Lecture 8: Web 2.0

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Acknowledgement: Part of the lectures notes are from Wikipedia
Definition

• **Web 2.0** is a phrase coined by O'Reilly in 2004 to refer to a supposed second-generation of Internet-based services that let people collaborate and share information online in new ways — such as
  – social networking sites,
  – wikis,
  – communication tools,
  – etc.
Web 2.0

- Difference from Web 1.0 (traditional WWW)
- Name implies an improved form of the WWW
- Web 2.0 is not a technology, it's a way of architecting software and businesses. Web 2.0 is really a set of related forces, design patterns, and business models that are increasingly emerging onto the world stage.
- Not as easy to learn as HTML to users
Philosophy behind Web 2.0

• Web 2.0 is a category of new Internet tools and technologies that focuses on the idea that the people who consume media, access the Internet, and use the Web shouldn't passively absorb what's available — rather, they should be active contributors, helping customize media and technology for their own purposes, as well as those of their communities.
Definition of Web 2.0

• Like many important concepts, Web 2.0 doesn't have a hard boundary, but rather, a gravitational core. You can visualize Web 2.0 as a set of principles and practices that tie together.
Web 2.0 Meme Map

- **Flickr, del.icio.us**: Tagging, not taxonomy
- **PageRank, eBay reputation, Amazon reviews**: user as contributor
- **Google AdSense**: customer self-service enabling the long tail
- **Wikipedia**: Radical Trust
- **BitTorrent**: Radical Decentralization
- **Gmail, Google Maps and AJAX**: Rich User Experiences

**Strategic Positioning:**
- The Web as Platform

**User Positioning:**
- You control your own data

**Core Competencies:**
- Services, not packaged software
- Architecture of Participation
- Cost-effective scalability
- Remixable data source and data transformations
- Software above the level of a single device
- Harnessing collective intelligence

- **“An attitude, not a technology”**
- **The Long Tail**
- **Data as the “Intel Inside”**
- **The perpetual beta**
- **Software that gets better the more people use it**
- **Play**
- **Rich User Experience**
- **Small Pieces Loosely Joined (web as components)**
- **Trust your users**
- **Granular Addressability of content**
- **Emergent: User behavior not predetermined**
- **The Right to Remix “Some rights reserved”**
- **Hackability**

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O'Reilly’s hierarchy of Web 2.0

O'Reilly gave examples in his description of his "four plus one" levels in the hierarchy of Web 2.0-ness:

– Level-3 applications, the most "Web 2.0", which could only exist on the Internet: eBay, Wikipedia, craigslist, del.icio.us, Skype, dodgeball, and Adsense.

– Level-2 applications, which can operate offline but which gain advantages from going online: Flickr

– Level-1 applications, also available offline but which gain features online: Writely

– Level-0 applications would work as well offline: MapQuest, Yahoo! Local, and Google Maps.
Level 3

- **Wikipedia** is a Web-based free-content multilingual encyclopedia project.
• **eBay Inc.** manages an online auction and shopping website, where people buy and sell goods and services worldwide.

From Wikipedia
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Level 2

• **Flickr** is a photo sharing website and web services suite, and an online community platform.

http://www.flickr.com/
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Level 1

- **Writely** is a web-based word processor currently in beta and owned by Google.

http://www.writely.com/
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Level 0

- Google Maps is an example of a web 2.0 application that uses Ajax techniques.
- Like other Google web applications, a large amount of JavaScript was used to create Google Maps. As the user drags the map, the grid squares are downloaded from the server and displayed to the user.
Web 2.0 Applications

• There are many recently-developed concepts and technologies as contributing to Web 2.0, including weblogs, linklogs, wikis, podcasts, RSS feeds and other forms of many to many publishing; social software, web APIs, web standards, online web services, and others.

Basic characteristics of Web 2.0

• Web 2.0 website would exhibit some basic characteristics:
  – "Network as platform" — delivering (and allowing users to use) applications entirely through a web-browser.
  – Users own the data on the site and can exert control over the data.
  – An architecture of participation that encourage users to add value to the application as they use it.
  – A rich, interactive, user-friendly interface empowered by Ajax.
Issues

• The concept of web 2.0 concentrates on the following issues (Joycsc 2006)
  – Human-machine communication through web, accessible through wide range of operating system platforms, which was been possible by using http and html.
  – Machine to machine communication. You publish your content in one site, which has been automatically shared by thousands of web pages among other servers.
  – Human to human communication: pictures, emotions, biography, music etc personal resources can be shared with friends and friends community can be grown via friends of friends.
  – Rich user experience. For example the use of AJAX in Gmail
  – Personal contribution over web content. Web 2.0 encourages personal contributions of the users over the web content. For example, Blog and Wiki
Blog

- Short for "Web logs,“
- Voice could be not only heard but amplified.
- Images, photos, links, video, audio, or simple text.
- Archived by date and sometimes by category or by author.
- To find blogs on a specific subject, use Technorati, a real-time search engine for tagged blog postings.
RSS (Krasne 2005)

• Really Simple Syndication (RSS) feeds
• Simply download an aggregator, the software that delivers the content to your desktop.
• Customization for your own taste by keyword search
• To find out more about setting up an RSS reader or creating a feed for your own site, read TechSoup's RSS for Nonprofits.
Tagging

- Tagging (Krasne 2005)
  - Tag any information you put on the Internet -- or any information that you find on the Internet -- with simple keywords
  - Tags can also be a great way to draw attention to your posts and bring others to your blog or Web site.
  - The real value in tagging is that a community of like-minded people is helping to sort and classify information.
  - To get started, just pick a keyword to represent your organization or issue, start tagging URLs that you come across with that keyword
  - Be sure to use something that will be unique and memorable.
AJAX Applications

• AJAX Applications (Krasne 2005)
  – The centerpiece of the Web 2.0 transformation is AJAX, a group of Web page coding technologies that allows pages to respond to a user’s input without processing or reloading the page.
  – One of AJAX's most popular applications is Google Maps, where you can drag the map around on the screen seamlessly and add and remove flags without having to wait for Google's server to send you an updated Web page.