

Tech Talks

The Internet & The Web

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Center for Learning in Retirement

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Seniortechadvisor.com

What we'll cover in 6 weeks

- 1) ~~Computers & Operating Systems~~
- 2) ~~Applications & The Cloud~~
- 3) The Internet & The Web
- 4) Social Media
- 5) Security & Privacy
- 6) Entertainment & IoT

Why Combine These Topics Together?

- The Internet & The Web

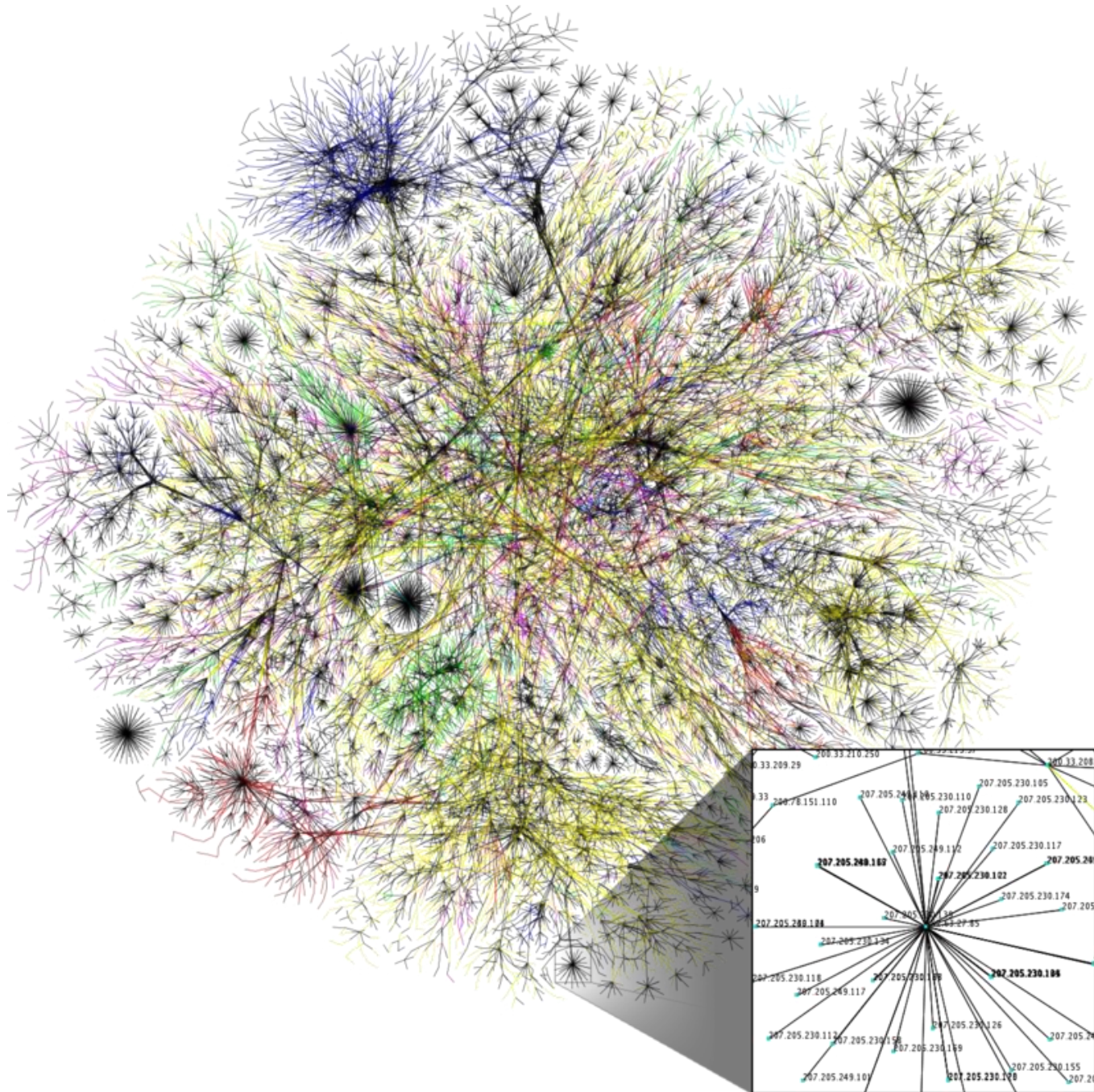
- The [Internet](#), a massive [network](#) of networks, is an enabler for the World Wide Web (WWW) and Social Media
- Information travels over the Internet via [protocols](#)*
- The [World Wide Web](#) (the Web) is a way of accessing information over the medium of the Internet - the Web uses the [HTTP](#) protocol
- The Web also utilizes [browsers](#) like [Firefox](#) or [Chrome](#) to access Web documents called [Web pages](#) ([example](#))

*A Protocol is an agreed-upon [format](#) for transmitting [data](#) between two [devices](#).

Protocols determine the following:

- error checking, [data compression](#), how a sending device indicates it is finished sending a message, and how a receiving device indicates it has received a message

A Brief History of The Internet



The Internet. What is it?

- The [Internet](#) was built in partnership among the military, universities, and private corporations – the military-industrial-academic complex
- It is a global system of interconnected [computer networks](#) that use the [Internet protocol suite](#) (TCP/IP) to link devices worldwide. It is *a network of networks*
- July 1945 – [Vannevar Bush](#), with experience and influence in all 3 camps, at Roosevelt’s behest, wrote [‘Science, the Endless Frontier’](#)

1945



Bush publishes
“Science, the Endless
Frontier,” proposing
government funding
of academic and
industrial research.

[Link](#)

The Internet. How did we get here?

- 1960 - [J. C. R. Licklider](#), America psychologist and computer scientist, known as 'computing's Johnny Appleseed', wrote '[Man-Computer Symbiosis](#)', then '[Intergalactic Computer Network](#)' in 1963

1960



J. C. R. Licklider publishes "Man-Computer Symbiosis."

1963

Licklider proposes an "Intergalactic Computer Network."

[Link](#)

[Link](#)

"Consider the situation in which several different centers are netted together..."

- 1966 - [Bob Taylor](#) (American Internet pioneer) and [Larry Roberts](#) (American scientist) were responsible for funding and overseeing construction of the ARPANET

1966



Bob Taylor convinces ARPA chief Charles Herzfeld to fund ARPANET.

1968

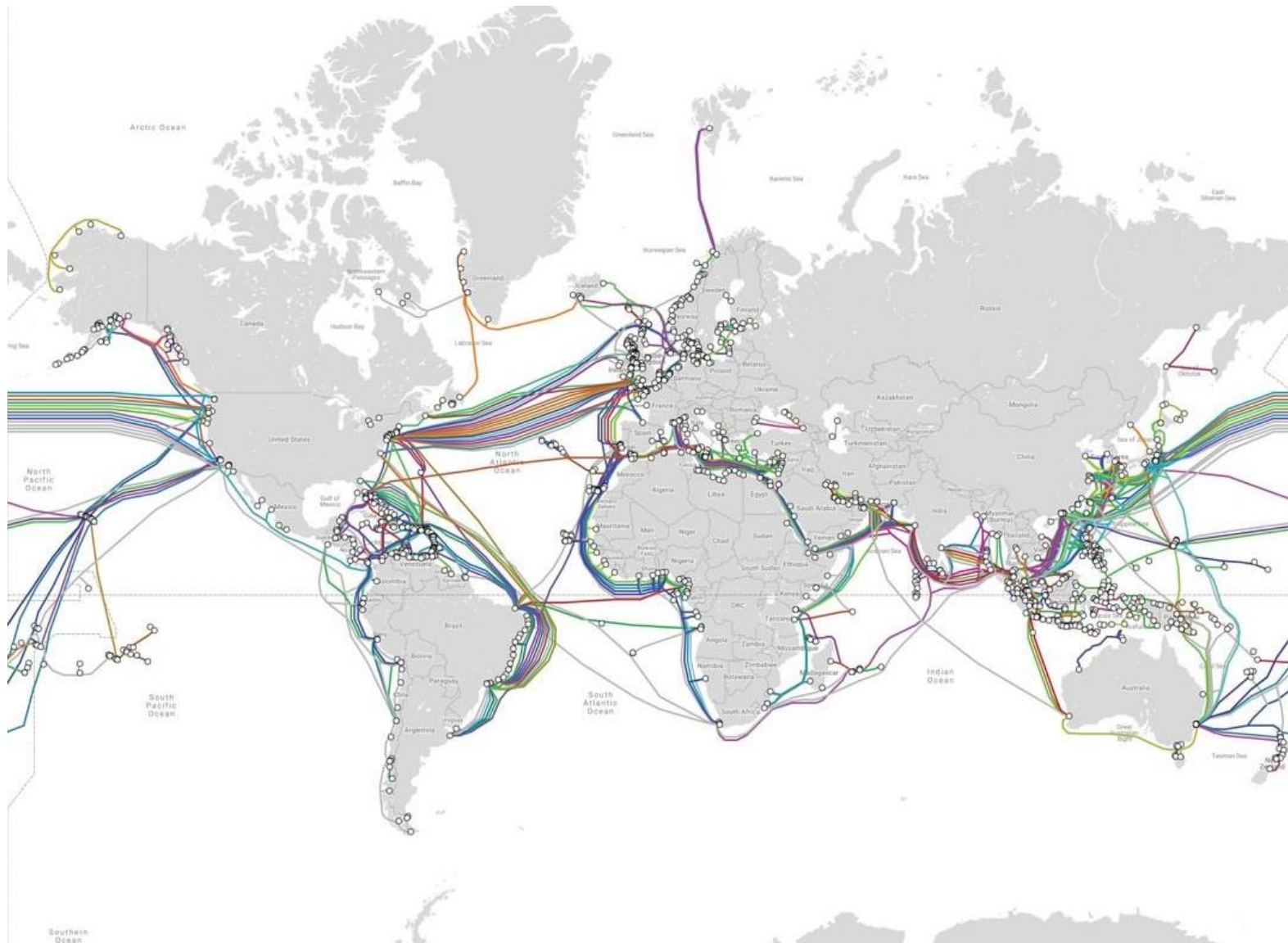


Larry Roberts sends out request for bids to build the ARPANET's IMPs.

J.C.R. Licklider - The network is the computer

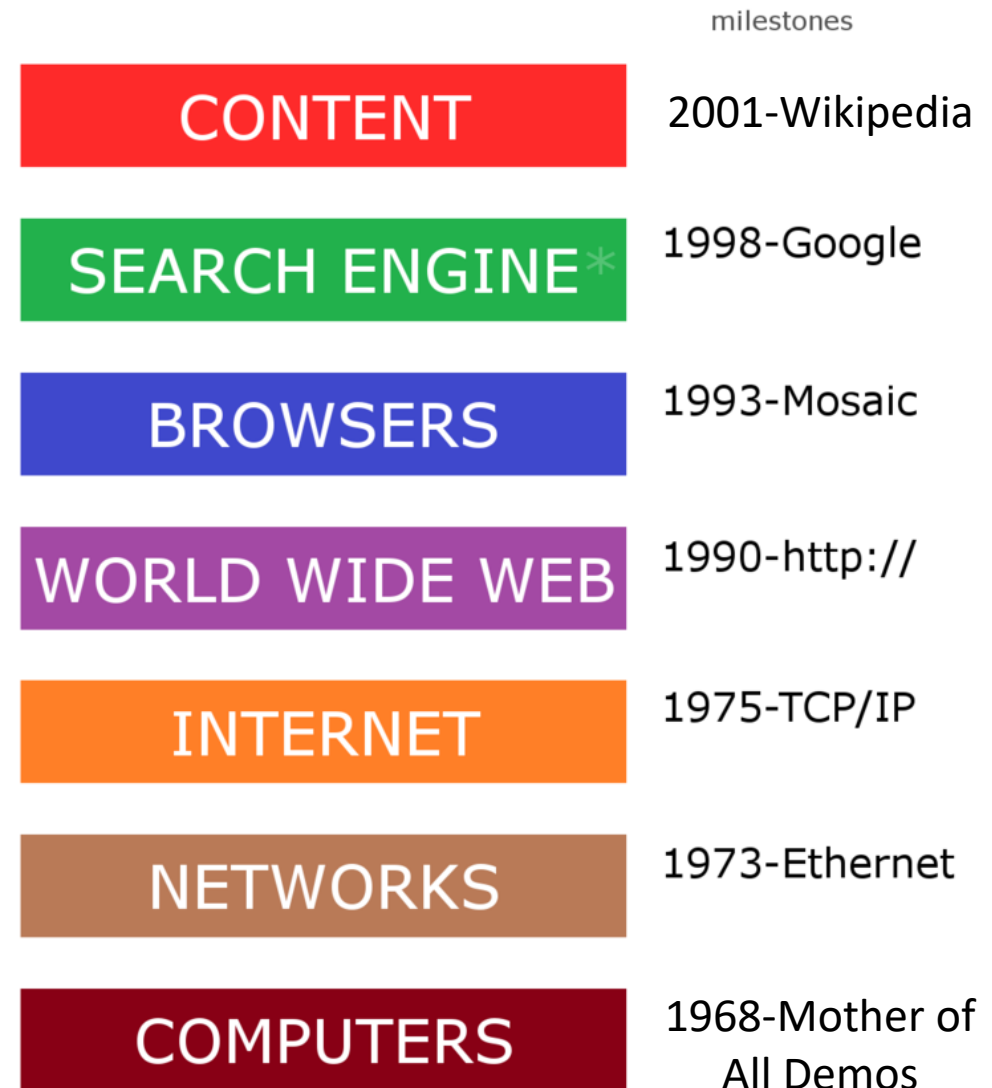
Today, with the Internet and World Wide Web, it seems very obvious that computers become much more powerful in all sorts of ways if they are connected together. In the 1970s this result was not so obvious. This chapter is about how the Internet of today came about. As we can see from Licklider's (B.10.1) quotation beginning this chapter, in addition to arguing for the importance of interactive computing in his 1960 paper on "Man-Computer Symbiosis," Lick also envisaged linking computers together, a practice we now call *computer networking*. Larry Roberts, Bob Taylor's hand-picked successor at the Department of Defense's Advanced Research Projects Agency (ARPA), was the person responsible for funding and overseeing the construction of the ARPANET, the first North American *wide area network* (WAN). A WAN links together computers over a large geographic area, such as a state or country, enabling the linked computers to share resources and exchange information.

Map of 550,000 miles of 'data' cables that make the Internet possible



[video](#)

Layers of the Internet



A Brief History
of
The [Web](#)

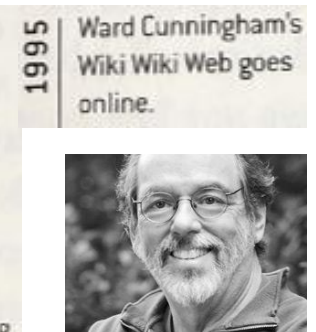
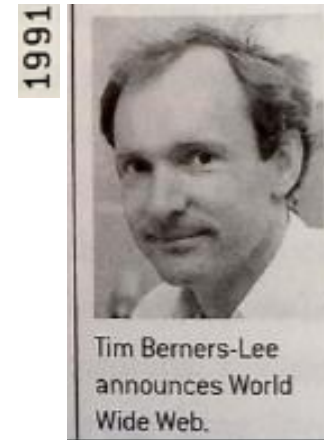


The World Wide Web. What is it?

- Modems and Online Services made connection to the Internet possible, but for most accessing anything useful was an ordeal
- The World Wide Web ([Tim Berners-Lee](#) – 1991 “[WorldWideWeb: Proposal for a Hypertext Project](#)”
- [World Wide Web](#) ("**WWW**" or simply the "**Web**") is a global [information](#) medium which users can read and write via [computers](#) connected to the [Internet](#). The Web is a service that operates over the Internet, like [e-mail](#).

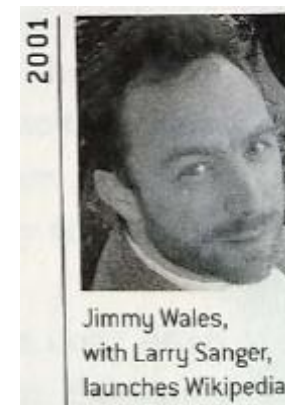
WWW Inventors

- 1991 – [Berners-Lee](#) - received the 2016 [Turing Award](#) "for inventing the World Wide Web, the first web browser, and the fundamental protocols and algorithms allowing the Web to scale"
- 1993 – [Marc Andreessen](#) - co-author of [Mosaic](#), the first widely used [Web browser](#); co-founder of [Netscape](#)
- 1994 – [Justin Hall](#) – Web logs become blogs
- 1995 – [Ward Cunningham](#) created [WikiWikiWeb](#), which allowed users to [collaboratively](#) modify content from a [web browser](#)



WWW Inventors (continued)

- 1998 – [Larry Page](#) and [Sergey Brin](#) launched [Google](#)
- 1999 – [Ev Williams](#) launches [Blogger](#) (acquired by Google in 2003)
- 2001 – [Jimmy Wales](#) and [Larry Sanger](#) launch [Wikipedia](#) (from [Nupedia](#))

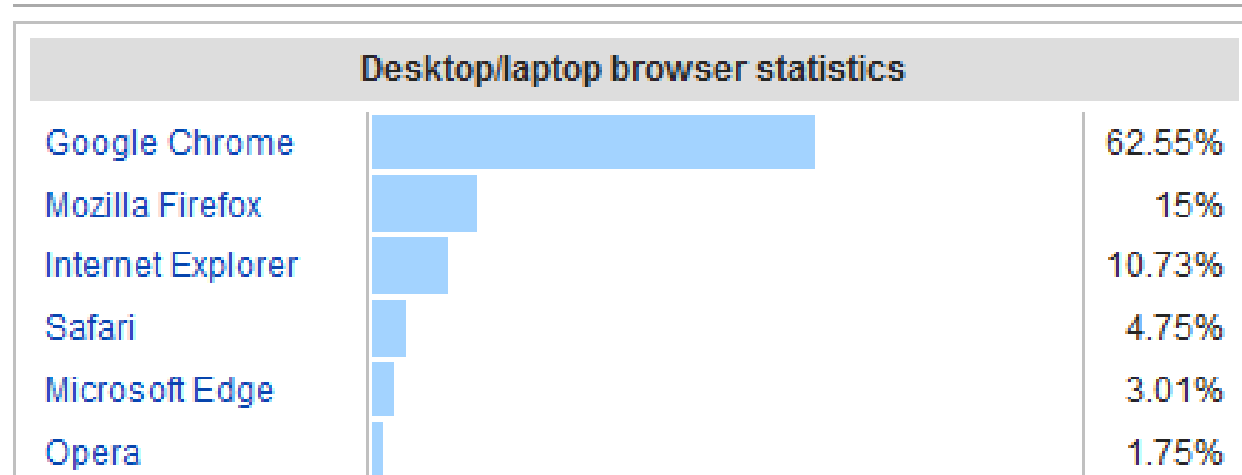


Interacting with the Internet

A **web browser** (or just **browser**) is a [software application](#) for retrieving, presenting, and traversing information resources on the [World Wide Web](#). An *information resource* is identified by a [Uniform Resource Identifier](#) (URI/URL)* and may be a [web page](#), image, video or some other content.

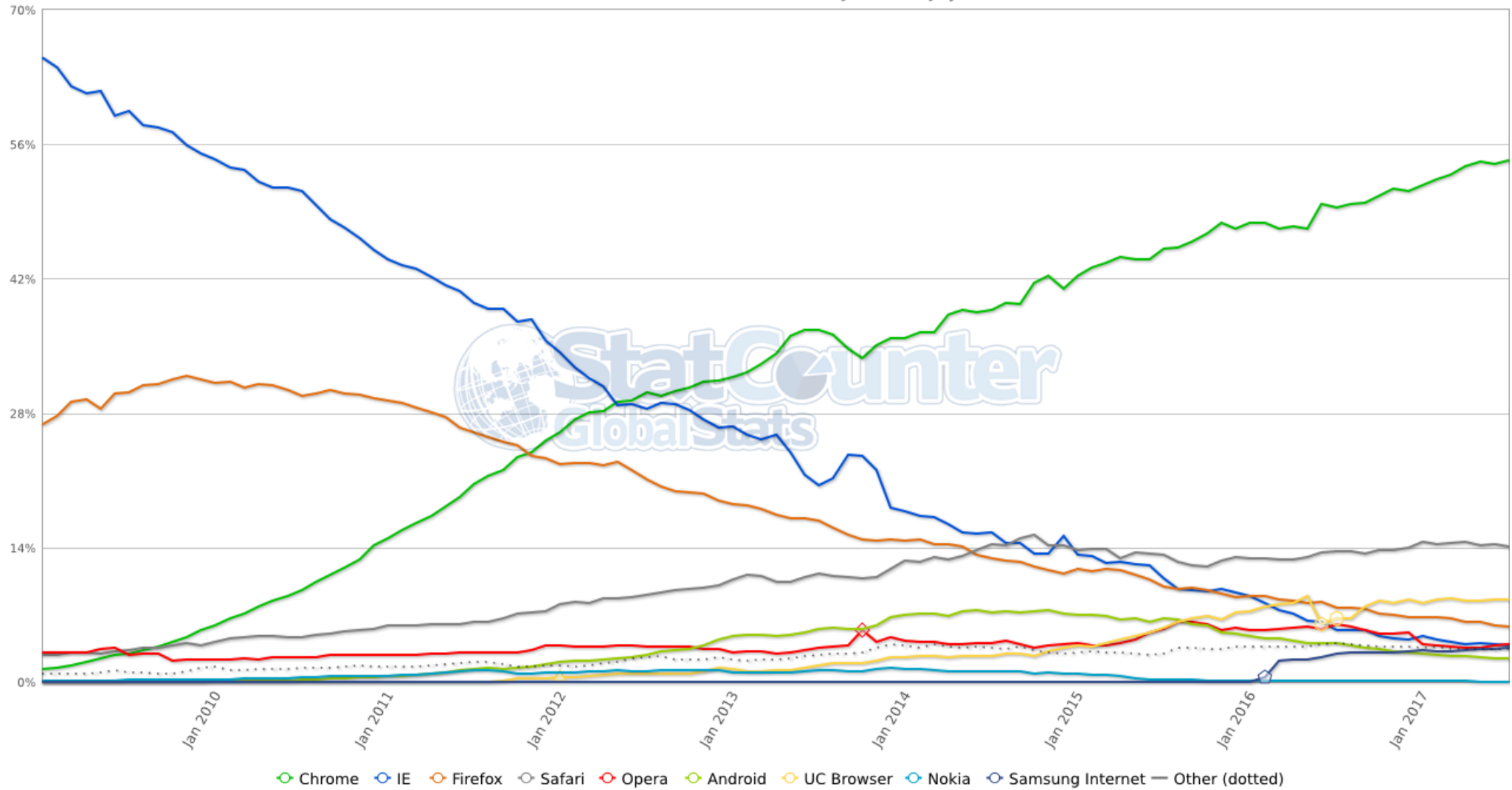
*Uniform Resource Identifier (URI) is a string of [characters](#) that unambiguously [identifies](#) a particular [resource](#)

Browser [Market share](#) [\[edit \]](#)



Browser Market Share

StatCounter Global Stats
Browser Market Share Worldwide from Jan 2009 to July 2017



Internet etiquette (aka Netiquette)

Be Nice – no [cyber bullying](#) allowed

Learn the Lingo – [TYVM](#)

Keep Messages and Posts Brief

Don't Shout – avoid using all caps in any email or post

Use Discretion – remember that anything you put on the Internet can/will be there forever

Protect Personal Information – don't make things easy for identity thieves and predators

Obey Copyright Laws – never copy someone else's work and post it as your own

Protect Children – restrict access, or monitor their Internet activity closely

Before You Click "Send" – reread anything you type before clicking the "send" button

Help Others – if someone appears to be new to the Internet, offer your assistance

Internet Lingo (twbat)

ASAP: As Soon As Possible

BBIB: Be Back In A Bit

BBL/BBS: Be Back Later/Soon

BF: Boyfriend

BFF: Best Friends Forever

BFFL: Best Friends for Life

BRB: Be Right Back

CYA: See You

DS: Dear Son

FAQ: Frequently Asked Questions

FB: Facebook

FLBP: Future Lower Back Problems

FML: "F-Word" My Life

FTFY: Fixed That For You

FTW: For the Win

FYI: For Your Information

G2G: Got to Go

GF: Girlfriend

GR8: Great

GTFO: Get the "F-Word" Out

HBIC: Head B**** in Charge

HML: Hit My Line, or Hate My Life

HRU: How are you?

HTH: Hope This Helps

IDK: I Don't Know

IGHT: Alright

IMO/IMHO: In My Opinion/In My Humbl

IMY: I miss you.

IRL: In Real Life

ISTG: I Swear to God

JK: Just Kidding

KTHX: OK, Thanks

L8R: Later

LMAO: Laugh My "A-Word" Off

LMFAO: Laugh My "F-ing" "A-Word" Off

LMK: Let Me Know

LOL: Laugh Out Loud

MWF: Married White Female/Monda

NM: Nevermind

NP: No Problem

NSFW: Not Safe for Work

OFC: Of course

OMG: Oh My God

ORLY: Oh Really?

OTOH: On the Other Hand

RN: Right Now

ROFL: Roll On the Floor Laughing

RUH: Are Your Horney

SFW: Safe for Work

SOML: Story of My Life

SOZ: Sorry

STFU: Shut the "F-Word" Up

TFTI: Thanks for the Invite

TIL: Today I Learned

TMI: Too Much Information

TTFN: Ta-ta for now

TTYL: Talk to You Later

TWSS: That's What She Said

U: You

W/: With

W/O: Without

WYD: What You Doing

WTH: What the Hell?

WTF: What the "F-Word"

WYM: What You Mean?

WYSIWYG: What You See Is What You Get

Y: Why

YMMV: Your Mileage May vary

YW: You're Welcome

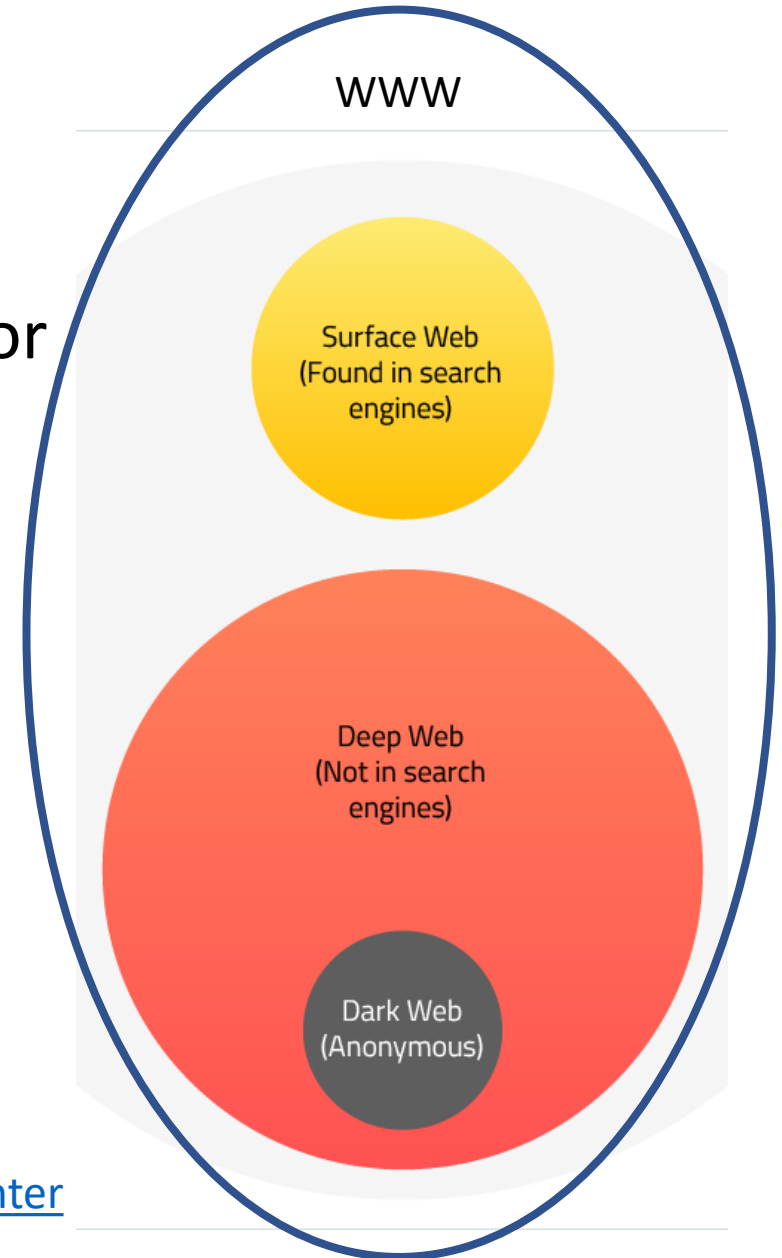
YWA: You're Welcome Anyway

Dark Web versus Deep Web

- The part of the internet indexed by Google and other search engines is known as “Visible Web” or “Surface Web.” (4% or the World Wide Web)
- The Deep Web is effectively walled off from ‘indexation’ – unreadable sites, internal sites, or sites requiring authentication to access (96%)
- Included within the Deep Web is the Dark Web (aka DarkNet). Pages in the Dark Web are anonymous, encrypted, and require special software to access - TOR (The Onion Router) and the Tor browser.

Excellent Video about the Dark Web:

[The Dark Net isn't what you think. It's actually key to our privacy | Alex Winter](#)



Dark Web versus Deep Web (10.5 min)

The Dark Net isn't what you think. It's actually key to our **privacy** | Alex Winter

