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**ADDIS ABABA INSTITUTE OF TECHNOLOGY**

**CENTER OF INFORMATION TECHNOLOGY AND SCIENTIFIC COMPUTING**

**DEPARTMENT OF SOFTWARE ENGINEERING**

**The Evolution**

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# **Introduction**

# **The History of The Internet**

Before discussing the history of the internet, it is vital to understand what the internet is and what it represents in today’s standards.

The internet, put in simple terms is a network of networks. The size of the internet as well as what the internet offers depends purely on the networks that make it up. from this, it is possible to infer that the internet is not controlled by a single entity and that it can’t be controlled by a single entity.

Going to the actual invention or birthdate of the internet, no one can pinpoint the date where it occurred and it can only be considered as a continuous change that brought about the end result.

The internet was the work of dozens of pioneering scientists, programmers and engineers who contributed various features and technologies to create the internet. Many scientists anticipated the existence of a worldwide network of information exchange long before the internet actually existed.

Still, the first practical schematics arrived in the early 1960’s and later on the creation of the ARPANET which can be considered as a monumental step that drove the internet to what it is today.

The history of the internet then, can only be studied through observing monumental developments that played a major role in its growth to what it is today.

## **The ARPANET (Advanced Research Projects Agency Network) and its creation**

Even though many scientists had anticipated the existence of a worldwide network of information exchange, the first description of such a network that allowed for social interactions was written by J.C.R Licklider of MIT in August 1962. He described a Galactic Network Concept where he envisioned a globally interconnected set of computers through which everyone could quickly access data. And while at DARPA (Defense Advanced Research Projects Agency), which is an agency of the United Stated Department of Defense, he convinced his successors Ivan Sutherland, Bob Taylor and Lawrence G. Roberts, who was an MIT Researcher, the importance of such a network.

In 1964, Roberts would go on to create the first wide-area computer network ever built when he connected a TX-2 computer in Massachusetts to a Q-32 in California. The result was the realization that the time-shared computers could work well together. However, the line used to connect the two computers was a circuit switched telephone system that was inadequate for the job. At this point the work of Leonard Kleinrock of MIT on packet switching theory was confirmed to be superior to circuit switches.

Circuit switching is a system where each data unit knows not only its final destination but the specific path it must follow to reach its destination while packet switching is a system where each data unit just knows its final destination and the specific path followed by it is decided by routers. One of the main advantages of packet switching over circuit switching is that packet switching is suitable for handling bilateral traffic i.e. a transfer of data in both directions. While Kleinrock worked on his packet switching theory in 1961, other groups such as RAND (1965) and NPL (1967) had also worked on packet switching in parallel without any of the researchers knowing about the other’s work.

In late 1966 Roberts went to DARPA to develop the computer network and put together his plan for the “ARPANET” publishing it in 1967. In August 1968, after Roberts and the DARPA funded community had refined the overall structure and specification for the ARPANET. DARPA was looking for a company to build the packet switches called Interface Message Processors (IMP’s) that were vital for the ARPANET. Bolt Beranek and Newman (BBN) was given the contract. Roberts played a major role in designing the network topology.

The first computer connected to the ARPANET was the Network Measurement Center at UCLA. It was selected because of Kleinrock’s early development of packet switching and his focus on analysis, design and measurement. Hence, the first IMP was installed at UCLA and the first host computer was connected. The second node was connected at the SRI (Stanford Research Institute).

After the SRI was connected to the ARPANET, the first host-to-host message was sent from Kleinrock’s laboratory to SRI. The message that was sent was the word “Login” but the link between the two colleges crashed on the letter “g”. Soon, two more nodes were added at UC Santa Barbra and University of Utah. These last two nodes incorporated application visualization projects.

## **NCP created**

Shortly after, computers were quickly added to the ARPANET and work proceeded on completing a fully functional Host-to-Host protocol and other networking software. In December 1970, the Network Working Group (NWG) finished the initial ARPANET Host-to-Host protocol called the Network Control Protocol (NCP). This protocol utilized two port addresses, establishing two connections. This would provide flow control between processes running on different ARPANET computers which gave the network functionalities.

## **Email Created**

Email is thought of as being one of the main reasons the ARPANET grew into the internet. The initial idea of Email was simple, put a message in a user’s file directory so that they see it when they log in. and indeed, the initial implementation was no different. The first email system of this type was called MAILBOX and it was used at Massachusetts Institute of Technology from 1965 another email system of this type is SNDMSG. How this worked was that the mainframe computers of this era had up to one hundred users, each one accessing them from so called “dumb terminals”. These dumb terminals just connected to the main frame and so had no storage or memory of their own, they did all their work on the remote mainframe.

Since the users were all working on the same computer, the emails they sent could only send messages to various users on the same mainframe computer. However, after the advent of the ARPANET, emails needed some kind of addressing system since they would be sent across a network. This is where Ray Tomlinson comes in. He is credited with inventing electronic mail. He was a contractor that worked for BBN on the ARPANET and he picked the @ symbol to denote the destination of an electronic mail.

By 1976, 75% of all ARPANET traffic was electronic mail. But that was mail inside an internal network. The concept of communicating via email from organization to organization was the impetus for the advent of the internet itself. For many new internet users, email was the first practical application of this new medium.

By 1993, the word “electronic mail” had been replaced by “email” in the public lexicon and internet use had become more widespread.

## **Beginning of TCP/IP**

Robert E. Kahn and Vinton Cerf are credited as the forefathers of TCP/IP. In the spring of 1973 Kahn and Cerf, who developed the existing NCP protocol, joined forces with the goal to create the next. The main goal Kahn and Cerf were working towards was reformulating the ARPANET so that instead of the network being responsible for the reliability, that was delegated to the hosts by using an interpersonal protocol to hid the differences between local network protocols.

This new protocol was implemented as the Transmission Control Program. Initially, TCP handled both data representation and routing buts as the protocol expanded, it was split into two parts TCP and IP. So, the final TCP/IP worked such that IP was in charge of addressing hosts, putting data into datagram and routing those datagrams from the source to host. While TCP keeps track of that data’s segments where it initially segments the data when sending and reassembling the data when receiving.

There were four goals that Kahn set for what would become of TCP:

* Network connectivity. Any network could connect to another network through a gateway.
* Distribution. There would be no central network administration or control.
* Error Recovery. Lost packets would be retransmitted.
* Black box design. No internal changes would have to be made to connect it to other networks.

In 1975, a two-network TCP/IP communications test was performed between Stanford and University College London (UCL) and it was observed to be successful.

## **International Link to the ARPANET**

The first international link was setup in 1973 when the University College London and Norway’s National Defense Research Establishment joined the ARPANET via dedicated phone lines running at 9.6 Kilobits per second. The key people behind this were Larry Roberts and Donald Davies.

Mr. Davies had worked on packet switching theory as Kleinrock did in the U.S. and had created a working network at the UK’s National Physical Laboratory.

Initially, ARPA agreed to provide basic ARPANET hardware and fund a transatlantic link to Norway if the UK would pay. After some work, the link went live in July 1973 and it was publicly demonstrated in November of that year.

This was a major step that took the ARPANET to becoming the internet.

## **TCP/IP becomes the standard for internet protocol**

Several TCP/IP prototypes were developed at multiple research centers between 1978 and 1983. With TCP/IP being vastly superior to the NCP, the migration of the ARPANET to TCP/IP was officially completed on January 1, 1983, when the new protocols were permanently activated.

In March 1982, the US Department of Defense declared TCP/IP as the standard for all military Computer networking.

## **DNS introduced**

One of the major problems faced by the then still growing ARPANET was its lack of scalability. The ARPANET was using a huge directory of websites and their corresponding IP addresses. But as more computers accessed the ARPANET, it became harder for the workers in-charge to maintain, while the numerical IP addresses were getting more complex for the users to remember.

The solution came from Paul Mockapetris. He suggested that host names should include a Name and category or purpose describing appendage- for example .com for commercial purposes. After a year, the generic top-level domains were created.

Mockapetris designed the Domain Name System at the University of California in 1983. In 1984, four UC Berkeley students-Douglas Terry, Mark Painter, David Riggle, and Songnian Zhou – wrote the first Unix server name implementation, called the Berkeley Internet Name Domain (BIND) Server. BIND is the most widely used DNS software on the planet.

But the Domain Name System, as this system became known, is more than a naming scheme. It also translated website names to their respective IP addresses

## **ARPANET dissolved**

Between 1969 and 1977, ARPANET grew from a network of four computer sites to one with 111 computers belonging to universities, research facilities and the military. Shortly after, other ARPANET networks began to go live, including USENET, Ethernet, CSNET and BITNET. The ARPANET request for comments 827 established an External Gateway Protocol that made it possible for separate networks to access each other. In 1983, the military section of the ARPANET split off from the network. The military renamed its smaller network MILNET, which would later become part of the Department of Defense Data Network.

In 1986, five supercomputer centers formed a network called NSFNET. Before long, NSFNET grew to include several universities in its network. People referred to this larger collection of networks and gateways as the internet. Even though the era of the personal computer began in the late 1970’s, the internet still remained a resource for universities, corporations and the government.

ARPANET’S infrastructure was beginning to show its age. The system’s IMP’s weren’t as efficient or powerful as the computer nodes in other networks. Organizations on ARPANET began to transition to other networks, mainly NSFNET. In 1990, DARPA pulled the plug on the ARPANET. The organization's goals had been met. The United States had a nationwide computer network that not only linked powerful resources together, but also could continue operating if a significant portion of the network stopped working. Even more impressive, this network now spanned the globe, connecting computers from one side of the world to the other. And thus, the internet was born.

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

## **2.1) Apple.com**

Date domain registered: 1987-02-19

Owned by Apple Inc.

The website of the one of the biggest tech companies of today was first recorded in the web archive back in December 1996. However, the domain was registered 1987. The website has changed many times in terms of its website over the years.

Points taken from observation

* The content provided by the website didn’t change that much through the years. However, considering that the website is a business website this is not that surprising.
* Many aesthetic changes can be observed through the years with the design evolving towards a clean and minimalist view.
* The website remained largely unchanged through the 1990’s only receiving minor visual changes. Only adding new products and pages for such products
* A major aesthetic change was made starting from Feb 26, 2000. The website included a menu bar like many of the websites we see today. The overall aesthetic for the website improved greatly.
* The buttons on the menu had drop shadows that added to the aesthetic of the website
* The next major change to the website came in 2007 with the website taking a sleeker and simpler website design
* The changes were mainly aesthetic with the website keeping its old menu design
* The colors used remained largely unchanged from the design in 2000
* The website received some changes in 2011 with the release of the iPhone 4, the menu bar also had some changes of color and gradient
* The website received yet another change in 2013. although it is a minor change, the design of buttons and article headers looked more coherent from color choices
* The next major change came in Oct 2014 with the launch of the iPhone 6
* The menu bar no longer had shadows but was a slab of color that covered the full width of the view port
* The color choices are gray and cream that blend together
* The menu items were classified into the store and the major product lines along with the familiar search bar
* In 2015, the website included a shifting landing page that displayed various products just below the menu bar
* With the launch of the iPhone 7 the grey color was turned darker but no other changes were there
* With the launch of the iPhone X in 2017, some aesthetic changes were introduced. With the inner pages being linked with large photographs of the items that represent tabs rather than text links
* Looking at the current state of the website, many things have changed about the website. Being a business website, it changes rapidly to display new products. The website’s aesthetic is minimal mainly focusing on well taken photographs with minimal text. Overall, it has evolved to become a very visually appealing website.

## **2.2) Reddit.com**

Date domain registered: 2005-04-29

Owned by: Reddit Inc.

Reddit is one of the largest if not the largest online community. It is a network of communities based on people’s interests. It contains subreddits of various kinds that focus on an intended matter. Being a forum website, many aesthetic changes haven’t taken place since it’s creation in 2005 but the major changes have been listed down below.

* The first snapshot on the web archive shows that the website had a very simple design. It had options to login or register and articles and topics could be rearranged as either hot or new
* Only 39 captures are available for the site on the web archive and it goes many years without a snapshot
* The major change that can be observed about the website was in 2012.
* The majority of the website remained unchanged apart from making the site more intuitive with the addition of background colors.
* A large menu was added listing out some of the various subreddits that were popular at the time.
* We can also observe the usage of flash player in some components that do not load
* In 2013, we see the same thing as the years before with a similar layout. It is also worth noting that the article and discussion listing did not include a preview of the post
* The next snapshot that is available is in 2019 and many major changes can be seen here
* The first big change is that articles now show a preview of the post and each article is separated from other posts with a box that encloses it
* The buttons are bigger and more intuitive and the colors used make them stand out
* It can be seen that with major product launches, some aspect of the website launches such as the placement of product boxes or the content of the menu bar

## **2.3) Amazon.com**

Date domain registered: 1994-11-01

Owned by: Amazon Technologies, Inc.

Amazon is not only the largest E-commerce platform in the world, but is a large multinational corporation that offer various services and products. With its most notable services being its online marketplace, its AI assistant know as Alexa and its cloud computing platform known as Amazon Web Services. The company was founded in 1994 and its domain was registered in the same year. The first snapshot of the website on the web archive dates back to 1998, however those pages are inaccessible and they redirect due to a 301 response at crawl time. Some notable observations are presented below

* From a snap shot of the site in 2005, we can observe that the user is provided with a lot of information
* The main content of the site lists new products and some description about the products
* A panel on the left shows a list of item categories and a menu bar classifies major item categories
* The design of the website remained largely unchanged with new products and deals being presented in the middle and categories being presented in a panel on the right
* Only some minor changes in color are observed

## **2.4) BBC.com**

Date domain registered: 1989-07-15

The British Broadcasting Corporation is the world’s oldest national broadcaster. Its domain was registered in 1989 and it provides new through its website. The first capture taken of the website is on 1989, however the domain was registered to a different company and the BBC acquired it in 2001. The following observations were taken

* From the first snapshot, it can be sent that the website was mostly text-based displaying information with links
* It included a side panel for categories and a main panel for main stories with space for bulletins on the right
* From a snapshot in 2002, it can be seen the layout changed. The left panel was removed and content was stacked on top of each other
* Some background colors were added as well
* The menu bar at this time included options for TV, Radio as well as an index of articles
* Much of the functionality and the layout of the website remained unchanged up until 2008 when changes in theme and layout were added
* The menu bar was changed and there were no longer traditional panels but compartments that contained different kinds of news and reports
* The website remained largely unchanged until 2010 with only color changes happening regularly
* A major change was seen in 2010 when a traditional menu reappearing and the color settling on red
* However, some changes of color did happen
* Another major change happened in 2014 when the site used a slider for showing various articles
* Regular changes to the arrangement of panels occurred but the main layout of the website did not change

## **2.5) eBay.com**

Date domain registered: 1995-08-04

Owned by: eBay Inc.

eBay is an American multinational e-commerce corporation based in San Jose, California. It is based on a system of auction where a seller lists an item and a starting price and users either bid on the item or buy the product at the listed price. The website of eBay went up in 1995. The following observations were taken

* The first snapshot in 1999 shows that the site looked very similar to other websites from that era, not aesthetically pleasing
* It had the common website layout elements with the menu, two side bars and a main content panel
* In the year 2000, the website remained largely the same except for the addition of a new welcoming tool for new users with various options, the right-side panel was also removed but no other main changes were introduced
* Major changes were introduced in 2004 when the large left-side panel was replaced with simplified option-based item searching and category selection panel, featured items appeared near the bottom of the page
* In 2005, the traditional left side panel returned. One thing to note here is the presence of two search bars
* Item listing at this time showed the price and the shipping price

# **5 Websites from the 13 types of websites**

## **Portals**

Web or internet portals are web-based platforms that collect information from different sources and present the user with the most relevant information for that specific user. Portals my also provide specific content. Examples:

* 1. **Santander Portal**

URL: <https://www.santanderbank.com/us/personal>

Description: Although not available in Ethiopia, the Santander portal is bank portal that allows users to access their account information as well as other financial services related to the bank. All bank user pages are portals.

* 1. **Australian Government Website**

URL: <https://www.australia.gov.au/>

Description: Like many other government websites, the Australian government website presents an interactive way to learn more about and receive services from the Australian government. All other government websites can be considered portals.

* 1. **Yahoo**

URL: [www.yahoo.com](http://www.yahoo.com)

Description: Yahoo is a search engine that is provided by Verizon Media. The front page of Yahoo is a discovery portal that brings news, social media trending topics and other content.

* 1. **AAU Portal**

URL: <https://portal.aait.edu.et/>

Description: The AAU portal is a portal that students can use to access their grades, course info and other AAU related matters.

* 1. **Bing**

URL: [www.bing.com](http://www.bing.com)

Description: Bing is a search engine provided by Microsoft. Apart from being a search engine, its front page is a portal that provides news, interesting articles and other content.

## **News**

News websites are websites of either national newspapers, broadcasters or online entities that present either local news or both local news and international news through web pages. Examples:

1. **CNN**

URL: <https://edition.cnn.com/>

Description: CNN is an American news- based television channel. It’s online website provides access to local as well as international news.

1. **New York Times**

URL: <https://www.nytimes.com/>

Description: The New York Times is an American newspaper based in New York City with worldwide influence. It provides international news coverage.

1. **Fox News**

URL: <https://www.foxnews.com/>

Description: Fox News is an American cable television news channel. It provides local and international news coverage but tends to focus on local news.

1. **The Guardian**

URL: [https://www.theguardian.com/](https://www.theguardian.com/internanal)

Description: The Guardian is a British newspaper owned by the Guardian Media Group

1. **Daily mail**

URL: <https://www.dailymail.co.uk/>

Description: The Daily Mail is a British newspaper that provides local and international news coverage.

## **Informational**

Informational websites are websites that exist to convey specific and helpful information about a certain topic to an audience. They exist so that the reader learns something new or understands the topic better. Example:

1. **Wikipedia**

URL: [www.wikipedia.org](http://www.wikipedia.org)

Description: Wikipedia is a largest wiki website that contains 49 million pages worth of articles on different topics

1. **Mental Floss**

URL: [www.mentalfloss.com](http://www.mentalfloss.com)

Description: Mental Floss is an online magazine that presents information and facts on a wide range of topics.

1. **TripAdvisor**

URL: [www.tripadvision.com](http://www.tripadvision.com)

Description: Trip advisor is the world’s largest travel platform that provides prospective travelers with information such as travel advice, hotel rankings and much more.

1. **IMDB (Internet Movie Database)**

URL: [www.imdb.com](http://www.imdb.com)

Description: IMDB is an online database of information related to films, television and celebrity content. Being a database, it provides the information for free.

1. **GoodGuide**

URL: [www.goodguide.com](http://www.goodguide.com)

Description: GoodGuide is an online tool that allows users to get information related to products such as evaluations of the health, environmental and social impact.

## **Business/Marketing**

A business or marketing website is a website that is usually owned by a specific business that is used to represent the business and advertise the services a business offers. Examples:

* 1. **Ferrari**

URL: [www.ferrari.com](http://www.ferrari.com)

Description: Ferrari is an Italian luxury vehicle manufacturer. Its website provides a shopping platform for its products.

* 1. **Adobe**

URL: [www.adobe.com](http://www.adobe.com)

Description: Adobe Inc. is software company that provides software products that focus on multimedia and creativity. Its website showcases the ability of its products while providing a shopping platform

* 1. **Rolex**

URL: [www.rolex.com](http://www.rolex.com)

Description: Rolex is a swiss luxury watch manufacturer. Its website offers a platform for its store.

* 1. **Gebeya**

URL: [www.gebeya.com](http://www.gebeya.com)

Description: Gebeya is an Ethiopian educational tech company that provides training on various programming skills. Its website showcases the trainings it gives.

* 1. **JetBrains**

URL: [www.jetbrains.com](http://www.jetbrains.com)

Description: JetBrains is a software development company that produces tools targeted towards software developers. Its website showcases the tools that it has and provides a shopping platform.

## **Educational**

Educational websites are websites that exist to either enhance learning or provide their own education. Example:

1. **Coursera**

URL: <https://www.coursera.org/>

Description: Coursera is an American online learning platform that was founded in 2011. It provides courses on various topics.

1. **EdX**

URL: <https://www.edx.org/>

Description: EdX is a non-profit online course provider that provides university-level courses in a wide range of disciplines. Courses are free on EdX but certificates require payment. It was founded by Harvard University and Massachusetts Institute of Technology in 2012.

1. **Udacity**

URL: <https://www.udacity.com/>

Description: Udacity is a for profit educational organization that provides online courses. It was created in 2011.

1. **Udemy**

URL: <https://www.udemy.com/>

Description: Udemy is an American online learning platform where anyone can create and promote their own courses. It was created in 2009.

1. **Khan Academy**

URL: <https://www.khanacademy.org/>

Description: Khan Academy is a non-profit educational organization that has a set of online tools that help educate students. It was created in 2008 by Salman Khan.

## **Entertainment**

Entertainment websites exist to entertain and amuse their visitors. Example:

1. **Media Take Out**

URL: <https://mtonews.com/>

Description: Media Take Out is an entertainment website that focuses on celebrity news and gossip. It was created in 2006.

1. **TMZ**

URL: <https://www.tmz.com/>

Description: TMZ is news website that focuses on entertainment and celebrity gossip.

1. **Buzzfeed**

URL: <https://www.buzzfeed.com/>

Description: Buzzfeed is an American entertainment website that focuses on digital media, news as well as generating buzz with its outlandish articles. It was created in 2006.

1. **Entertainment News**

URL: [www.eonline.com](http://www.eonline.com)

Description: E! online is an online source for celebrity news and gossip

1. **Viral Nova**

URL: [www.viralnova.com](http://www.viralnova.com)

Description: viral nova is a website that provides interesting, hilarious and overall entertaining and amusing from the web.

## **Advocacy**

Advocacy websites are websites that exist to influence the public about a specific topic. These sites advocate for a particular cause and are usually biased. Example:

* 1. **Brite web**

URL: [www.briteweb.com](http://www.briteweb.com)

Description: Brite web is a social impact agency that partners with non-profits for providing purpose-driven campaigns.

* 1. **Charity water**

URL: [www.charitywater.org](http://www.charitywater.org)

Description: charity water is a non-profit organization that work to bring clean, safe drinking water to people in developing countries.

* 1. **Convey of hope**

URL: [www.converyofhope.com](http://www.converyofhope.com)

Description: convey of hope is a humanitarian organization that works to combat poverty, disease and hunger.

* 1. **David Shepherd Foundation**

URL: [www.davidshepherd.org](http://www.davidshepherd.org)

Description: The David Shepherd Wildlife Foundation is an organization that works to save endangered species.

* 1. **Gates Foundation**

URL: [www.gatesfoundation.org](http://www.gatesfoundation.org)

Description: The Bill & Melinda Gates foundation is a charity foundation that funds various projects such as research and providing education to those in need.

## **Blog**

Blogs are websites that are tools for users to post their experiences and thoughts. These sites are like diaries and readers can usually post comments. Examples:

* 1. **Word press**

URL: [www.wordpress.com](http://www.wordpress.com)

Description: word press is a free website and blog building platform that eases the process of creating a blog.

* 1. **Blogger**

URL: [www.blogger.com](http://www.blogger.com)

Description: Blogger is a blog-publishing service that allows multi-user blogs.

* 1. **Joomla**

URL: [www.joomla.com](http://www.joomla.com)

Description: Joomla is a website and blog builder.

* 1. **Weebly**

URL: [www.weebly.com](http://www.weebly.com)

Description: Weebly is a website and blog builder.

* 1. **Penzu**

URL: [www.penzu.com](http://www.penzu.com)

Description: Penzu is a free online journal keeping platform. What makes this service different from other is that it is private.

## **Wiki**

A wiki or wikis are websites that contain a knowledge base where users collaboratively modify and structure the content of the wiki. Wikis run on wiki engines. Examples:

* 1. **Fanlore**

URL: [www.fanlore.org](http://www.fanlore.org)

Description: Fanlore is a wiki created to preserve the history of work done by fandoms.

* 1. **Wikileaks**

URL: [www.wikileaks.org](http://www.wikileaks.org)

Description: Wikileaks is an international non-profit organization that publishes news leaks and classified media provided by anonymous sources.

* 1. **Wikitravel**

URL: [www.wikitravel.org](http://www.wikitravel.org)

Description: Wikitravel is a web-based collaborative travel guide bases on the wiki model.

* 1. **Wikihow**

URL: [www.wikihow.com](http://www.wikihow.com)

Description: Wikihow is an online wiki community that consist of extensive how-to guides on a multitude of topics.

* 1. **Wiktionary**

URL: [www.wikitionary.org](http://www.wikitionary.org)

Description: Wiktionary is a web based wiki that provides a free dictionary in all natural languages.

## **Social**

Social websites are websites that exist to allow social relations and interactions using websites. Examples:

* 1. **Facebook**

URL: [www.facebook.com](http://www.facebook.com)

Description: Facebook is a social media platform that provides a way to connect with others all over the world.

* 1. **Twitter**

URL: [www.twitter.com](http://www.twitter.com)

Description: Twitter is a social media platform that allows it’s users to interact with messages known as tweets.

* 1. **9GAG**

URL: [www.9gag.com](http://www.9gag.com)

Description: 9GAG is a social media platform which allows users to share content usually in the form of short videos.

* 1. **Instagram**

URL: [www.instagram.com](http://www.instagram.com)

Description: Instagram is a social media platform where users post images and photos.

* 1. **Reddit**

URL: [www.reddit.com](http://www.reddit.com)

Description: Reddit is a social media platform that focuses on discussions and content sharing among users.

## **Network**

Social networking websites are websites that provide platforms and communities for people to build social networks with people of similar interests. They can also provide a platform for brands or places to display their works and get a social following. Examples:

* 1. **Academia.**

URL: [www.academia.edu](http://www.academia.edu)

Description: Academia is a social networking website that allows users to find networks of people with similar academic interests.

* 1. **DeviantArt**

URL: [www.deviantart.com](http://www.deviantart.com)

Description: DeviantArt is a social networking platform for artists and art enthusiasts.

* 1. **Groupspaces**

URL: [www.groupspaces.com](http://www.groupspaces.com)

Description: Groupspaces is a website that allows clubs to easily manage memberships and activities.

* 1. **CaringBridge**

URL: [www.caringbridge.org](http://www.caringbridge.org)

Description: CaringBridge is a social networking platform that allows people facing various medical conditions to communicate.

* 1. **Wylo**

URL: [www.wyloapp.com](http://www.wyloapp.com)

Description: Wylo is an internet based social networking platform that helps people find content and connections bases on their interests.

## **Content Aggregator**

Content aggregator websites are websites that collect data from other sources across the internet and put the information in one place. These websites are different from portal websites in that they usually focus only a specific content. Examples:

* 1. **Flipboard**

URL: [www.flipboard.com](http://www.flipboard.com)

Description: Flipboard is an online curator that brings content from various online sources.

* 1. **Feedly**

URL: [www.feedly.com](http://www.feedly.com)

Description: Feedly is a news aggregator website that allows users to customize the news that they receive.

* 1. **Trivago**

URL: [www.trivago.com](http://www.trivago.com)

Description: Trivago is a hotel price aggregator website that brings info about hotel rooms and prices to users.

* 1. **Google News**

URL: [www.news.google.com](http://www.news.google.com)

Description: Google News is a news aggregator that presents users with a continuous and customizable flow of articles.

* 1. **Popurls**

URL: m.popurls.com

Description: Popurls is a news aggregator website that compiles news from various social sources.

## **Personal**

Personal websites are websites that are created by individual to express themselves and display content of personal nature. Examples:

* 1. **Maria Sharapova**

URL: [www.mariasharapova.com](http://www.mariasharapova.com)

Description: personal website of the popular Russian professional tennis player Maria Sharapova.

* 1. **John Grisham**

URL: [www.jgrisham.com](http://www.jgrisham.com)

Description: Personal website of the famous American author John Grisham.

* 1. **Usain Bolt**

URL: [www.usainbolt.com](http://www.usainbolt.com)

Description: Personal website of the famous Jamaican sprinter Usain Bolt.

* 1. **Messi**

URL: [www.messi.com](http://www.messi.com)

Description: Personal website of the famous footballer Lionel Messi.

* 1. **John Green**

URL: [www.johngreenbooks.com](http://www.johngreenbooks.com)

Description: Personal website of the popular American author John Green.

# **Guidelines for evaluating the value of a website**

## **4.1) Guidelines**

Even though the world wide web is an effective means of disseminating information, anyone who has access to a web server can create and maintain a website on any topic they wish. This raises issues of quality and integrity.

While on the other hand, information on the web is ephemeral i.e. might last for a very short amount of time. Since the form and content on a website can be surprisingly fluid with a web address working today and disappearing tomorrow. Therefore, there are criteria for evaluating websites and the information they hold.

1. **Authority**

This refers to who created the site. The most important questions to ask when trying to determine the authority of a website are:

* What are the credentials of the author?
* Does the publisher list his or her qualifications?
* Does the URL suggest a reputable affiliation such as that of .edu or .org?

1. **Objectivity**

This refers to whether or not the information presented on the site is clear, unbiased or looks at things from a particular viewpoint. We can determine this by asking the following questions.

* Are the purpose and scope of the document clearly stated?
* Is the information clearly presented as being factual or opinion based?
* Does the information try to sway the audience?
* Is the site trying to explain, inform, persuade, or sell something?

1. **Accuracy**

This refers to the information presented being accurate or not. While this is a difficult quality to find out, we can try the following.

* Are the facts similar to those reported in related print or other online resources?
* It the author qualified to write this document?
* Can the author be contacted to verify the accuracy of the information?
* Are the facts documented or well-researched?

1. **Currency**

This refers to the information being current and up to date. The following questions should adequately address this.

* Is the content current?
* Is the content updated regularly and does it show a date of update?
* How up to date are the links and are there any dead links?

1. **Usability and Coverage**

This refers to the design and accessibility of a website. While this may be objective, we can ask the following questions to determine that.

* Is the site easy to maneuver?
* Is the page designed to operate ideally with all browsers or does it have a browser compatibility limit?
* Is the site reliably accessible?
* Is the content written at a level that is readable by the intended audience?
* Is the content free for access?

## **4.2) 3 websites evaluated using the above guidelines**

[**Internetsociety.org**](http://www.internetsociety.org)

Authority

* we can find out the details of the authors on the about us page, this indicates good document structure
* The publishers describe the history of their organization as well as the credentials and biography of their board of trustees which shows that they are well qualified
* The website is of the .org domain which is a reputable affiliation

Objectivity

* The purpose of the organization is clearly stated and that is reflected in all of the websites various articles
* The resources presented on the website are factual and they are not opinion based
* The resources presented present facts and therefore the reader is not swayed
* The site is informative

Accuracy

* The facts presented here correspond to the facts presented on other websites
* The qualification of the authors is presented on many of the articles
* Email, Twitter or Facebook can be used to contact the authors
* The facts presented can be considered well-researched since the authors are qualified

Currency

* The content is current with many articles being added back to back
* Articles presented show a date of update
* I have not observed any dead links within the site

Usability and Coverage

* The site is easy to maneuver with an intuitive UI
* The website operated ideally with Chrome, Opera and Edge
* The site was available at all times of checking
* The articles are written in concise language that makes it easy for readers to understand
* The content is free for access

Final verdict

* Internetsociety.org can be considered a valid place for information since all of the questions presented above are answered well.

**Wikipedia.org**

Authority

* Credentials of authors are not listed, and the authors who made changes in articles might not even be known
* Qualifications are not listed, an unqualified person can make changes
* The URL is of the domain .org which indicates that it is a non-profit

Objectivity

* The purpose of documents or articles is not explicitly stated. However, the language used shows that it is informative. The scope of articles is sometimes stated and links are presented if any further reading is recommended
* The resources presented on the website may vary in factuality and some may tend to sway the reader
* The resources usually present facts. However, this cannot be guaranteed for all documents
* Most of the sites’ content appears informative but this cannot be guaranteed since documents can be edited by anyone for purposes other than informing

Accuracy

* The facts presented usually correspond to other facts on other websites and many include references to primary sources
* The qualification of the authors is not known
* Users who edited a specific article can be contacted
* There is no guarantee that the facts presented are factual and well researched

Currency

* Most of the content can be considered current. However, this varies from article to article
* All articles indicate the last time they were edited on
* I have not observed any dead links within the site

Usability and Coverage

* The site is easy to maneuver with an intuitive UI. All articles are presented in a familiar way that makes it easy for users to quickly look for information
* The website operated ideally with Chrome, Opera and Edge
* The site was available at all times of checking
* The content is free for access
* Most articles are written in language that is understandable with many. However, there are articles that may include technical jargon.

Final verdict

* Thoughts about Wikipedia vary from article to article and from a study in 2008, its accuracy was rated at 80 percent. It is worth noting that Wikipedia is not considered a viable source in academic societies. Overall, any information found there should be thoroughly fact checked from other viable sources.

**Wri.org - World Resources Institute**

Authority

* The credentials of the authors are written
* The qualifications of the publishers of each article are written
* The URL is of the .org domain that indicates that it has a reputable affiliation

Objectivity

* The purpose of the organization is listed as a whole
* The information presented is factual
* The information does try to sway the audience
* The site is informative. However, it is persuasive

Accuracy

* The facts are similar to those presented on other sites and links to this site can be found on other sites
* The authors of the articles are qualified
* Every author of every article can be contacted through email
* The facts are well researched

Currency

* The content of the articles appears current
* All articles show a date of update
* I have not observed any dead links within the site

Usability and Coverage

* The site is easy to maneuver and has good choices of color for contrast
* The site appeared the same on Chrome, Opera and Edge browsers
* The site was accessible at all times of checking
* The content is written in understandable language
* The content is free for access

Final Verdict

* Wri.org can be considered a credible source of information. The most important factor is that the articles are written by highly qualified professionals. Apart from that, it has answered every question in the guideline to a satisfying level.

# **Resources:**

http://www.nethistory.info/History%20of%20the%20Internet/email.html

<https://www.internetsociety.org/internet/history-internet/brief-history-internet/>

<https://www.history.com/news/who-invented-the-internet>

<https://www.webfx.com/blog/web-design/the-history-of-the-internet-in-a-nutshell/>

<https://history-computer.com/Internet/Maturing/TCPIP.html>

<https://www.colocationamerica.com/blog/history-of-ip-address-part-2-tcp-ip>

<http://news.bbc.co.uk/2/hi/technology/3280897.stm>

<http://www.webhostingsearch.com/articles/history-of-domains-names.php>

<http://www.historyofdomainnames.com/dns/>

<https://computer.howstuffworks.com/arpanet4.htm>

<http://people.wcsu.edu/reitzj/res/evalweb.html>

https://www.library.kent.edu/criteria-evaluating-web-resources

https://www.livescience.com/7946-wikipedia-accurate.html