**History of the Internet**

The world would not be what it has become today without the internet. It touches just about every aspect of how we live, work, socialize, shop, and play. In just a few decades, the internet has gone from a novel way for the US military to keep in touch, to the always-connected heartbeat of the human race. With each passing year, more and more people have gained access to the internet.

Internet started as a defense department network designed specifically to hook up different research centers around a country which began in ARPA the Advanced Research Projects Agency in Arlington Virginia.

Early days

The internet traces its roots to a US defense department project in the 1960s born out of the Cold War, and a desire to have armed forces communicate over a connected, distributed network. The military’s research arm, the Advanced Research Projects Agency (ARPA), began work on a communication project, which led to the creation of ARPANET, one of the earliest iterations of computers talking to each other on a network. ARPANET eventually connected military installations, third-party contractors, and a handful of universities in the US. By the mid-1970s, ARPANET had connected to NORSAR, a US-Norwegian system designed to monitor seismic activity from earthquakes or nuclear blasts, over satellite. The Norwegian system then connected to computers in London, and eventually, other parts of Europe.

The computers used to connect this nascent network together were gargantuan by today’s standards. The SDS Sigma 7, which cost $700,000 which is about $4.8 million in today’s rate the mid-1960s was used by the University of California, Los Angeles to send the first message over ARPANET to Stanford University. SDS, or Scientific Data Systems, an early US computer company staffed by Packard Bell alums, built that first computer that connected to the network. The machine, like its offspring that helped the first people land on the Moon, was not like the computer we know today: It took up a large portion of the room it was in and consisted of a series of cabinets with reel-to-reel tapes, flashing buttons, and toggle switches. There would’ve been a small station with a keyboard and a very basic monitor, but much of the data for the machine would’ve been stored on punch cards. The first message sent was the word “lo;” the researchers were trying to type the word “login” and the system crashed after two letters.

Dial up days

The earliest days of the consumer internet were sound tracked by a cacophony of digital hisses and beeps.

As internet protocols and technologies were standardized, in the late 1980s and early 1990s, universities, businesses, and even regular people started to connect over the internet. But before the invention of the World Wide Web, accomplishing anything was a real chore. Information on the internet was difficult to search for, and almost impossibly dense.

We may not have moved beyond the internet of the early 1990s were it not for Tim Berners-Lee, who was looking for an easier way to find and share research. Berners-Lee, who in 1989 was a researcher working at CERN, the Swiss nuclear research facility, came up with the concept of the World Wide Web, a decentralized repository of  information, linked together and shareable with anyone who could connect to it. He 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 World Wide 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. Andreessen and his team left the research facility at UIUC to start Netscape, the company that produced 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, but more on that later.

Broadband days

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, according to the Pew Research Center. The price of broadband connections had begun to fall as more users signed up. Broadband modems act a little differently than their dial-up predecessors in that they do not need to call out over the phone line to your internet service provider to establish a connection to the internet—they stay connected unless they’re turned off. This 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.

Broadband speeds are generally faster than dial-up. In the US, the Federal Communications Commission (FCC) considers a broadband connection—at least for a fixed line, rather than a cellular connection—one that can achieve speeds of 25 Mbps for downloads and 3 Mbps for uploads. This could certainly change in the future—the definition has changed in the past—but for now, it accurately portrays what most of the country has access to.

Cellular data

Mobile broadband—connecting to the internet through a cell phone—has exploded in popularity over the last few 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.

The first truly useful mobile data standard was 3G in 2003, when radio technology first allowed for more than calls and texts to be sent over the air.

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.

View the 5 – 10 popular websites of your choice from web archive URL and put your observation and assessment.

1. Youtube.com
2. Apple.com
3. Facebook.com
4. Amazon.com
5. EBay.com

This are the websites I’ll review for this question. We all know how websites have evolved and become more and more interactive as each year progressed, and as I believe it this progression is ongoing and it will last to many years to come.

**YouTube**

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| 2006 | The YouTube in 2005 and 2006 were more or less the same. As we can see the coloring of the website looks familiar from the one we know right now. It has a red and white theme, which has been familiar to this day. |  |
| 2008 | As we can see the site has received some revision within 2 years but. This version of YouTube has had some improvements but there is nothing drastic. Major change I saw the placement of the search bar. |  |
| 2010 | The search bar again has been revised but it still has the same features from back in 2008. |  |
| 2012 | By far this is the most customized YouTube version I have seen. It has some major changes like the theme changed to black and white and the options had changed place to the left hand side of the website. |  |
| 2014 | This version of YouTube has come back to the original theme which is red and white. It still came with the improvements of the options being in the left hand side of the website. |  |
| 2016 | This version of YouTube didn’t have a drastic change from the earlier years. |  |
| 2018 | This version of YouTube didn’t have a drastic change from the earlier years. |  |
| 2020 | This is the current version of YouTube we all know today. It has the almost same functionalities from the other 3-4 versions. But one change is the look of the options had been upgraded to a newer cleaner version. |  |

Overall, YouTube has had some major changes throughout the years like the 2012. They changed the UI of the whole website and they surely got it to the older theme after then.

**Apple**

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| 2006 | This is the 2006 website of apple. It has a nice UI for its time. The Apple website is usually a site where they put their latest new products. |  |
| 2008 | This version of the website has changed in the style department. It has basically changed in the menu options on the top. In their 2008 website they advertised the iPhone 3G model. |  |
| 2010 | The 2010 website has not really changed much. It has an overall same look on the website. This website is advertising the iPhone 4 model. |  |
| 2012 | This version of the website has had some changes that can be seen, for example the menu tile has had some change. This version of website is introducing the MacBook Pro. |  |
| 2014 | This version looks different but the menu tile looks the same, the thing that has changed is the aspect ratio of the website has changed. |  |
| 2016 | The apple website of this time had major changes. One change that I can see is the menu tile being gone and they modified how they presented the phone upfront. |  |
| 2018 | This version of the website looks like the one before where they just put up the apple product they want to show you and keep the simplistic look so that the user doesn’t feel overwhelmed. |  |
| 2020 | This is the current version of the website. They kept the simplistic look but made some changes with the color choices. |  |

Overall, Apple makes amazing websites that only gets the users to familiarize with their different products. They keep things simple thinking they will not overwhelm the user and only focus on their products.

**Facebook**

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| 2006 | This is the 2006 version of facebook website has some features that has the user and password field on the left side of the page |  |
| 2008 | This version of the facebook login page has the username and password on the left hand side and the option to create a new account on the right hand side of the page. |  |
| 2010 | This version of the website looks more familiar to the one to the current facebook login page with only some minor change. |  |
| 2012 | This version of facebook is targeted to the mobile phone users. The cellular data bubble started in that era and facebook was a company that used that as an advantage to increase their overall users. |  |
| 2014-2020 | This is the current version of the facebook login page and it has served for a partially long. The facebook login page has been consistent with its UI for almost 5-6 years. |  |

Overall, facebook hasn’t really shifted with its UI really often and for the most part of it. It’s nice that they are keeping a consistent user interface giving their users.

**Amazon**

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| 2001 | Amazon is a site that a many major changes over the years. This version of amazon is slightly different from the other versions by the theme of the page. Usually amazon sites are blue and white but this site is red and white. |  |
| 2004 | In this version they have changed to the theme we all know today. The consistency of the website theme hasn’t really change much since then. |  |
| 2007 | The change this version of the website has made was on the menu tile the color of it is also changed slightly to a lighter blue. |  |
| 2010 | This version made the change in the menu tile but this is a different change from earlier version. This version introduced the search bar in the menu tile. |  |
| 2013 | This version of the website has changed in the top tile with the exclusion of the blue bar and the menu that was found on the left hand side that was on the earlier versions. |  |
| 2016 | This version of the amazon website has a futuristic look form the other earlier version. The way the animations work looks so seamless. |  |
| 2020 | This is the current version of the website. It is not as different |  |

Overall, amazon is a multi-billion dollar company and with this data we can see how they developed their website throughout the course 19 years.

**EBay**