

Evolution of the Web

I believe it is important to have a basic understanding of the evolution of the world wide web because it allows you to see how basic the space is on a macro level, but how complex and innovative it can become on a micro level. The Evolution of the internet can be described in three parts: Web 1.0, Web 2.0 and Web 3.0. Below is a comparison chart and following is a more fundamental breakdown of the 3.

Web 1

Personal web pages were common, consisting mainly of static pages hosted on ISP-run web servers, or on free web hosting services.

- Web 1.0 is a content delivery network (CDN) that enables the showcase of the piece of information on the websites.
- It can be used as a personal website.
- It costs the user as per pages viewed.
- It has directories that enable users to retrieve a particular piece of information.

Four design essentials of a Web 1.0 site include:

- Static pages.
- Content is served from the server's file system.
- Pages built using Server Side Includes or Common Gateway Interface (CGI).
- Frames and Tables are used to position and align the elements on a page.

Web 2

Interoperability is the ability of computer systems or software to exchange and make use of information) for end users. Web 2.0 is also called the participative social web. It does not refer to a modification to any technical specification, but to modify the way Web pages are designed and used. The web browser technologies includes AJAX and JavaScript frameworks. Recently, AJAX and JavaScript frameworks have become a very popular means of creating web 2.0 sites.

Five major features of Web 2.0:

- Free sorting of information, permits users to retrieve and classify the information collectively.
- Dynamic content that is responsive to user input.
- Information flows between the site owner and site users by means of evaluation & online commenting.
- Developed APIs to allow self-usage, such as by a software application.
- Web access leads to concern different, from the traditional Internet user base to a wider variety of users.

Usage of Web 2.0 – The social Web contains a number of online tools and platforms where people share their perspectives, opinions, thoughts and experiences. Web 2.0 applications tend to interact much more with the end user. As such, the end user is not only a user of the application but also a participant by these 8 tools mentioned below:

- Podcasting
- Blogging
- Tagging
- Curating with RSS
- Social bookmarking
- Social networking
- Social media

- Web content voting

Web 3

It enables the up-gradation of the back-end of the web, after a long time of focus on the front-end (Web 2.0 has mainly been about AJAX, tagging, and another front-end user-experience innovation).

- Web 3.0 is a term that is used to describe many evolutions of web usage and interaction among several paths.
- In this, data isn't owned but instead shared, where services show different views for the same web / the same data.
- The Semantic Web (3.0) promises to establish "the world's information" in a more reasonable way than Google can ever attain with their existing engine schema. This is particularly true from the perspective of machine conception as opposed to human understanding. Frameworks like OWL can produce domain-specific descriptions that machines can use to reason about information and make new conclusions, not simply match keywords.

5 main features that can help us define Web 3.0:

- Semantic Web - The succeeding evolution of the Web involves the Semantic Web. The semantic web improves web technologies in demand to create, share and connect content through search and analysis based on the capability to comprehend the meaning of words, rather than on keywords or numbers.
- Artificial Intelligence - Combining this capability with natural language processing, in Web 3.0, computers can distinguish information like humans in order to provide faster and more relevant results. They become more intelligent to fulfill the requirements of users.
- 3D Graphics - The three-dimensional design is being used widely in websites and services in Web 3.0. Museum guides, computer games, e-commerce, geospatial contexts, etc. are all examples that use 3D graphics.
- Connectivity - With Web 3.0, information is more connected thanks to semantic metadata. As a result, the user experience evolves to another level of connectivity that leverages all the available information.
- Ubiquity - Content is accessible by multiple applications, every device is connected to the web, the services can be used everywhere.