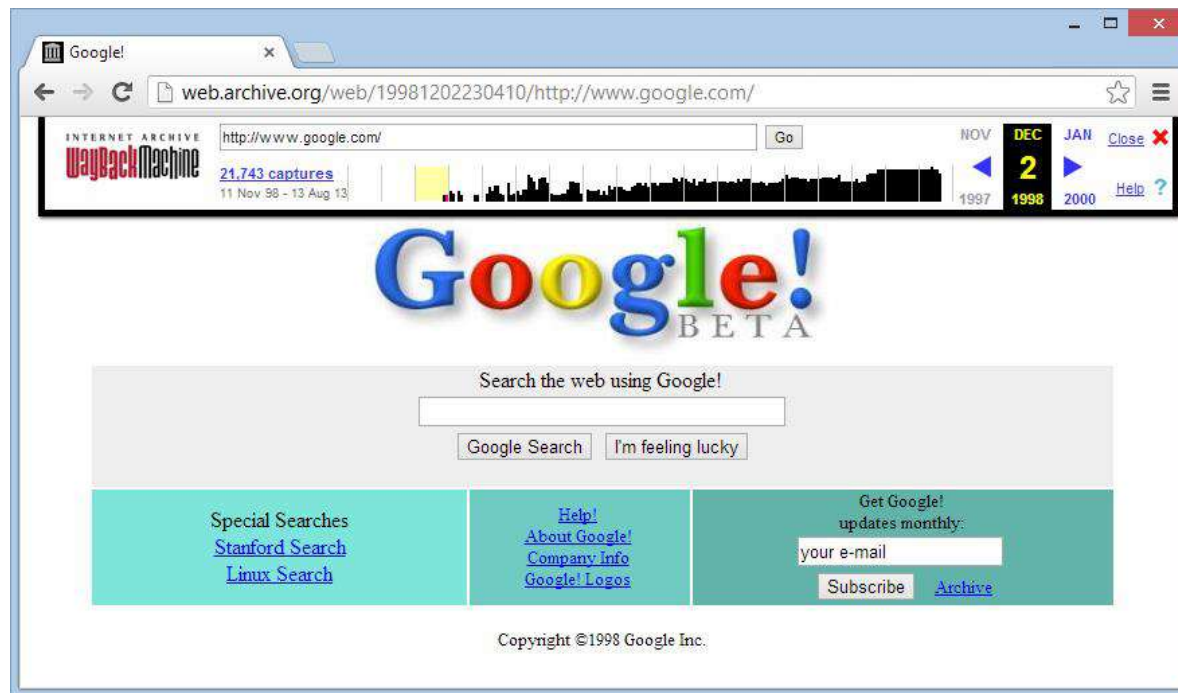


http://en.wikipedia.org/wiki/File:Internet_Explorer_1.0.png



- 1996 – Macromedia **Flash** 1.0 (previously called FutureSplash Animator)

Internet Archive begins archiving the Web



- 1997 – **HTML 4.0** de facto standard

Browser Wars I: Netscape vs. IE

“Netscape 72,
Microsoft 18”



Image: <http://home.snafu.de/tilman/mozilla/stomps.html>



- 1998 – Network Solutions registers **2 millionth domain name**

Emergence of **<XML>**

ICANN created to manage IP address space and DNS root zone



- 1998 – **Google** founded by Larry Page and Sergey Brin



- 2000 – **Napster** sued over music sharing



Web size estimates by NEC-RI and Inktomi surpass **1 billion indexable pages**.

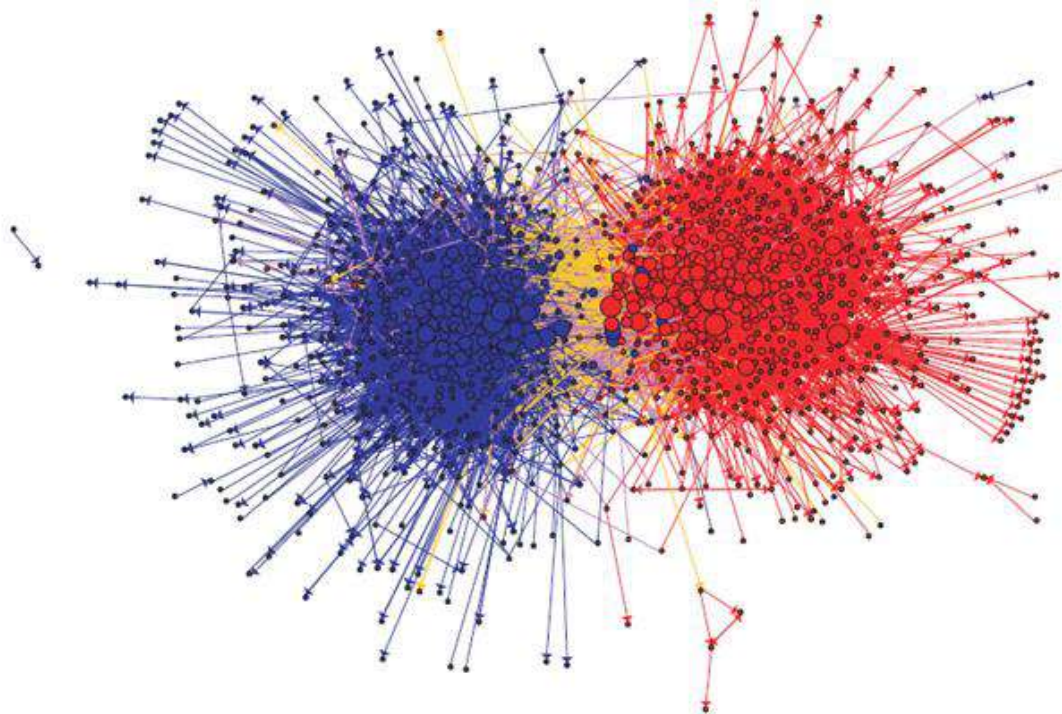
XHTML 1.0 recommended by W3C



- 2001 – **Wikipedia**: encyclopedia that can be edited by anyone



- 2002 – **Blogs** become popular



- 2003 – **iTunes.com** and other legal Internet music downloading services appear. iTunes.com registers 25th million song download in Dec (“Let It Snow! Let It Snow! Let It Snow!” by Frank Sinatra).



Image: <http://www.engadget.com/2007/10/16/apple-officially-cuts-drm-free-track-prices-to-99/>



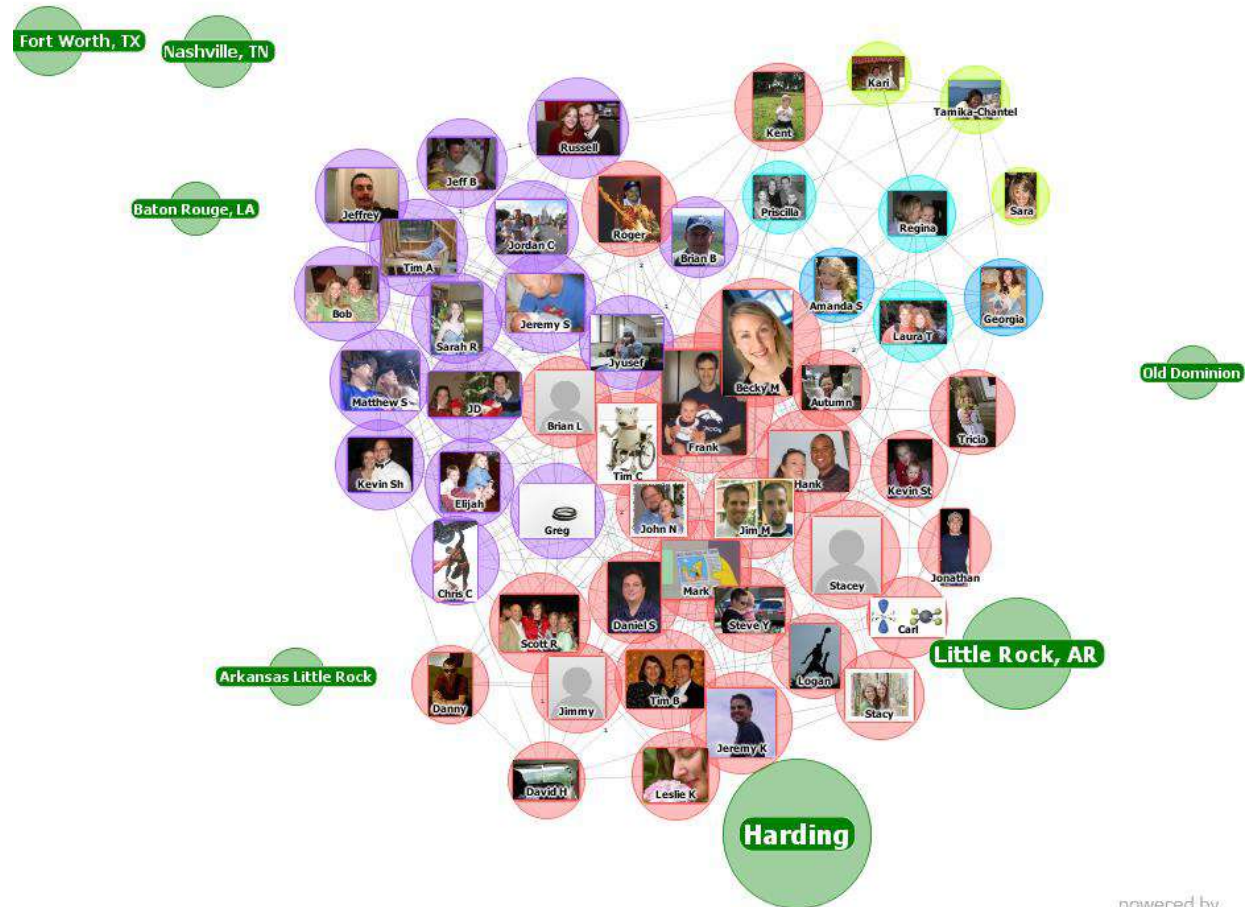
- 2003 – **Security problems**
 - SQL Slammer worm - largest and fastest spreading distributed denial of service (DDoS) attacks ever
 - Sobig.F virus - the fastest spreading virus ever
 - Blaster (MSBlast) worm – one of the most damaging worms ever



Image: <http://www.lbl.gov/ITSD/CIS/compnews/2003/August/01-Sobig-worm.html>



- 2004 – **MySpace** and **Facebook** popularize online social networks




- 2005 – **YouTube** founded by three former PayPal employees and sold to Google the next year for \$1.65B



Image: http://www.usatoday.com/tech/news/2006-10-11-youtube-karim_x.htm



- 2006 – **Twitter**  launches 140 character limit micro-blogging service

Time Magazine's person of the year: **You.** Acknowledges significance of user-generated content (Web 2.0)



- 2007 – One of the first massive **cyber attacks**: Estonian websites attacked by Russian hackers after relocating the Bronze Soldier of Tallinn monument



- 2008 – **Firefox 3** sets Guinness World Record for the “largest number of software downloads in 24 hours.” (8M downloads)

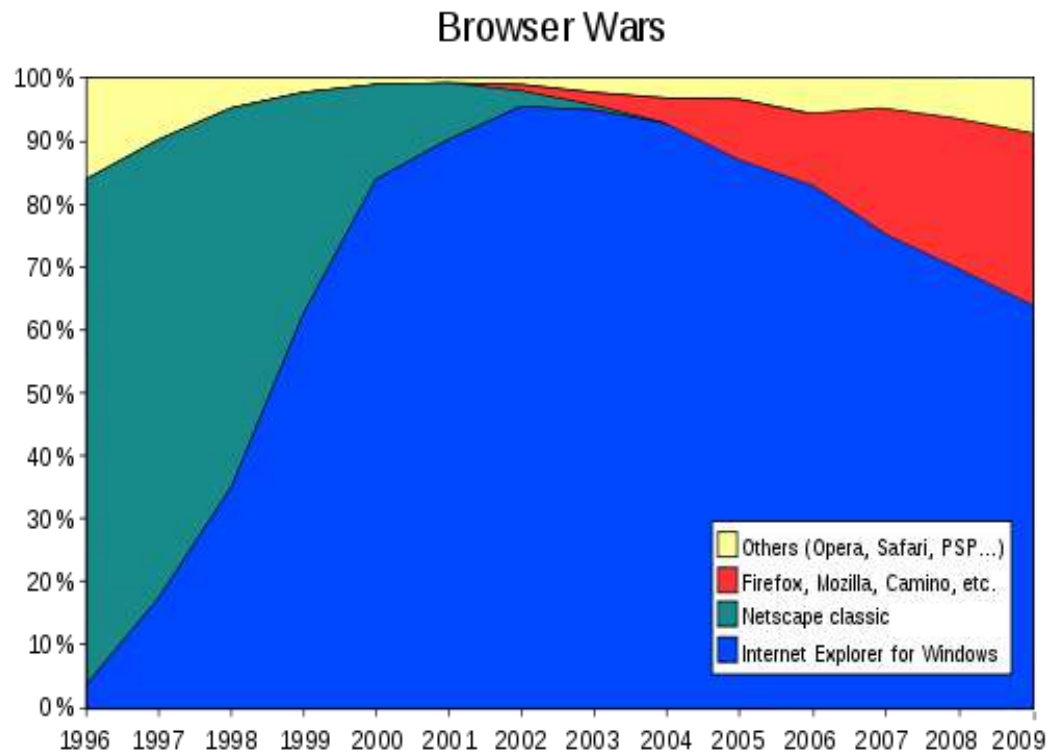
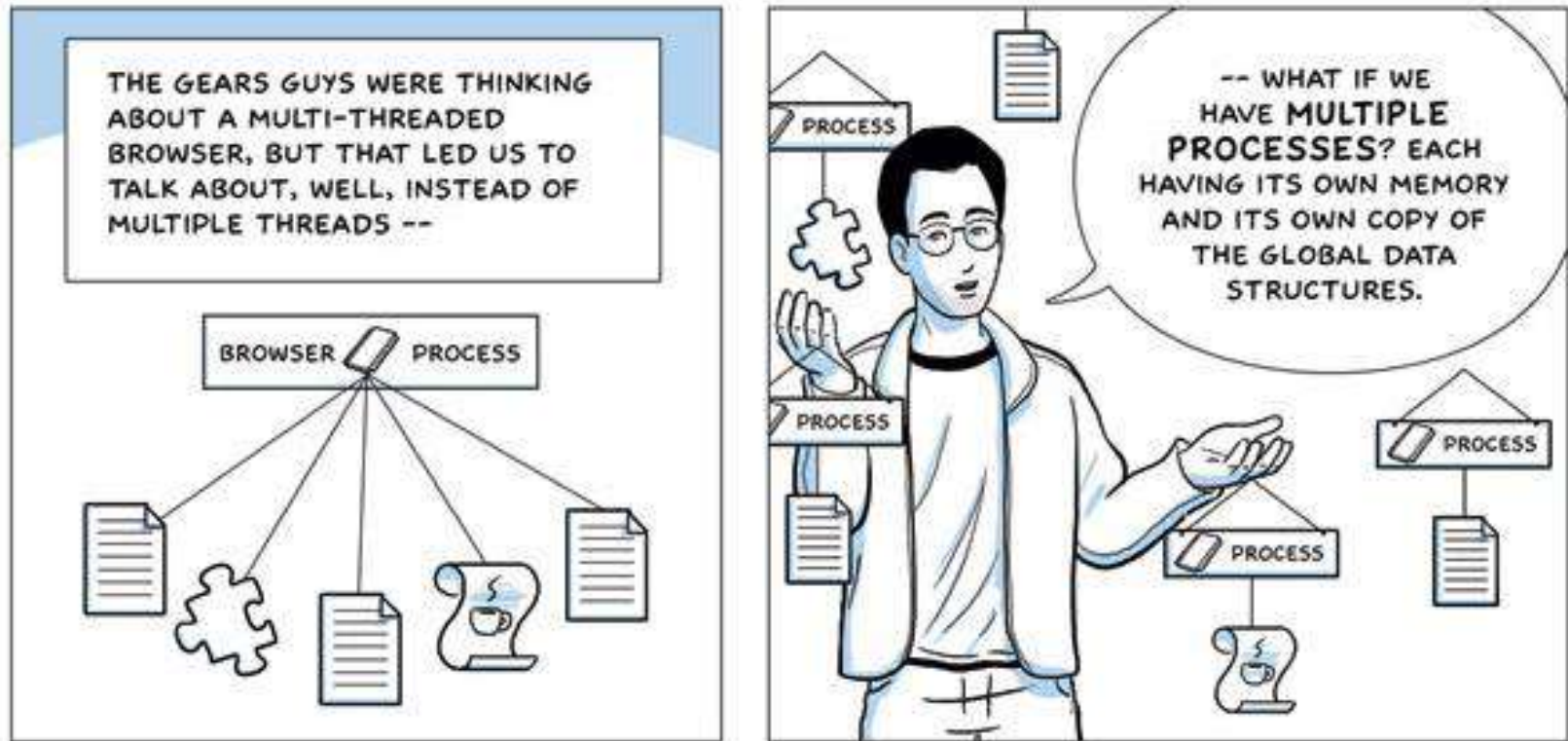


Image: http://en.wikipedia.org/wiki/File:Browser_Wars.svg



- 2008 – Google releases the **Chrome** web browser



- 2008 – W3C releases First Public Working Draft of **HTML5** spec



- 2012 – ICANN reveals 1,410 new generic top-level domains (**gTLDs**) like .apple, .catholic, and .dad
- 2013 – **Mobile devices** account for 18% of all web page views (StatCounter)

