

A Quick History of The Internet

Here's a short overview of how the Internet came to be.

WE'LL COVER THE FOLLOWING ^

- Why Learn History?
- The '50s: The Cold War
- The '60s-'70s: ARPANET
- The '80s: Protocols
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Why Learn History?

- Learn about the mistakes made during the development of the Internet and avoid repeating them.
- Understand why some things are designed and work the way they do today.
- Lastly, it's interesting!

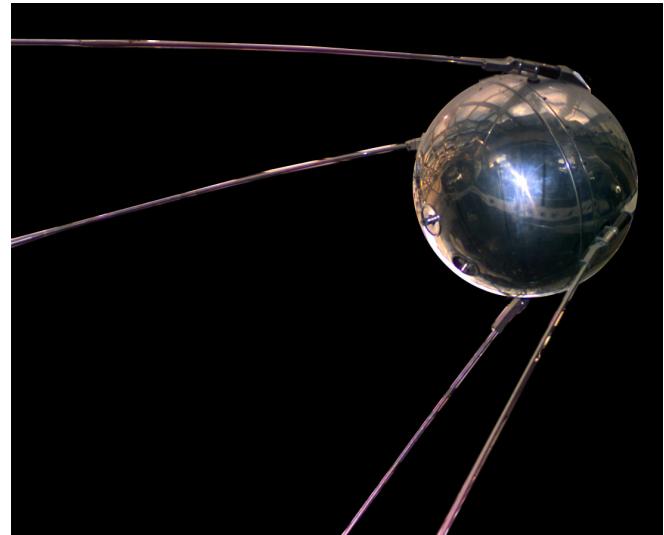
“Those who do not read history are doomed to repeat it.”

– George Santayana

Let's get right into it.

The '50s: The Cold War

- The birth of the Internet can be traced back to the middle of the last century.
- The U.S. was in the midst of a cold war with The Soviet Union and both nations were trying to gain an advantage over the other.



Replica of Sputnik I

- In 1957, the Soviets [launched Sputnik](#), the world's first satellite, propelling us into the space age.
- This caught the US off-guard, and in response the U.S. government created [ARPA](#) (Advanced Research Projects Agency) which was mandated with the responsibility of the technological and scientific advancement of the country.

The '60s-'70s: ARPANET

- ARPA was meant to facilitate research. But **their computers could not talk to each other.**
- ARPA sent out a request for the **design of a network that would allow computers across the entire country to talk to each other.**
- A network called the **ARPANET** was developed over the course of a year. In September 1969, the ARPANET was turned on. **The first four nodes** were at UCLA, Stanford, MIT, and the University of Utah. Over the '70s, other computer networks just like ARPANET sprang up.

While the computers on one network could communicate via a default gateway, they could not communicate with computers on other networks.

- While the computers on one network could communicate via a default way to communicate set by the network administrator of each network, the computers on different networks could not communicate since every network had its own language or - more formally – **protocol**, which we will introduce in a [later lesson](#).
- Then, a standardized protocol called the **Transmission Control Protocol** was invented ([RFC 675](#)).
- It was also in [RFC 675](#) that the term “Internet” was first used. Later RFCs continued the use.



Did You Know? The Advanced Research Projects Agency (ARPA) is now known as Defense Advanced Research Projects Agency (DARPA) to emphasize the its focus on defense!

The '80s: Protocols

- ARPANET was fully migrated to TCP/IP.
- As we moved into the 1980s, computers were added to the Internet at an increasing rate. These computers were primarily from government, academic, and research organizations. Much to the surprise of the engineers, the early popularity of the Internet was driven by the use of electronic mail.

The '90s: The World Wide Web

- During the 90's, the researchers at the **European Council for Nuclear Research (CERN)** felt the need for automated sharing of their findings between their computers. CERN had documents that cross-referenced other documents. So, there were these (hyper) links between documents.



Tim Berners Lee at CERN. Taken from:
<https://www.flickr.com/photos/itupictures/16662336315>
under CC BY 2.0

- In 1990 Tim Berners-Lee introduced his World Wide Web project to store and retrieve these inter-connected documents.
- Check out a restored version of [the first website ever!](#)
- Later, educational, commercial and so many other applications were realized.
- The World Wide Web got even more popular with the advent of browsers such as **Mosaic** and **Netscape** which allowed combining graphics with web navigation!

... Creating the web was really an act of desperation because the situation without it was very difficult when I was working at CERN later. Most of the technology involved in the web, like the hypertext, like the Internet, multi font text objects, had all been designed already. I just had to put them together. It was a step of generalizing, going to a higher level of abstraction, thinking about all the documentation systems out there as being possibly part of a larger imaginary documentation system."

– Tim Berners Lee

Search Engines

Another fun fact that initially, **there were no search engines**.

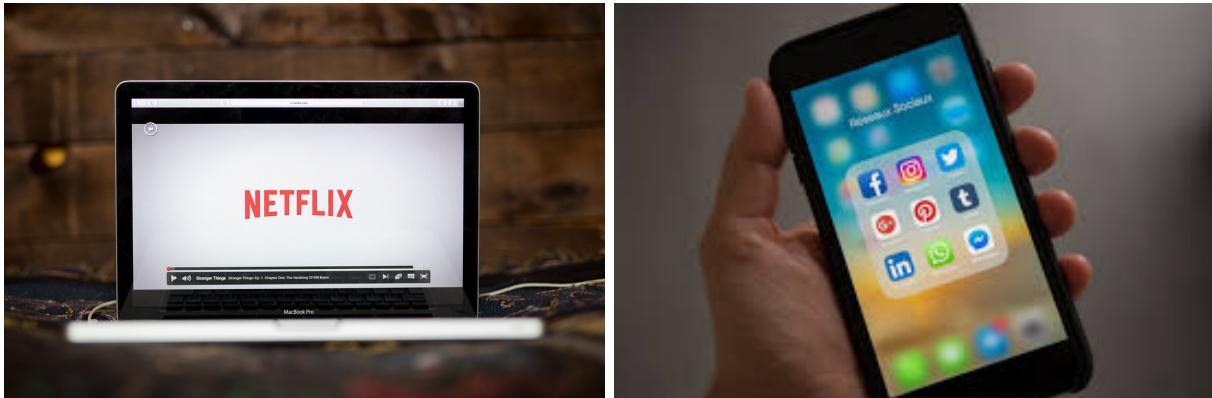
So how would you find a website? Well, you couldn't. Either you knew it or you didn't. Of course, you could land on a website by accident or by following a link from another website that you knew.

Then, people started creating [static indices of the web](#) - a categorized listing of websites. People would sit and randomly click on links to find web pages and add links to their index. But this couldn't scale. So, eventually, search engines

add links to their index. But this couldn't scale. So, eventually, search engines were “invented.”

Altavista and Yahoo! were among the earlier search engines. According to [this Wikipedia article](#), the first automated web index was World Wide Web Wanderer. Soon afterward, the first web search engine, the W3Catalog was invented.

The 21st Century: The Age of the Internet



And now here we are. In an age in which all our devices run on the Internet, even toasters for some – the era of the **Internet of Things** is here! Life without it seems almost inconceivable.

A Video

Here's the history of the Internet in a short video.



Quick Quiz!

1

Tim Berners Lee invented the Internet

COMPLETED 0%

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Now that we have an overview of where the Internet comes from, let's discuss what it's actually made of in the next lesson!

