Prof. Dr. Gottfried Vossen  
University of Münster  
Germany

Web 2.0: a buzzword, a serious development, just fun, or what?

ICE-B 2009, Milan, Italy

Family 2.0, Health 2.0, Enterprise 2.0, Pub 2.0, Music 2.0, …
Overview

- **Web 2.0 dimensions**
  - Is it a buzzword?

- **Enterprise 2.0**
  - Is it a serious development?

- **Some things [not] to try out:**
  - business ideas, legal issues
    - Is it just fun?

- **Conclusions**

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**Web 2.0: Confluence of Several Developments**

Net Infrastructure (“Flat World”)

Data Collections  ↓  WEB 2.0  ↓  Functionality

User Participation Socialization
**Technical Dimension**

**WEB 2.0**

- **Net Infrastructure:**
  - Huge improvements in speed, bandwidth, availability, and reliability over the past 10 years
  - Broadband networks worldwide, “flattening” of the world
  - The large computing center is back (but we don’t know its location anymore)
  - Computing is on its way into the cloud
  - Nick Carr: The Big Switch

- **Programming:**
  - Transition from HTML to XML/XHTML
  - Extended client- as well as server-side scripting

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**Scripting (w/o Ajax)**

- **Client**
  - Web Browser
  - Script Engine (e.g., JavaScript)

- **Server**
  - Web Server
  - Application program
  - Extension (e.g., PHP)
  - Published resources
    - HTML
    - CSS
    - doc+ script

- **Request (URL)**
  - HTTP
  - Response (HTML page)

- Sources:
  - External sources
  - Local sources
**Scripting (w/ Ajax)**

- **Client**
  - User Interface
  - HTML+CSS data
  - JavaScript call

- **Server**
  - Web and/or XML Server
  - Application program
  - Extension (e.g., PHP)
  - Published resources

- **External sources**
- **Local sources**

- **Request (URL)**
  - HTTP
  - Response (XML data)

- **Put**
- **Get**

- **AJAX**
  - External sources
  - Local sources

- **JScript for IE**
- **Asynchronous JavaScript and XML**
- **not mandatory**

**Functional Dimension**

- **WEB 2.0**

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- Rich Internet Applications (RIAs) based on technologies such as Ajax, REST, Flex, AIR, Silverlight, JavaFX, several others
- Applications move from the desktop to the Web, into the cloud
- Software as a Service (SaaS) as the new ASP (application service provisioning) model
also: Pageflakes, eskobo, Netvibes, Protopage, Microsoft, Yahoo!, Cleverset etc.
Amazon EC2

Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides resizable compute capacity in the cloud. It is designed to make web-scale computing easier for developers.

Amazon EC2’s simple web service interface allows you to configure capacity with minimal friction. It provides you with tools that you can control your computing resources and lets you run your applications on a proven computing environment. Amazon EC2 reduces the time to obtain and boot new server instances to minutes, and allows you to quickly scale capacity, both up and down, as your computing requirements change. Amazon EC2 changes the economics of computing by allowing you to pay only for capacity that you actually use.

Amazon EC2 provides developers the tools to build failure-resilient services and isolate themselves from common failure scenarios.

Applications, storage space, servers, computing power, all in the cloud → IaaS

(More) SaaS Examples

organizer, calendar, planning, conferencing, db apps, collaboration, time tracking, accounting, payroll, project mgmt
similar: Wuala, SugarSync, Mozy, Box.net, Dropbox

Next Step: (Sales) Force

- **Up to now:** on-demand customer relationship management (CRM), marketing, Web analytics as hosted service

- **Now:** platform to enable developers to create and provide arbitrary business applications on-demand
Why This Is Attractive

- No software installation on private PC, no upgrades, no patches, no service packs, no maintenance
- No license renewal when computer is exchanged
- All data resides on the Web
- „Pay-as-you-go“ business model, i.e., payment based on usage

Implication: Low Startup Costs

The $100 IT Application setup

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Website - use Joomla / Mambio / Drupal / osCommerce and host at Siteground.com. Modify/customise an existing or free template</td>
<td>US$4.95/month</td>
</tr>
<tr>
<td>2.</td>
<td>Domain name and website stats - Google Apps and Google Analytics</td>
<td>Free</td>
</tr>
<tr>
<td>3.</td>
<td>Email system - Gmail with Google Apps</td>
<td>Free</td>
</tr>
<tr>
<td>4.</td>
<td>Office automation - use Star Office, Open Office or Google Docs and Spreadsheets / Google Calendar</td>
<td>Free</td>
</tr>
<tr>
<td>5.</td>
<td>PDF writer - use Google Documents and Spreadsheets instead</td>
<td>Free</td>
</tr>
<tr>
<td>6.</td>
<td>Project Management - use Basecamp Basic</td>
<td>US$14/month</td>
</tr>
<tr>
<td>7.</td>
<td>CRM / Contact management - use SugarCRM hosted on Siteground.com</td>
<td>US$4.95/month</td>
</tr>
<tr>
<td>8.</td>
<td>Telephony - use Skype Out or Jitah</td>
<td>US$10/month</td>
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<tr>
<td>9.</td>
<td>Accounting - Xero (to be released)</td>
<td>Unknown*</td>
</tr>
<tr>
<td>10.</td>
<td>Operating System - use Ubuntu</td>
<td>[Free]</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>NZS 62.77/ month</td>
</tr>
</tbody>
</table>

* Xero is currently in private beta testing but is expected to be available in Q1 2007. Given that it is targeting SME’s using a software as a service model it is likely that the monthly cost is not more than $56 for the most basic version.

Source: Igniter Ltd., Wellington, NZ
Result: “Long Tail” Effects

- Startup companies need small initial investments only in order to run their business on a world-wide scale
- 60+ generation enters the Web

Data Dimension

Creation of data collections by computers as well as by humans:

- Tags, registrations, evaluations, comments, online diaries / blogs, emails, bookmarks, CVs
- Click paths, storage of tracking data, search engine indexes

Usage of these collections:

- Recommendations, creation of profiles, online communities, personalization
- Context-dependent advertising
- Mash-ups combining data from multiple sources
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Tag Clouds, the New Form of Statistics

07 africa amsterdam animals april architecture art asia august australia baby barcelona beach berlin birthday black blackandwhite blue beater bw california cameraphone camping canada canon car cat cate chicago china christmas church city clouds color concert day dc de dog england europe family festival film florida flower flowers food france friends fun garden geotagged germany girl grant green halloween hawaii hiking holiday home honeymoon house india ireland isand italy japan july june kids lake landscape light live london macro may me mexico mountain mountains museum music nature new newyork newyorkcity nextbase night nikon nyc ocean paris park party people photo portrait red river madrip rock rome sanfrancisco scotland sea seattle show sky snow spain spring street summer sun sunset sydney taiwan texas thailand tokyo toronto tour travel tree trees trip uk urban usa vacation vancouver washington water wedding white winter yellow york zoo

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Diaries, Reviews

Taiwan

A country in Southeast Asia

Taiwan is a charming island country located off the southeast coast of China. It is known for its beautiful beaches, vibrant cities, and unique culture. The capital city, Taipei, is a hub for both business and leisure, offering a mix of modern amenities and traditional sights.

Search for Taiwan

Taiwan Hotels - List of Hotels in Taiwan

A travel blog by Bob & Dan

2007 Part 1: Asian Exploration

Singapore City, Singapore

A travel blog by Dion Hinchcliffe

Social Networking designed for your business.

www.tantamj.com

Latest Entries

How to Survive and Thrive in Business Today with Web 2.0 - Part 1

Tuesday, November 18, 2008

Two of the big headlines currently in the world of Web 2.0 are: how to change successfully today and how to deliver greatness, meaningful value today’s marketplace. The current economic climate combined with today’s e-commerce is changing the way business is handled, thus leading to fundamental changes in how they are doing it for the better.

How to Survive and Thrive in Business Today with 2.0

Innovation

Leveraging Innovation

Creating new rapid growth

Online products

Growth

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Online Advertising

A Mashup Based on Mapping

Housingmaps = Craigslist + Geocoders.us + Google Maps
Other Types of Mashups

- Mapping mashups
- Video and photo mashups
- Search and shopping
- News mashups
Reading Radar: Mashing Up NYT and Amazon

Reading Radar
From the New York Times Bestseller Lists

Hardcover Fiction

#1
GONE TOMORROW
by John Grisham

John Grisham's new crime novel about a woman taking on the Department of Justice in a landmark antitrust case. On the bestseller list for 5 weeks.

#8
OBELISK FURY
by Wilbur Smith

The gripping African adventure novel that takes the reader on an epic journey across the continent. On the bestseller list for 8 weeks.

#3
TREASURIES OF THE OSS
by Robert Baer and Marc Polley

The story of America's secret war against terrorism in the 21st century. On the bestseller list for 4 weeks.

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Creating Mashups: DIY

also: Frameworks like Google Web Toolkit

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### Mashup Creation Tools

- **Data Mashup Tools**
- **Scraping Tools**
- **Development Tools and Suites**
- **DIY Consumer Tools**
- **Services**

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### Social Dimension

- **Social networks**
  - MySpace, Facebook, Friendster, LinkedIn, Xing, …
- **Personalized search**
  - RollYo, AfterVote, Eurekster, Summize, …
- **User-Generated Content (UGC) up to advertising**
- **RSS feed and, podcasts**
- **Interaction via blogs and wikis**
User-Generated Content (UGC)

- Meeting friends in social networks
- Organizing photos
- Watching videos
- Creating a 2nd Ego

A Professional Network: LinkedIn

Next week off to Gdansk, Poland, for the EDEN 2009 conference; paper presentation on Friday.

@mattgottfried: It's good to hear from you. Gottfried! It was a good event there. It's great to be in gdansk.
## The Difference between Web 1.0 and 2.0

<table>
<thead>
<tr>
<th>Feature</th>
<th>Web 1.0</th>
<th>Web 2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authoring</td>
<td>personal web sites</td>
<td>blogging</td>
</tr>
<tr>
<td>Information sources</td>
<td>Britannica Online</td>
<td>Wikipedia</td>
</tr>
<tr>
<td>Content creation &amp;</td>
<td>via CMS</td>
<td>via Wikis</td>
</tr>
<tr>
<td>maintenance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data storage</td>
<td>local disk</td>
<td>online disk</td>
</tr>
<tr>
<td>Online advertising</td>
<td>banners</td>
<td>Google AdSense</td>
</tr>
<tr>
<td>Traffic creation</td>
<td>domain names</td>
<td>SEO</td>
</tr>
<tr>
<td>Online payment</td>
<td>bank account</td>
<td>PayPal</td>
</tr>
<tr>
<td>Revenue</td>
<td>Top $ for killer-apps</td>
<td>free service, pay for</td>
</tr>
<tr>
<td></td>
<td></td>
<td>community access</td>
</tr>
</tbody>
</table>

Source: Igniter Ltd., Wellington, NZ
Web 2.0 a buzzword?

Web 2.0 a serious development?

Web 2.0 just fun?

**No, is it a confluence of various developments that have grown over the past 10-15 years, which suddenly have the right enabler and produce joint effects.**
Use of Web 2.0 tools, in particular blogs, for B2B, B2C, C2C communication

Use of Web 2.0 tools, in particular wikis, for internal or B2B communication

Integration of Web 2.0 tools, e.g., social networks, to exploit employee creativity

Sure, I’ve made some bad choices. Doing that “Name 25 illegal things you’ve done recently” blog meme is probably at the top of my list.
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Company Blogging

Keeping the Conversation Open

by FM
director
President and CEO

Thanks to our Fast, new readers for your comments on my post yesterday. I've reviewed the comments as they've come in and added my thoughts. I haven't responded to all, but I did do my best to keep the information coming.

BM: Hello! After your announcement that Pontiac would be no more and that there weren't any more Pontiacs left to come from Austria, I got my seat back to get going and read about how old Pontiacs are. It appears that the Pontiac brand has been driven to near extinction. The GS GT represents the best GM vehicle I have ever owned. It is just one of these sales success stories. I have driven the car for a little over 30,000 miles on the car. I just can't stop driving it. What an indication of old, but it has had a vehicle so fantastic, and they could not find a way to market or sell it to a broader group.

I hope you have also noted that the GM isn't being rebranded as another manufacturer's car. It is a Buick. I just want to remind you to find a nice little home to be rebranded. If you don't, you'll just be buying a 30% off the price. I am sure that is the company that will be rebranded.

Robert, appreciate your comment. Certainly, the OIL is going to be one of the Pontiacs will be made. That, we haven't slowed the die on the prices one to the future. You paint both the Camaro, which is definitely in the mainstream price range of today's cars, and the GSL, which is an amazing value in the luxury sport segment. As we ramp up our future vehicle needs, you can find the right opportunity and price point to do a award cross-vehicle car, you can bet we will consider it.
Usage of Blogs (inside HP)

Quelle: Yardi et al., CSCW 2008

Figures 1a-d. Activity in 24-hour period beginning at midnight. (a) emails sent at HP; (b) messages sent in Facebook; (c) internal blog posts at HP; (d) blog reading at HP.

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Search Engine for Blogs: Technorati

The latest news, blogs, and buzz on film, TV, music, and celebs without pants.

Now in Entertainment

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Wiki Applications within the Enterprise

- Interaction and collaboration between employees (and customers)
- Project collaboration and exchange of experience
- Knowledge management within the “learning organization”
- Knowledge preservation by making implicit knowledge explicit

Comparing Wiki Software

ICE-B 2009, Milan, Italy
ICE-B 2009, Milan, Italy

Software for Wiki Creation

ICE-B 2009, Milan, Italy

„Enterprise 2.0“

Customer acquisition and contact, CRM

Staff motivation and interaction
Let employees retain their personalized work environment in the office like they do it at home!

Knowledge Management

Exploit crowdsourcing

Blogs and Blogging

Podcasts

Social Networks

Wikis

DIA-Seminar 2009: Web 2.0 für Unternehmen
Example of Web 2.0 Environment Integration: WorkLight

Crowdsourcing (cf. Wikipedia)

"Crowdsourcing is a neologism for the act of taking a task traditionally performed by an employee or contractor, and outsourcing it to an undefined, generally large group of people or community in the form of an open call."

DIA-Seminar 2009: Web 2.0 für Unternehmen
(Intermediate) Conclusion

- Web 2.0 a buzzword?
- Web 2.0 a serious development?
- Web 2.0 just fun?

Yes, and enterprises as well as software vendors are exploiting it by integrating Web 2.0 features into their software, processes, and environments.

Overview

- Web 2.0 dimensions
  - Is it a buzzword?
- Enterprise 2.0
  - Is it a serious development?
- Some things [not] to try out: business ideas, legal issues
  - Is it just fun?
- Conclusions

Is there revenue in Web 2.0?
Are there legal ways to make money in Web 2.0?
Components of a Business Model

- A value proposition, i.e., a statement of how the products or services offered by the company or enterprise in question can create a value or be of value for a customer;

- A revenue model, i.e., a description of which cash flows into the company will actually bring along a profit;

- A specification of the target customer or the market segment to which the products or services are to be offered for the purpose of creating value and revenue;

- Distribution channels through which the company plans to reach its customers.

General Business Models

(Cf. Michael Rappa, NCSU)

- Commission-based brokerage and merchants (e.g., Amazon, eBay, PayPal, Expedia, Orbitz, Dell)

- Advertising (e.g., Google AdWords, AdSense)

- Information intermediaries (e.g., Nielsen//NetRatings, DoubleClick, TripAdvisor)

- Community model (e.g., Wikipedia, SHOUTcast)

- Subscription model (e.g., ISPs)
Trends in Advertising

- Localization (“all business is local”):
  - Personalized search
  - Semantic search (“a dentist near you”)

- Advertising everywhere
  - In podcasts
  - In videos
  - In games
  - In IPTV
  - In social networks: Facebook SocialAds, MySpace HyperTargeting

Lots of New Business Ideas

- Virgin Charter
- Current
- RevolutionMoney

- many others, see RWW, Techcrunch
(Some of) The Legal Issues

- Is “big brother” watching us?
- Is Google allowed to index my gmail entries?
- Does Amazon own the reviews I have written?
- Is keeping (customer/business) data on the Web (as in SaaS applications) a good idea?
- Who is in control of these SaaS services?
- Who is the owner of content that a user has contributed to a Web site run by a company or service provider?

Issues, cont’d

- How can national and domestic law be enforced in light of multi-national and multi-dimensional services?
- Who can be held responsible for breaches of law or copyright, for example with respect to context published on YouTube?
- Is it at all possible in Web 2.0 to protect ethical and legal values referring to personal rights, personal data, or to minors?
- Is “computing as a commodity” changing the rules?
(Intermediate) Conclusion

- Web 2.0 a buzzword?
- Web 2.0 a serious development?
- Web 2.0 just fun?

It is definitely fun, but it is a lot more than that! There is room for numerous new business ideas, and a good portion of awareness of what you are doing and consuming is apt.

Overview

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Summary

- Decreasing costs of connection
- Increasing Internet availability among consumers
- Increasing bandwidth
- Large number of users
- New applications better usability higher benefits

New technologies
UGC
RIAs, SaaS, WOA
Socialization

Web 2.0

- A migration from a “Read-Only Web” to a “Read/Write Web”
- A collection of technologies, social trends, and business strategies, and characterized by services, simplicity, DIY mentality, community
- With increasing impact on how enterprise organize their business, and how software companies build software
- By 2009, not a distinctive feature anymore!
Future Developments

- Attention creation continues to grow: Facebook, Twitter & Co.

- Everything is going mobile: search, instant messaging, where am I? ...

- Even reading becomes mobile: Kindle 2, Sony eBook Reader, etc.

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comScore Statistics, April 2009

<table>
<thead>
<tr>
<th>Rank</th>
<th>Source</th>
<th>Total Unique Visitors (000)</th>
<th>% Change</th>
<th>Rank by Unique Visitors</th>
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<tbody>
<tr>
<td>1</td>
<td>Total Internet: Total Audience</td>
<td>192,173</td>
<td>0</td>
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<td>2</td>
<td>CDC.gov</td>
<td>2,371</td>
<td>142</td>
<td>214</td>
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<td>3</td>
<td>CHINAONTV.COM</td>
<td>2,074</td>
<td>123</td>
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<td>8</td>
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<td>10</td>
<td>World Wrestling Entertainment (WWE)</td>
<td>3,774</td>
<td>33</td>
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<tr>
<td>11</td>
<td>Wiki Sites</td>
<td>3,638</td>
<td>34</td>
<td>239</td>
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</tbody>
</table>

*Ranking based on the top 250 properties in April 2009.*
As the world watches the violence and post-election protests escalate in Iran, startling images from the streets of Tehran are disseminating through various social media. Many of them are tagged #iranelection, a hashtag which started on Twitter but is spreading to Flickr and elsewhere.

Techcrunch, June 21, 2009

### (Some) Research Issues

- Programming models, standardization (e.g., Design Patterns from the Yahoo Developer Network or OpenAjax Alliance)
- Linked Data Initiative vs. Dataportability.org (e.g., Open Social, Friend Connect)
- Social network / graph analysis
- In cloud computing
  - inter-cloud communication and (metadata) portability
  - Public cloud vs. private cloud
  - Application-specific clouds (e.g., for testing, development, etc.)
- Mashups based on tagging (“ActiveTags”) vs. meta-programming
- Security and privacy in mashups, in the cloud (e.g., access to medical information when a person is in a foreign emergency room), in social networks
- Increased collaboration between researchers from distinct fields, e.g., CS, IS, psychology, sociology, art
The Future

SXSW...

Thank you for listening!