

ADDIS ABABA UNIVERSITY

ADDIS ABABA INSTITUTE OF TECHNOLOGY

CENTER OF INFORMATION TECHNOLOGY AND SCIENTIFIC

COMPUTING

1. History of Internet [The evolution]
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The origins of internet date back from 1969 nearly 40 years from now, due to Arpanet (Advanced Research Projects Agency) funded by the U.S Army internet sought to see the light of day. Back then it connected five sites: UCLA, Stanford, UC Santa Barbara, the University of Utah and BBN. And the computers used to connect this was SDS Sigma 7, which cost $700,000 in the mid-1960s ($4.8 million in today’s dollars) and which took a lot of space was used by the University of California, Los Angeles to send the first message over ARPANET to Stanford University. SDS, or Scientific Data Systems

By the time of 1983 the U.S. Defense was given its own branch of ARPANET, called MILNET, for secure communications, allowing other research and communication to take place on ARPANET.

By the time of 1984 Arpanet was renamed the Internet at that moment the internet had already linked 1,000 hosts at university and corporate labs. And at this time The Internet's Domain Name System was created to match complex IP addresses with easy-to-remember names ending in extensions such as .com, .org, .Edu, .gov, .mil and country codes including .de for Germany.

And by the time of 1990 Tim Berners-Lee, a scientist at CERN, the European Organization for Nuclear Research, develops Hypertext Markup Language (HTML). This technology continues to have a large impact on how we navigate and view the Internet today. And to publish this hypertext format on the Internet Tim Berners-Lee invented the World Wide Web.

Tim Berners-Lee built the first webpage in 1993. Seeing the value in what Berners-Lee and his team had created, CERN opened up the software for the web to the public domain, meaning anyone could use it and build upon it. Berners-Lee also created the first website browser (initially called Worldwide Web and then renamed Nexus). But it wasn’t until a team of former students at the University of Illinois at Urbana–Champaign (UIUC), led by Marc Andreessen, created the Mosaic web browser in 1993 that the web started to take off.

Marc Andreessen and his team were also the ones who started the development of Netscape Navigator and it was the first web browser many people ever used. By the mid-1990s, Netscape had about 80% of the browser market in the US and Europe. Its only real competitor was Microsoft’s Internet Explorer, which first launched with Windows 95. But Microsoft, a huge company even then, was able to iterate its software faster as the web changed, implementing new technologies like CSS (cascading style sheets—the code that ensures the web is more than just bland pages of text) before Netscape could. (Microsoft’s dominance remained pretty much unchallenged until the dawn of the mobile web).

In 1996 we got the 56K modem which let internet users surf the web at a blistering 56,000 bits per second. (Today we can download a 1 GB file in about 32 seconds, compared with around 3.5 days, which is what it would take on a 56k modem.)

In 1998, the U.S. Department of Commerce privatized domain name registrations and operations through the creation of the Internet Corporation for Assigned Names and Numbers. Since then, domain name sales have risen nearly 10-fold, but .com remains the most popular domain.

At some point in 2004, for the first time ever, there were more people in the US who had access to broadband internet than dial-up and , Coupled with the advent of WIFI, broadband has revolutionized the way that people connect to the internet. Before WIFI and broadband, accessing the internet was a very static and slow experience, requiring someone to sit in front of a large computer, physically connected to a modem, to access the web. But when WIFI started to gain popularity, it made the internet accessible wherever someone had a laptop, tablet, or Palm Pilot and WIFI connection. The earliest versions of WIFI were implemented in the mid-1990s, but it wasn’t until Apple included the technology in the iBook laptop in 1999, as well as  other models in the early 2000s, that it really started to kick off.

Facebook first launched in 2005 and the era of social networking begins which now has 2.45 billion subscribers which played a major role for the expansion of internet era. Mozilla unveils the Mozilla Firefox browser.

YouTube first launched in 2005. Websites evolved from simple destinations to interactive places where people could buy things and communicate with each other in real-time.

Mobile broadband—connecting to the internet through a cell phone—has exploded in popularity over the last five years. At the end of 2013, there were about 1.9 billion smartphone subscriptions in the world, and by the end of 2018, there were about 5.3 billion—that’s a jump of about 180% in five years. According to a recent consumer report commissioned by networking hardware company Ericsson, the average smartphone owner in the US currently uses around 8GB of data each month. The company expects that number to balloon up to possibly 200GB per month by 2025. Mobile devices will likely not look like they do now: In the same way using a smartphone to access the web in 2019 is nothing like using a laptop to get online in 2003, or a desktop in 1993, it’s possible a completely new paradigm will be invented for our super-fast, mobile future. The future of the web will likely be increasingly mobile, but probably won’t be dominated by the devices of today.

As 5G wireless networks are deployed around the world today, many with the promise of download speeds over 1 Gigabit per second (compared to LTE, which maxes out at around 25 Mbps in the US), and connections so airtight it’ll feel like you’re in the same room as someone thousands of miles away. It’s easy to see how the internet could progress from its simple roots, but not what form it will take. It’s possible that the next iteration of the internet, powered by 5G, could introduce some fantastical-sounding scenarios: surgeries performed remotely in real time; fleets of autonomous trucks all monitored from afar; augmented reality glasses that overlay holographic information in front of us as we move through the world; computers hosted in the cloud.

So, what’s next for internet: Experts say the Internet will continue along its phenomenal growth path, what’s different is that the Internet will become increasingly mobile and social.