History of the internet at a Glance

The Internet has completely transformed the computer and communications industries. The telegraph, telephone, radio, and machine were all invented at the same time, paving the way for this unparalleled convergence of capabilities. The Internet is a global broadcasting capability, a knowledge dissemination system, and a platform for communication and interaction between individuals and their computers, regardless of geographic location. The Internet is one of the most promising examples of the advantages of long-term investment and dedication to information technology research and development.

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iMac innovations

History of the internet Apple iMac History of the internet Apple iMac The Apple iMac is a series of personal computers that was massively successful. Likewise, the Apple iMac's design has changed drastically to meet consumer demands for more powerful and sleeker designs. Semi recently Apple changed the iMac's design in 2009 and debuted with the "2009"(Apple Support Page Identify Your iMac Model) era which featured an aluminum case design. The primary benefit of the 2009 iMac is that it was a space saving computer because all of the computer components except the keyboard and mouse are inside the display. However, the monitor and the monitor stand are relatively thick. "Depth: 7.4 inches (18.9 cm)"(Apple Support Page Technical Specifications Early 2009 iMac) Despite the iMac's thickness it would still save space on a desk area than having a monitor and a desktop tower separately. Likewise, later in the future Apple was able to further improve the iMac's design, but the design was arguably the same because Apple kept the aluminum case design from previous iMacs, but improved the technical specifications. "20-inch and 24-inch model with 2.66GHz processor NVIDIA GeForce 9400M graphics processor with 256MB of DDR3 SDRAM shared with main memory3."(Apple Support Page Technical Specifications Early 2009 iMac) and comparing the specifications to the 2020 iMac it is a drastic improvement. "Graphics 3.0GHz Radeon Pro 570X with 4GB of GDDR5 memory 3.0GHz 3.0GHz 6-core Intel Core i5 (Turbo Boost up to 4.1GHz)"(Apple Support Page Technical Specifications 2019 iMac) Likewise, improving the technical specs of a personal computer can expand the computer's functionality with a faster processor and improvement graphics the 2019 iMac can do more tasks that the 2009 iMac cannot. For example, a person can use a 2019 iMac to play ultra high definition games that cannot run with only 256mb of graphics memory. A person can also have more programs simultaneously because the 2019 iMac's 6 core processor can open more programs without slowing down. Therefore, the Apple iMac is a popular personal computer because it's improved processing power made it popular for Apple customers and customers that are new to Apple technology. Bibliography Published Date: August 20, 2020 Apple Technology https://www.apple.com/mac/ https://support.apple.com/en-us/HT201634 https://support.apple.com/kb/SP507?locale=en_US https://support.apple.com/kb/SP790?locale=en_US

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History of the Internet Web Browsers

The internet is a critical aspect of modern communications in the early internet there were numerous web browser services that struggled to compete for market dominance. Moreover, early web browser creator Marc Andreessen was a Netscape co-founder which was responsible for enhancing an average person's web browsing experience. Likewise, Andreessen and his web development team created Mosaic the earliest web browser with a user friendly graphical user interface. Likewise, Jim Clark heavily invested in expanding Mosaic and making it widely available. However, Mosaic was extremely difficult to market because Jim Clark was the only investor the Mosaic development team had at the time. Meanwhile, other leaders in the technology industry such as Bill Gates Microsoft's co-founder wanted to create a web browsing experience wholly dominated by Microsoft. Therefore, Bill Gates actively competed against Netscape by introducing its own MSN service for computers. Moreover, Microsoft tried to intimidate Netscape by holding a meeting with it's employees and made an aggressive offer to buy Netscape's resources so Microsoft would no longer have competition against them. "In August 1995"(26:20 John Heilemann) Netscape chose to be publicly listed on stock exchange platforms, to collect funding to enhance it's products. Netscape's initial public offering made Netscape extremely wealthy which instigated Microsoft to create and release the internet explorer browser. Moreover, Microsoft created aggressive competition when they made internet explorer available for free, which caused Netscape to be used less often because people had to buy Netscape to use it. However, Microsoft's aggressive business strategies were effective and usage of the Netscape browser had fallen drastically and they were acquired by AOL. Furthermore, "its 1998 and the United States Department of Justice...has launched a historic antitrust lawsuit."(38:24 John Heilemann) Microsoft was being scrutinized by legal experts and the department of Justice for using unlawful business strategies to unfairly gain market dominance and cause companies like Netscape to be absorbed into other companies or possibly face closure because they could no longer freely compete in the internet browser industry. The Judge found Bill Gates guilty in the trial and caused Microsoft's stock market value to plummet. It is critical for software companies like Netscape to be able to compete freely to create an even competitive market. Likewise, it is important to prevent immense companies like Microsoft from using their financial resources to create campaigns to remove smaller competitors like Netscape from being able to compete and sell their products to the general public.

Prior to modern search engines organizing billions of web pages into a convenient easy to read format people using the early internet in the mid 1990s had to manually search for web pages which made browsing the internet strenuous until the founders of Yahoo Jerry Yang and David Filo created the first easy to use search engine. Moreover, Yahoo's largest competitor was excite founded by Joe Kraus it was technologically superior than Yahoo because the websites Yahoo has listed on their platform were manually indexed. However, the websites Excite displayed were automatically indexed by a program. Moreover, after Yahoo and Excite have solidified dominance in the search engine industry Google started at Stanford university and expanded quickly. Moreover, Google's founders Sergey Brin and Larry Page were approached by Vinod Khosla who wanted Excite to borrow Google's indexing program to improve on Excite's web page indexing. However, Excite declined to work with Google which was a missed financial opportunity because Google is more commonly used than Excite and has a larger market value. Google was able to rapidly expand it's operations because wealthy investors like Andy Bechtolsheim invested large sums of money into Google. "So I rushed out to my car and pull out my checkbook and wrote them a check on the spot."(Andy Bechtolsheim 22:53-22:57) "He came back with a checkbook and wrote us a check for 100,000 dollars."(Sergey Brin 22:54-22:59) However, Google struggled to make revenue, but Bill Gross figured out how to make ad revenue without cluttering a search engine menu with banner ads that could annoy internet users. Gross' technique was to gather the internet searches of the people using the internet, store that data, and would use keywords purchased by companies that would like to advertise using Gross' system to sway internet users to buy their product. Despite the skepticism from Gross' staff members at a meeting. Gross states. "Come its just like the yellow pages...Think how useful the yellow pages are...Look how useful this is. Why wouldn't that be helpful?" (Gross31:30-31:52) Google studied Gross' keyword advertising and adapted into the Google search engine and became massively successful and wealthy. Moreover, Google in the long term has outgrown Yahoo, Excite, and Bill Gross' company IdeaSpace, because of wealthy venture capitalists investing money into Google. Likewise, Google has made browsing the internet easier and more convenient than search engines like Excite and Yahoo because their advertising is not interrupting a user's web browsing experience. .

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History of the Internet, the Invention of the Internet

The internet is a critical aspect of modern society because it has increased global economic opportunities and has made remote communication more convenient. Likewise, the conceptualization of the internet was started by J.C.R. Licklider an MIT psychology professor. Moreover, early computer technology contributed to creating the internet because early computers were eventually used to create internet based communication. Query theory was conceptualized at MIT to begin early computer communication. Likewise, the Internet's creation was instigated by the United States military to create a robust communication system in order to defend national security. Moreover, Dr. Paul Baran was leading a project to create hot potato routing to highlight how the internet can still be accessed if one route is disconnected the signal can still be transmitted through a different route connected in the network. Likewise, hot potato routing also led to creating internet packets which is when data is split into smaller pieces to make it easier to transmit. Moreover, in the year 1969 Project Manager Frank Heart was working with the company BBN to create a packet switching system called the ARPA net and was tasked to create a communication line at UCLA. On "September 1st 1969"(23:43 Narrator) the first piece of internet communication hardware arrived at UCLA (23:53). In April 1971 the "ARPANET had 18 mainframe computers"(24:30 Narrator) The ARPANET was primarily installed at government facilities. However, private networks for business use was developed during the 1980s and then Consumer websites became available soon after. Moreover, the most popular consumer internet service was AOL. Likewise, what popularized the internet for common people was when the US government opened the internet for public use on "1992"(36:53 Narrator) Therefore, the internet became widely available and has made global communication more convenient. Moreover, the internet opened numerous economic opportunities as well because numerous early e-commerce websites opened and became available to the general public .

Many companies have sprung up as a result of the internet, and many sectors have benefited as a result. Many doors have been opened as a result of its invention.

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History of the Internet People

The internet has changed how people can communicate with other groups of people. Likewise, the internet has expanded immensely due to the extremely high demand for accessing and using the internet. Likewise, major companies like Yahoo, Google, Amazon, eBay, Digg, and Facebook, have made the internet more accessible to the general public. For example, Google and Yahoo indexed internet web pages so users could find what they would like to see online quickly. Moreover, companies like Facebook have made the internet even more popular than it already was by creating a successful social media website. Moreover, websites like Youtube have also redefined entertainment because the general public has the option to watch entertaining content on the internet. Moreover, Digg popularized the concept of users deciding what articles gets featured on their social media news article hybrid website. Likewise, Digg's casual atmosphere is what made it popular among people on the internet because the user has voting power to what gets featured. However, what also popularized the internet was when Apple opened Itunes to the internet so users can purchase music. Purchasing music digitally through Itunes was extremely effective for Apple because Itunes had support from many music producers. Therefore, Apple was able to generate revenue from music sales which was shared between Apple and the music producers. Moreover, other services on the internet such as Craigslist have also changed the internet because Craigslist is not immensely profitable like google or Facebook, but also provides services similar to eBay where users can buy and sell products online. The Internet through it's early development in the 1960s has changed drastically since it was made available to general public in the early 1990s. Moreover, the internet has brought numerous positive social changes because the general public can search for online products, communicate with other people, and browse the internet through organized web search engines like google using a computer or other internet connected devices.

History of the Internet Dot Com Bubble

During the Internet's development to monetize it numerous companies began figuring out how to monetize internet content besides advertising. The earliest major e-commerce websites Amazon and eBay found out how to effectively sell products online and began popularizing online shopping. "Bezos launched amazon in the summer of 1995"(John Heilemann 3:18-3:21) Likewise, Pierre Omidyar launched eBay on a similar time and became Bezos' first competitor in e-commerce. Moreover, Amazon and eBay were tremendously successful in their early stages similar to the success stories of Google and Yahoo the details of their success were covered in the previous historical summary. During the increase of e-commerce transactions in the 1990s and 2000s it created the need for better cybersecurity innovations to protect e-commerce customer's data during online transactions. Encrypting user data when a transaction is submitted creates secure payments for e-commerce users and sellers. Likewise, what contributed to the dot com bubble was when newly founded companies like eBay went public and many people began investing in their shares. Likewise, other newly created companies struggled to remain profitable because they spent excessive sums of money on unnecessary events. Philip Kaplan States. "People were just spending crazy amounts of money... they spent 10 million dollars on their launch party. they raised 12 million and spent 10 million on the party."(Kaplan 24:18) John Doerr also makes an insightful statement about how many new e-commerce companies made terrible business decisions. "Very energetic nearly frantic time when it was easy to lose your bearings and some of your judgment."(Doerr 25:43-25:53) Likewise, after the dot com bubble burst many e-commerce companies went bankrupt because they had spent their investors money and were not profitable enough to repay their expenses. Likewise, when the dot com bubble burst it redefined e-commerce and now modern tech companies are more cautious to they do not risk going bankrupt over bad business decisions. .

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How The Internet Works

How the internet works part 1

The internet originated from the ARPANET which was conceptualized and sponsored by the American military to create a nationally accessible communication system. Moreover, no single group controls the internet because internet networks can be created by internet service providers and then redistributed to customers. Likewise, users can connect to networks or use different providers if they are dissatisfied with their service providers service. The internet has many nodes that redistribute internet content to internet users and the internet is beneficial because if one node is removed the entire internet does not vanish because other nodes can serve users the data they would like to access. .

How the internet works part 2 WIFI

The internet is able to transmit binary information that is interpreted by the computer and then turned into files such as documents, software, and websites to the user. Wired internet communications use cables to transmit information if the connection is removed then the data being transferred is lost. Moreover, the computers that want to send and receive information have to recognize the data transfer and then the data is sent into the receiving machine. Moreover, internet speed is affected by the connection's bandwidth. Likewise, bandwidth is affected by the types of cables used when the data is transmitted a standard Ethernet cable can send information moderately fast. Therefore, the internet relies on fiber optic cables that send much faster than Ethernet cables could. Likewise, WIFI works with radio waves that can wirelessly communicate with other devices. WIFI makes using the internet convenient for someone to access information using a mobile device or is in an area without Ethernet access.

How the internet works part 3 IP addresses and DNS

The internet is able to communicate with computers globally because they use networking protocols. Similarly, for a computer to connect to the internet to send and receive data each computer requires an IP address and over a network a computer needs to another computers IP address to send or receive data otherwise, the computer will not know which computer to send the data. Sections of IP addresses are organized by region and location of the computer so other computers can know which network to connect to and which IP addresses to communicate with. The internet has expanded rapidly as Paola explains. "IPV4 it was designed in 1973 and widely adopted in the early 80s and provides more than 4 billion unique addresses for devices connecting to the internet... and 4 Billion addresses wont be enough we're now in the middle of a multiyear transition to a longer IP address format called IPV6"(3:28-3:55 Paola) Likewise, IP addresses work together with DNS to link the internet to computers across the world, DNS enables an IP address to be associated with a website link that a person on the internet can access. .

How the internet works part 4 IP Packets and Routing

The way internet users can send and receive information is through a packet system where data is split into smaller pieces and sent across the internet. However, some parts of the internet are used more frequently which causes the internet packet to assess where is the fastest possible route so it can deliver the information without taking the slower route. Moreover, when data is transmitted across a network an internet router can receive that information and enable computer users to access, send, and observe data online. Similarly, if a network needs to send more information then more routers should be added to make it easier to send data across a network.

How the internet works part 5 HTML and HTTP

When computers want to access the internet a computer sends a request to access a website. The website's server sends back the web-page the person wants to access. Likewise, web browsers enable people to access the internet by inputting text in the browser's search box and the web browser uses a search engine to find the results the person wants to browse. Moreover, websites primarily use HTML which is universally used on most websites to format the website's text and graphics. Moreover, it is important to take the size of a website into consideration otherwise web-pages could load slower or load incompletely if the files on the web-page are too large. Therefore, the files are difficult to send to another computer that wants to see the website. .

How the internet works part 6 Internet decryption and public keys

When data is sent online it is within a person's best interest to verify that the data is secure and encrypted to prevent illicit hackers from accessing their personal information. Encryption is when data is changed so only authorized users can see the file. Likewise, Mia Gil Epner a computer science major states the importance of complex data encryption. Mia states "Today's secure communications are encrypted using 256 bit keys....even if you had a hundred thousand super computers and each of them was able to try a million billion keys every second it would take trillions of trillions of trillions of years to try every option."(3:00-3:32) Mia Gil Epner. Likewise, it is critical to ensure data is secure so a user does not have to be a victim of a cyber attack. Moreover, it is important for online services to use encryption to prevent hackers from obtaining that does not belong to them. Similarly, encryption also works with decryption keys which can enable certain people to access data. A public key can encrypt data, but only people with a private key can read the data.

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