Website Review

Assignment I

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# History of the Internet

The first recorded description social interaction through networking was a series of memos written by J.C.R Licklider of MIT in August 1962. The first paper on packet switching theory was published in July 1961. After Kleinrock convinced Roberts of the theoretical feasibility of communications using packets, Roberts with Thomas Merril made the other key step in computer networking. In 1965, they connected the TX-2 computer in Mass to the Q-32 in California with a low speed dial-up telephone line creating the first wide-area computer network ever built. In 1966, Roberts went to DARPA(Defense Advanced Research Projects Agency) and put together the plan for ARPANET and published it in 1967. When he presented the paper, there was also another paper on a packet network concept by Donald Davies and Roger Scantlebury of NPL(National Physical Library). Later, Scantlebury told Robert of another paper on packet switching networks for secure voice in the military by the Rand group. The word packet was adapted from the work at NPL.

Then, Roberts and the DARPA funded community refined the overall structure and specifications for the ARPANET and BBN (Bolt Beranek and Newman) worked on the IMP’s (Interface Message Processors) with Bob Kahn playing a major role in the overall ARPANET architectural design. The first node on the ARPANET was Network Measurement Center at UCLA. While, the second node was provided by Standford Research Institute. By the end of 1969, four host computers were connected together into the initial ARPANET. In December 1970, the Network Working Group working under S. Crocker finished the initial ARPANET Host-to-Host protocol called the Network Control Protocol (NCP) which enabled network users to develop applications. In October 1972, the first public demonstration of this new network technology was done. In March Ray Tomlinson at BBN wrote the basic email message send and read software. After Roberts expanded its utility by writing the first email program to list, selectively read, file, forward, and respond to messages, email took off as the largest network application for over a decade.

But, NCP had its drawbacks. It didn’t have the ability to address networks further downstream than a destination IMP on the ARPANET. It trusted ARPANET to provide end-to-end reliability, no error packet loss tolerance. Thus, Kahn decided to develop a new version of the protocol which could meet the needs of an open-architecture network environment, where the individual networks may be separately designed and developed and each many have its own unique interface. This protocol would be called the Transmission Control Protocol/Internet Protocol (TCP/IP).

Four ground rules were critical to Kahn’s early thinking:

* Each distinct network would have to stand on its own and no internal changes could be required to any such network to connect it to the Internet.
* Communications would be on a best effort basis. If a packet didn't make it to the final destination, it would shortly be retransmitted from the source.
* Black boxes would be used to connect the networks; these would later be called gateways and routers. There would be no information retained by the gateways about the individual flows of packets passing through them, thereby keeping them simple and avoiding complicated adaptation and recovery from various failure modes.
* There would be no global control at the operations level.

After Kahn began work, he would later ask Vint Cerf to work with him on the detailed design of the protocol. Together they would write a paper on one protocol, TCP which provided all the transport and forwarding services in the Internet. However, the model worked fin for file transfer and remote login applications, but some applications failed like voice applications. In some cases, packet losses should not be corrected by TCP. These led to reorganization of the original TCP into two protocols, the simple IP and the separate TCP. For those applications that did not want the service of TCP, an alternative called UDP (User Datagram Protocol) was added in order to provide direct access to the basic service of IP.

Following, there has been the formation of organization, research teams and many benefactors of the Internet. This recent development and widespread of the World Wide Web brought with it new communities. A new coordination organization was formed, the World Wide Web Consortium (W3C). W3C has taken the responsibility for evolving the various protocols and standards associated with the Web. Internet started to get commercialized which led to the improvement of TCP/IP and the internet products. From here, directly quoted from the source of this passage, it continued in this manner: “ In the beginning of the Internet, the emphasis was on defining and implementing protocols that achieved interoperation. As the network grew larger, it became clear that the sometime ad hoc procedures used to manage the network would not scale. Manual configuration of tables was replaced by distributed automated algorithms, and better tools were devised to isolate faults. In 1987 it became clear that a protocol was needed that would permit the elements of the network, such as the routers, to be remotely managed in a uniform way. Several protocols for this purpose were proposed, including Simple Network Management Protocol or SNMP (designed, as its name would suggest, for simplicity, and derived from an earlier proposal called SGMP) , HEMS (a more complex design from the research community) and CMIP (from the OSI community). A series of meeting led to the decisions that HEMS would be withdrawn as a candidate for standardization, in order to help resolve the contention, but that work on both SNMP and CMIP would go forward, with the idea that the SNMP could be a more near-term solution and CMIP a longer-term approach. The market could choose the one it found more suitable. SNMP is now used almost universally for network based management.” The internet is now almost a “commodity” service and the latest focus has shifted on the use of this global information infrastructure for support of other commercial services. [[1]](#endnote-1)

Five Most Popular Websites

* [www.google.com](http://www.google.com)
* [www.youtube.com](http://www.youtube.com)
* [www.bbc.com](http://www.bbc.com)
* [www.wikipedia.org](http://www.wikipedia.org)
* [www.reddit.com](http://www.reddit.com)
* [www.facebook.com](http://www.facebook.com)

# List of Website on each 12 categories

## Portals

* <https://www.australia.gov.au/>
* <https://www.india.gov.in/>
* <https://asistdl.onlinelibrary.wiley.com/>
* <https://www.commonapp.org/>
* <https://academy.oracle.com/en/oa-student.html>

## News

* <https://www.foxnews.com/>
* <https://www.nbcnews.com/>
* <https://www.theguardian.com/world>
* <https://www.africanews.com/news/>
* <https://www.aljazeera.com/>

## Informational

* <http://who.int/>
* <http://www.w3.org/>
* <http://www.nobelprize.org/>
* <https://techcrunch.com/>

## Business/Marketing

* <https://www.ebay.com/>
* <https://www.amazon.com/>
* <https://www.bestbuy.com/>
* <https://www.walmart.com/>
* <https://www.target.com/>

## Educational

* <https://www.edx.org/>
* <https://www.coursera.org/>
* <https://alison.com/en>
* <https://ocw.mit.edu/index.htm>
* <https://www.khanacademy.org/>

## Entertainment

* <http://netflix.com/>
* <https://www.hulu.com/>
* <https://www.spotify.com/>
* <https://www.youtube.com/>
* <https://www.tiktok.com/en/>

## Advocacy

* <http://www.worldadvocacy.com/>
* <http://www.greenpeace.org/>
* <http://www.undoit.org/>
* <http://www.panda.org/>
* <http://nature.org/>

## Blog

* <https://www.paulosyibelo.com/>
* <https://me.getify.com/>
* <https://www.crockford.com/blog.html>
* <https://inmyencounters.wordpress.com/>
* <https://powerseductionandwar.com/blog/>

## Wiki

* [www.aboutus.com](http://www.aboutus.com)
* <https://www.encyclopediaofmath.org/>
* <https://www.geonames.org/>
* <https://www.nukapedia.com/>
* <https://rosettacode.org/>

## Social Nework

* <https://facebook.com/>
* <https://instagram.com/>
* <https://telegram.org/>
* <https://twitter.org/>
* <https://linkdin.com/>

## Content Aggregator

* <https://alltop.com/>
* <http://popurls.com/>
* <http://theweblist.net/>
* <https://news.google.com/>
* <https://news.ycombinator.com/>

## Personal

* <http://vizualize.me/sandrakreis>
* <http://www.allisonstadd.com/>
* <http://joshuamccartney.com/>
* <http://www.stephaniepal.com/>
* <http://ellensriley.com/>

Guidelines

* <https://www.w3.org/TR/2008/REC-WCAG20-20081211/#guidelines>

1. All information on the **History of the internet** has been extracted from <https://arxiv.org/html/cs/9901011?> [↑](#endnote-ref-1)