

# Web 1.0



# Web 2.0



# WEB 3.0

## **What is web 1.0?**

- An old internet that only allows people to read from the internet.
- First stage World wide linking web pages and hyperlink.
- Web is use as "information portal"
- It uses table to positions and align elements on page

## What is web 2.0?

- ❖ It is a platform that give users the possibility to control their data.
- ❖ This is about user - generated content and the read-write web.
- ❖ Everyone can be content producer.
- ❖ Web 2.0 can be describe into 3 concepts which is ....

## **Web 2.0 Concept**

Rich Internet Application (RIA) : It defines the experience brought from desktop to browser .

Service- Oriented Architecture (SOA)  
: defines how web 2.0 applications expose its functionality so that other application can integrate the functionality and produce a set of much richer applications. (feeds, RSS, )

Social Web : it defines how web 2.0 tend to interact much more with the end user and making the end user an integral part.

# How Web 1.0 And Web 2.0 Work?





## **Example Of Web 1.0 And Web 2.0**

### Web 1.0

- Shopping carts
- Mp3.com

### Web 2.0

- Blog / wikis
- Social network
- Yahoo
- Youtube



# **WEB 3.0 AND SEMANTIC WEB**



## **What is WEB 3.0???**

- ✓ Suggested name by John Markoff of the New York Times for the third-generation of the web.
- ✓ In this generation, all the application on web or mobile will be upgraded with more features.
- ✓ It apply same principle as WEB 2.0 : two way interaction
- ✓ Web 3.0 will be more connected, open, and intelligent, with semantic Web technologies, distributed databases, natural language processing, machine learning, machine reasoning, and autonomous agents.

## **Different between WEB 3.0 with WEB 2.0 and WEB 1.0**

<b>WEB 1.0</b>	<b>WEB 2.0</b>	<b>WEB 3.0</b>
The web	The social web	The semantic web
Read only web	Read and write web	Read, write and execute web
Information sharing	Interaction	Immersion
Connect information	Connect people	Connect knowledge
All about static content, one way publishing (one way communication)	More about two way communication through social networking, blogging, tagging and wikis.	Curiously undefined.
Example : Personal web sites	Example : Blogs, Facebook	Example : Semantic blog (semiblog, haystack)

## Characteristics of WEB 3.0

### Ubiquitous

- available at any time, anywhere, through any channel or device

### Individualized

- filtered and shared by friends or trust network

### Efficient

- relevant and contextual
- information findable & instantly

## **Example of WEB 3.0**

### **FB app**

- what friends bought or want to buy
- Drag to share items which friends know friends are looking for.

### **Online coupons**

- coupons delivered contextually and proactively when user needs it (without the user even asking for it)

### **Voice search**

- for example in Google voice search
- user only speak to the smart phones, then the application will find for you.

# What is Semantic Web???

Definition : The semantic web is an exciting new evolution of the World Wide Web (WWW) providing *machine-readable* and *machine-comprehensible* information far beyond current capabilities.

- help computers understand the meaning behind the web page.
- Make life easier.
- The web of the future.

## **Characteristics of Semantic Web???**

Linked  
data or  
hyperdata

- data objects are linked to other data objects

Large  
hyperdata  
datasets

- a community effort to extract structured information from wikipedia and make the information available on the web

## Semantic web as a component of web 3.0

URI (uniform resource identifier)

RDF (Resource Description  
Framework)

RDFS (RDF Schema)

OWL (Web Ontology Language)

Microformat

# URI

- ❖ **uniform resource identifier (URI)** is the way you identify any of those points of content, whether it be a page of text, a video or sound clip, a still or animated image, or a program.
- ❖ The most common form of URI is the Web page address, which is a particular form or subset of URI called a Uniform Resource Locator (URL). A URI typically describes:
  - ❖ The mechanism used to access the resource
  - ❖ The specific computer that the resource is housed in
  - ❖ For ex:

**[http://www.w3.org/Icons/WWW/w3c\\_main.gif](http://www.w3.org/Icons/WWW/w3c_main.gif)**



# URL

- ❖ **This URL is broken into four parts:**
- ❖ **HTTP : communication protocol**
- ❖ **://: Separator**
- ❖ **www: World Wide Web**
- ❖ **Google: The site name**
- ❖ **com: domain name .com for commercial.**

# RDF

- ❖ The **Resource Description Framework (RDF)** is a family of World Wide Web Consortium (W3C) specifications originally designed as a metadatadata model
- ❖ This framework is used to represent data in the LOD (linking open data) cloud as an XML file.
- ❖ It is also a way to define resources using a specific framework.
- ❖ \*LOD : data in the LOD cloud is *open* and freely available. The ultimate sense of openness is that the data may be freely *edited* by users,

# RDFS

- ❖ **RDF Schema (Resource Description Framework Schema**, variously abbreviated as **RDFS**, **RDF(S)**, **RDF-S**, or **RDF/S**) is a set of classes with certain properties using the RDF extensible knowledge representation language, providing basic elements for the description of ontologies, otherwise called RDF vocabularies, intended to structure RDF resources.
- ❖ Semantic Extension RDF .

# OWL

- ❖ Ontology defines the terms used to describe and represent an area of knowledge. Ontologies are used by people, databases, and applications that need to share domain information (a domain is just a specific subject area or area of knowledge, like medicine).
- ❖ The OWL Web Ontology Language is designed for use by applications that need to process the content of information instead of just presenting information to humans.
- ❖ OWL is a *Web* Ontology language. Where earlier languages have been used to develop tools and ontologies for specific user communities (particularly in the sciences and in company-specific e-commerce applications)

# MICROFORMAT

- Microformats are small patterns of HTML to represent commonly published things like people, events, blog posts, reviews and tags in web pages.
- Microformats are the quickest & simplest way to provide an API to the information on your website.
- Microformats intend to solve simpler problems first by adapting to current behaviors and usage patterns (e.g. XHTML, blogging).

Many Web developers would just format the content as a generic list like this:

```
<ul>
<li>Joe Doe</li>
<li>The Example Company</li>
<li>604-555-1234</li>
<li><a
href="http://example.com/">http://example.com/
</a></li>
</ul>
```

❖ The problem with this is that the inherent structure of that information is completely lost. If I want to pull those contacts out and put them in my address book I have to do it manually.

So the previous example would look like this with the hCard microformat:

```
<ul class="vcard">  
  <li class="fn">Joe Doe</li>  
  <li class="org">The Example Company</li>  
  <li class="tel">604-555-1234</li>  
  <li><a class="url"  
href="http://example.com/">http://example.co  
m/</a></li>  
</ul>
```

# Challenges for semantic web 3.0





## Challenges

### Vastness

## • Explanation

- ❖ Other problems associated with Web 3.0 expansion are the vastness of the web and security issues with cloud computing.
- ❖ According to WorldWideWebSize.com, the web today contains at least 20 billion indexed pages.
- ❖ This is a rather big input for any modern system that deals with information and semantics. It will take some time to remove all duplicate terms and to outline information with semantic values that are specific to the subject

## Challenges

### Vagueness

#### • Explanation

- ❖ Web 3.0 assumes that computers will be using their own reasoning to deal with tons of information, available in forms like RDF, XML, or any other markup language.
- ❖ To catalog information in real time and deal with its vagueness, systems will have to use fuzzy logic in order to process different types of information.

## Challenges

Uncertainty

Inconsistency

## • Explanation

- ❖ Uncertainty refers to something a system can't easily classify and save to the appropriate table in the database.
- ❖ Inconsistency stands for logical contradictions which inevitably arise during the development of large systems.
- ❖ One can't use deductive reasoning to solve this problem. Instead, defeasible reasoning and paraconsistent reasoning should be used

## Challenges

### Deceit

- **Explanation**

- ❖ This is when the producer of the information is intentionally misleading the consumer of the information.