Web 2.0, Social Programming, and Mashups
(What is in for me!)

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Social Community, Collaboration, Sharing

Back to the future...
Outline

- What is Web 2.0? What is social Web?
- Web 1.0 vs. Web 2.0?
- How can I make my website web 2.0?
  - RSS, Atom
  - Mashups
  - Programmable web
- How can I build a mashup?

What is Web 2.0?

I cannot define it, let’s see some examples..
Wikipedia edited in real-time by anyone

(9.1 million articles in 252 languages) written collaboratively by volunteers around the world. <Top 10 visited sites on the net>

A social network for sharing photos

Users can work together to collaborate on photo projects and use each others' tags to find new photos. (60 millions photos/week)
Upload, View, and Share Videos (and tags...)

Millions of items are listed, bought, sold, and discussed daily.
We know this! What is social?

Upcoimg.org

A social event calendar website, uses iCalender, supports an open API for the submission of event descriptions.
Blog (Your Own Journal)

Commentary, news, personal diaries... + comments/discussions
(+106 million blogs, as of 2007)

Personal Blogs

journalists, scientists, employees, everybody
Corporate Blogs

Amazon Bookstore’s Blog

Old Media Monday (on Tuesday): Reviewing the Reviewers

6:30 AM, November 26, 2007

Social employability

Business/Professional Networking

16 million registered users
Social Networking

Find your friends, socialize, group, share/organize events, and more… (55 million active members)

Founded by Mark Zuckerberg in 2004 (Harvard students).

Became public in 2005

Looking for a Dating?!

A big business (now, 2nd largest segment of “paid content”) $500 million subscription fees in 2005 in the US (20M users/year?).
What is Web 2.0?

<table>
<thead>
<tr>
<th>Web 1.0</th>
<th>Web 2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>html, xml, cgi, php, portal, xform...</td>
<td>Blog, Wiki, folksonomy, RSS, Atom, Mashup...</td>
</tr>
<tr>
<td>Read</td>
<td>Read/Contribute</td>
</tr>
<tr>
<td>Page</td>
<td>Post/Record</td>
</tr>
<tr>
<td>Static</td>
<td>Live</td>
</tr>
<tr>
<td>“Client server”</td>
<td>“Web Service”</td>
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<tr>
<td>Dogmatic</td>
<td>Democratic</td>
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<tr>
<td>Social aspects</td>
<td></td>
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<tr>
<td>Community/collaboration</td>
<td></td>
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<tr>
<td>Content sharing</td>
<td></td>
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<tr>
<td>Users are its driving force</td>
<td></td>
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<tr>
<td>….very creative</td>
<td></td>
</tr>
</tbody>
</table>

What is in it for me?

→ “Me”, as a user?

I will join networks, learn, share, contribute…

→ “Me”, as a programmers?

Ideas?

Let’s see some of the Web 2.0 Technologies (to make your site web 2.0)
Web 2.0 Technologies

Content syndication
How can you deliver recent news to your users without forcing them to visit your website? → RSS, Atom

Mashups
How can you remix free content and make a new website?

Web APIs (programmable web)
How can make use of the free content inside my website?

Content Syndication

Millions of online publishers including newspapers, commercial web sites and blogs now publish their latest news headlines, product offers or blog postings in standard format news feed.

A typical web feed logo
Content Syndication

Browsers can read these feeds, syndicate, and save them as “Favorites”

The two main families of web syndication formats are RSS and Atom.
Content Syndication

RSS (Really Simple Syndication)

- An RSS document is an XML (/sometimes RDF) document.
- An RSS document, (called a "feed"/"channel," contains a summary of content or the full text.
- People are updated automatically.
- RSS content can be read using "RSS readers," "feed reader" or an "aggregator."

Atom
Same as RSS, but elements are typed, + some other features.

Content Syndication

Feed Aggregator

A client software or a Web application which aggregates syndicated web content such as news headlines, blogs, podcasts, and vlogs in a single location for easy viewing.

For example:

- Akregator (KDE/Linux)
- Apple Mail (Mac OS)
- Attensa Feed Readers (cross-platform)
- BlogBridge (cross-platform)
- Feedview, a Firefox extension (cross-platform)
- FeedDemon (Windows)
- FeedGhost (Windows)
- Hubdog (Windows Mobile)
- Juice (cross-platform)
- Liferea (Linux)
- Mozilla Thunderbird (cross-platform)
- Microsoft Outlook 2007 (Windows)
- Internet Explorer 7 (Windows)
- ...
Mashups / Programmable Web
(The Puzzle of APIs)

Mashups

• A new breed of web applications.

• Combines data from more than one source into a single integrated tool.

• Creating a new and distinct web service that was not originally provided by either source.

• Content is typically sourced via an API* or a RSS Feed

Let’s see some examples..
Mashups (Example)

**Ask500People.com**
Real-time mashup of votes from around the world

**ePartyGuide.com**

Yahoo! Maps - Yahoo! Local - Flickr
**Mashups (Example)**

**Download and view any maps on your mobile.**

Google Maps - Yahoo - MSVEarth

**Mashups (Example)**

Combines Google maps with real-estate databases

Google Maps - Real-estate
Mashups (Example)

A unified and comprehensive view of the current global state of infectious diseases and their effect on human and animal health

Google News- ProMED- World Health Organization-

Mashups (Example)

Google news visualized intelligently
Mashups (Example)

A visually rich application that combines the Amazon API to show the relationship between movies, bands, actors, etc.

Mashups (Example)

Visualize the most important incoming links for any URL.

Amazon API- You Tube- Others-

Google Search- Yahoo Search-
Mashups (Example)

Plan what movies to watch with your friends

Ruby on Rails-
Amazon ECS-
YouTube-
Yahoo BBAuth-
Be Innovative… (The Puzzle of APIs)
Find popular APIs

How an API looks like?
Watch, Google Base Coming!

Find popular APIs here

Also, How-To start a mashup
Opportunity to compete

How Can I build a mashup?

What do you want to do?
Which data you need? APIs/RSS available?
How is your programming skills?

Programmers’ affair! (For Google Maps: HTML, XML, JavaScript )

Semi technical skills

Sign up for a developer token
http://aws.amazon.com/
http://www.google.com/apis/maps/
http://api.search.yahoo.com/webservices/

Use mashup editors
Microsoft Popfly
Yahoo! Pipes
QEDWiki by IBM
Google Mashup Editor (Coming)
Serena Business Mashups
Dapper
JackBe Presto Wires

Start coding
Start Configuring
Yahoo Mashup Editor

Demo

What is in it for me?

→ "Me", as a user?
  I will join networks, learn, share, contribute…

→ "Me", as a programmers?
  Support RSS, APIs, Mashup…

→ "Me", as a businessman?
  \( API_x + API_y = \text{Money} \)
  … Be innovative to know x and y ;-)
  ➔ See the "Mashup Market"
Where can I read more about Mashups?

What is

→ “Me”, as a user?
  I will join networks, learn, share, contribute…

→ “Me”, as a programmers?
  Support RSS, APIs, Mashup…

→ “Me”, as a businessman?
  (API_X + API_Y = Money)… See the “Mashup Market”

→ “Me”, as a researcher?
  Prepare yourself for an open discussion.
  Let see some observations…
The API phenomena is great!

• Close your eyes and imagine, a high tech room, where all information you need (cross all computers) can be retrieved and visualized very efficiently? What you will do? How do you want to personalize it?

• Where are we going? what is next?

• → Is it really true what they say about (Web 3.0 ;-) that “the whole web is turning into a database”

What is the problem is the API phenomena

• How can we link data items cross sources?

• How to answer structured queries (over different APIs) such as “Give me all people who works-for UCY and previously lived in Belgium”?

• How can I build up my “publications webpage”, combining all data from all sources/APIs?
Can RDF and SPARQL help Web 2.0/3.0?

- Feeds are published in RDF.
- SPARQL is used to query and combine RDF documents

- Does this technology really solve the problem?
- If so what are the challenges? (((Let's discuss)))

Thank You

Download slides
http://www.cs.ucy.ac.cy/~mjarrar

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