"Web 2.0 and the Future of Social Networking and Online Communities"

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ECOM-ICOM Experts Address Series
March 14, 2006

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What Web 2.0 is Not

- The Semantic Web (though there are some commonalities)
- A new collection of technologies (though there are new applications of existing technologies)
- Just blogging, wikis, and RSS

Web 2.0 is Happening

Logos of start-ups "claiming" to be Web 2.0



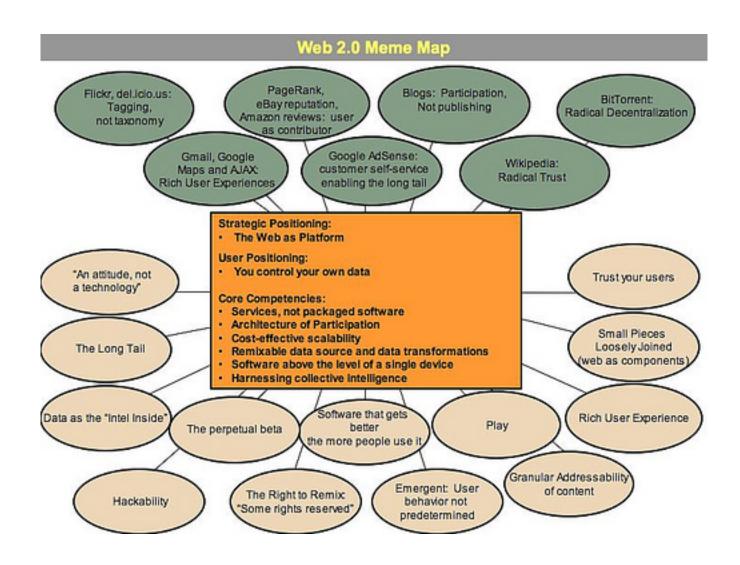
So, What is Web 2.0? (1/2)

- Definition is still evolving...
- An <u>ATTITUDE</u>
- Shifts the focus to the user of the information, not the creator of the information
- Information moves "beyond" Web sites
- Information has properties and these properties follow each other and find relationships
- Information comes to users as they move around

So, What is Web 2.0? (2/2)

- Information is broken up into "microcontent" units that can be distributed over many domains
- Interaction is no longer limited to (X)HTML
- Users are able to control how information is categorized and manipulated
- User agent becomes a "fat" rather than "thin" client
- Requires a new set of tools to aggregate and remix microcontent in new and useful ways

Tim O'Reilly's Web 2.0 Meme Map



Web 2.0 By Example (Tim O'Reilly)

Web 1.0	<u>Web 2.0</u>
Personal Web Sites	Blogs
Britannica Online	Wikipedia
Content Management Systems	Wikis
Directories (Taxonomy)	Tagging ("Folksonomy")
Screen Scraping	Web Services
Etc.	Etc.

Web 2.0 Drivers - Technology

- Computing power
 - Still doubling every 18 months
 - PC-based data centers
- Connectivity
 - Low cost, broad reach Internet
 - Wireless, broadband access
- Device proliferation
 - PDAs, cell phones, etc.
 - Towards a digital devices decade
- Internet standards
 - XML-based integration
- User Interface
 - Many possibilities

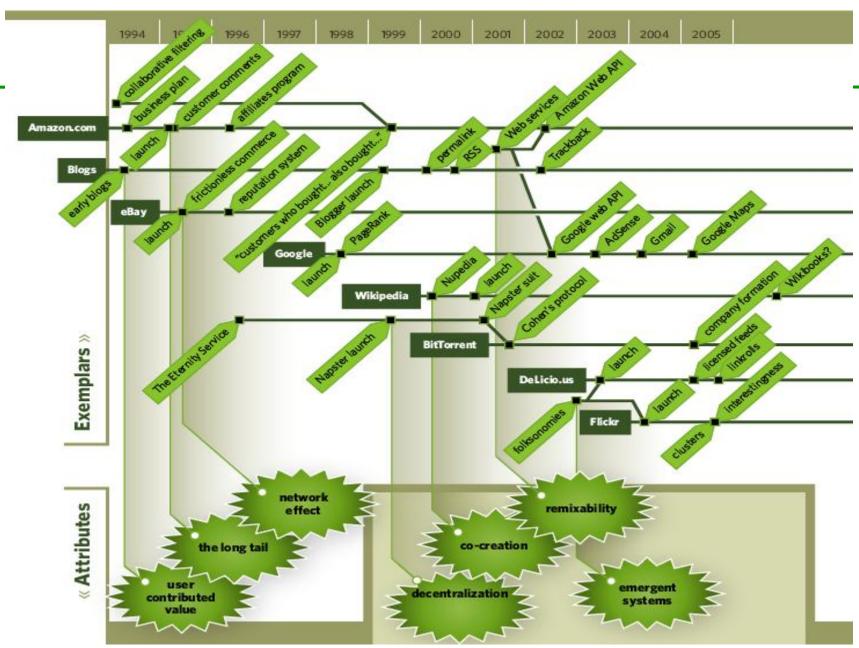


Web 2.0 Drivers - Environmental

- The "dot-com" collapse forced a Web re-examination
- The "long tail" the collective power of small sites that make up the bulk of the Web's content
- The Web reached a critical mass of
 - (Good) information content sources
 - Use (and desire for reuse)
 - Trust
- Web users developed an expectation of fulfillment







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What is Web 2.0 Again?

"Web 2.0 is a convergence of individual traits, and social and technological forces"

"User-Focused Web = User Satisfaction"

Basic Paradigm Shifts (1/2)

	Web 1.0	Web 2.0
Governance	Top down	Bottom Up
Communications	People to Machine	Machine to Machine and People to People
Information Discovery	Search and Browse	Publish and Subscribe
Information Retrieval	Transactional	Relationships
Information Aggregation	Portals, Commercial Aggregators	Micro-Aggregation

Basic Paradigm Shifts (2/2)

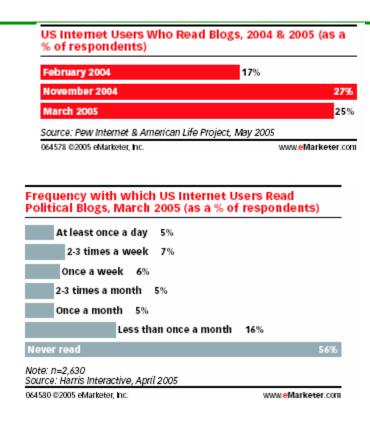
	Web 1.0	Web 2.0
Marketing, Selling	Push, Contextual	Conversational, Personal
Content Control	Publishers, Aggregators	Content Authors
Content Structure	Documents, Pages	Tagged Objects
Applications	Closed, Proprietary	Open, Standards- based
Technology	HTML, Solaris, Oracle	XML, AJAX, RSS, PHP, MySQL, XQuery

Five Characteristics of Web 2.0 Infrastructure

- "Web as Platform" "A platform beats an application every time"
- Web as "Point of Presence" "visiting vs. immersion"
- Microcontent-based open, decentralized, bottom-up, and self-organizing infrastructure
- 2nd Order Content or Metacontent content reuse, out of context
- A Metaweb to support the dream of the Semantic Web

Blogging





The Value of Blogs?

September 30th, 2005 - What I Ate Today

Breakfast, the usual: Cong You Bing, no surprises.

After breakfast, I had a snack I couldn't resist, Fried Chicken Flavor Cheetos. This actually consists of completely cheeseless-flavored cheetos, (in fact, almost completely flavorless cheetos) which you sprinkle a packet of flavoring over. That packet is, I'm convinced, the exact same stuff you mix in chicken-flavored instant noodle.

At lunchtime, I managed to sneak into a MOS Burger and have a small, but tastey, cheeseburger. MOS' burgers are a bit messy, and weird, but, I like 'em. Their fries are decent,





too... if only they'd put some salt on them... or even have salt somewhere in the restaurant.

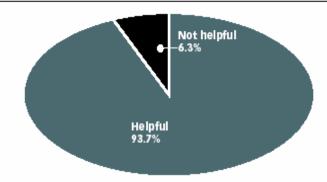
Good thing I did sneak into MOS because the family planned lunch for me, which was take-out Peking Duck and celery.



- www.blog.people.com.cn
- Set up by Chinese government for members of National People's Congress (NPC)
- To boost public interest in the NPC

User Response to Blogs

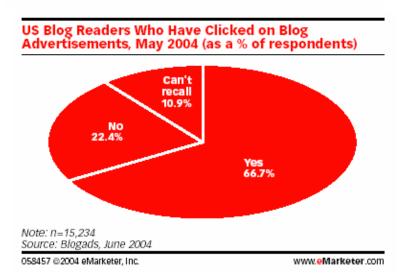
US Internet Users Who Find Information on Blogs Helpful in Making Purchasing Decisions, March 2005 (as a % of respondents*)



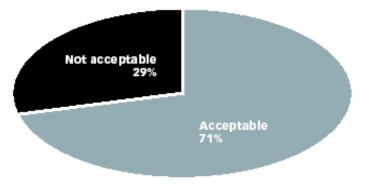
Note: *among respondents who have referred to blogs to look for information on products and services they were considering buying Source: Hostway, Taylor Nelson Sofres (TNS), April 2005

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www.eMarketer.com





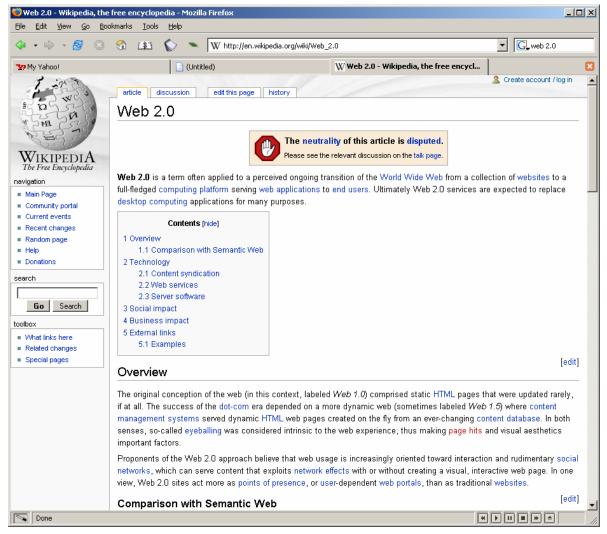


Note: Over 1,000 bloggers were surveyed Source: BlogKits, April 2005

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Wikipedia



A **Collaborative Dictionary** being edited in real time by anyone.

Everyone becomes an author, an editor, and a publisher.



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XML RSS

Deception as Official Public Policy

[Opinion] American people turn against Bush's tactics

Immediately after its seizure of power by a court negotiated ruling, the Bush administration seemed determined to marginalize the American public. The terrorist attacks of Sept. 11 were... (Ramzy Baroud)



Iranian Women March for Freedom

Women's Day demonstration in Tehran brutally suppressed



Witnesses reported the arrest of many marchers; in fact, during the last six months the situation of women in Iran has gotten much worse. While Iran is the only country... (Dorna Kouzehgar)

- U.N. Forum Marks Women's Day.
- → A Day of Vindication.
- 🗕 Building Sisterhood on Int'l Women's Day
- March 8 'Revolution' for Vietnam Women

Choi's Attack Not Isolated Case

Korean lawmaker's outrage highlights social issues around gender, drinking

According to an internet poll, 78 percent of citizens think Choi should resign. An internet blogger compared Choi's case to that of John Brogden, a former opposition leader... (Hyejin Kim)



'The Hills Have Eyes' a Bloody Thrill Ride

Horror remake tops original

An update of Wes Craven's 1977 film, Aja's "Hills" is eager to thicken the trauma inflicted by Craven



OMNI NEWS TRACKER !

- Enron: Something a Jury Can See -BusinessWeek
- Bank of Japan Ends Five-Year Policy of Fighting Deflation - Bloomberg
- Bush urges faster help in cleanup -International Herald Tribune
- Suspect says Alabama church fires were a joke Reuters
- Warner Plans New US Senate Effort to Rescue Dubai Ports Deal -





HOT SEAT

+ MORE

Still Angry After All These Years

Former Philippine first lady Imelda Marcos denies claims of kleptocracy...



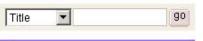
- " 'Iraqi Team Defies Circumstances'
- * U.S. Should Be 'Good Cop' on HK

COMMENT OF THE DAY

'Iran Is Not a Quick Air Strike Solution'

OhmyNews reader 'Martin' comments on article 'Forestall Iran Confrontation by Negotiation'...

 'Purpose of Freedom of the Press Is to Offend'



Korea Geographic

Scenes of Nature and Nurture



- Glimpsing Nature's Life Cycle
- * Fleeting Photos of Sea and Sky
- * South Korea's Seasons of Color
- * Sun, Sand, Sea and Squid



OhmyNews at a glance

CNPK Forum: Talk! Northeast Asia



- * Survey: Tell Us Who You Are
- * OMN to Foster Journalism in Japan
- " 'Best Stories of the Month' Award

Poll



OhmyNews

- 41,000 "citizen reporters"
- 60 "professional reporters and editors"
- 700,000 repeat visitors per day

"No journalism organization, no matter how big it is, knows as much about a particular topic as the people who read or listen to it. ... That doesn't mean that there is no longer a role for journalists – there is a huge role. But in a world that is moving away from a lecture to a conversation, it makes sense for there to be more participation from the audience."

--- Dan Gillmor,

We the Media: Grassroots Journalism by the People, for the People

Web 2.0 and Copyright/Copyleft

- User focus builds upon
 - The ability for legal copying, modification, sharing
 - Creative Commons
 - GNU Free Documentation License

Key Element of Web 2.0 – Collective Intelligence

- An architecture of participation
- Users add value
- An evolved Web perspective
 - Payment
 - Volunteering
 - Selfish interests build collective value as an automatic byproduct
- User ratings
- User tagging

User Ratings

Spotlight Reviews (What's this?)

Write an online review and share your thoughts with other customers.

103 of 108 people found the following review helpful:

**** Blowin' In The Wind, September 28, 2005

Reviewer: Thomas Magnum (NJ, USA) - See all my reviews

TOP SOREVIEWER

Neil Young has always been a musical chameleon. Shifting from hard rock to rockabilly to grunge to futuristic synth music, he's tried every music genre. But the style he keeps returning to is country-rock. Prairie Wind is yet another superb album in this vein. The past few years haven't been kind to Mr. Young with the death of his father and the mother of his first child or finding out that he has a brain aneurysm. With the sense of loss and mortality, Prairie Wind reflects on life and family. "The Painter" brilliantly sets the tone for the album as it a brooding, moody piece that shows music gives eternal life to its artists. "Far From Home" is a lovely ode to his parents and "Here For You" is a sweet song for his kids that has a great harmonica solo. "Falling From The Face Of The Earth" is a gentle lament and "He Was The King" is a goofy salute to Elvis Presley, but one done with spirit. "When God Made Me" has a full gospel chorus and "This Old Guitar" is the best track on the album with its simple story and laid-back charm. Country-rock is the skin Mr. Young feels most comfortable in and Prairie Wind is his best album in a decade.

Was this review helpful to you?





(Report this)

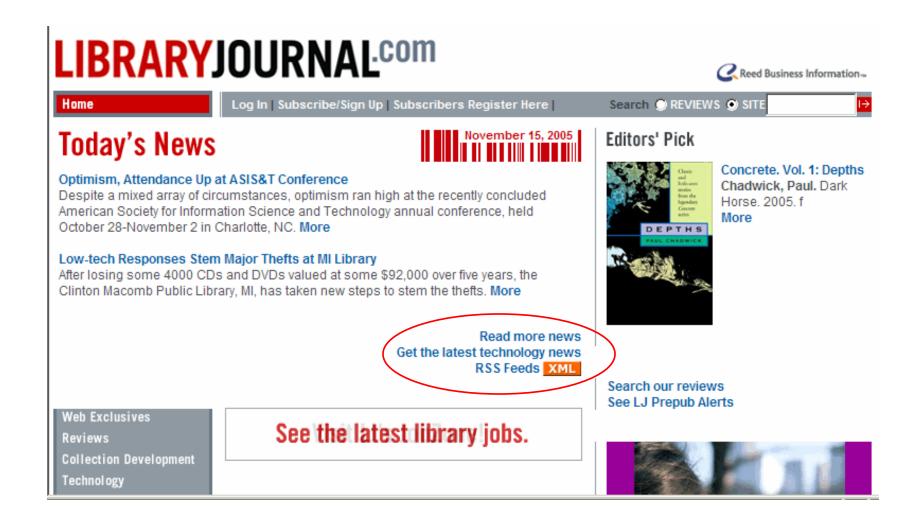
User Tagging (1/2)

 Folksonomy – alternative to Taxonomy – A style of collaborative categorization of Web sites using freely chosen keywords (tags) allowing for retrieval methods generated by user activity

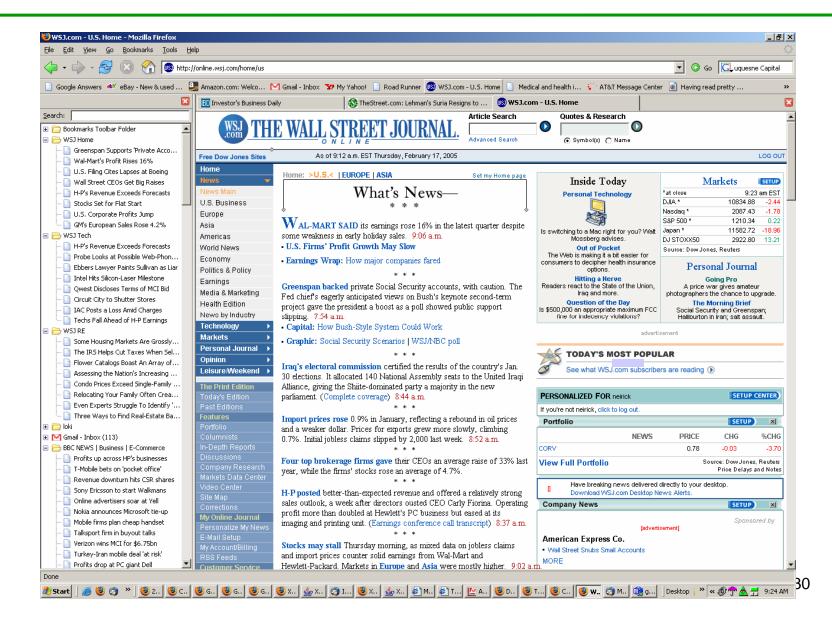
User Tagging (2/2)



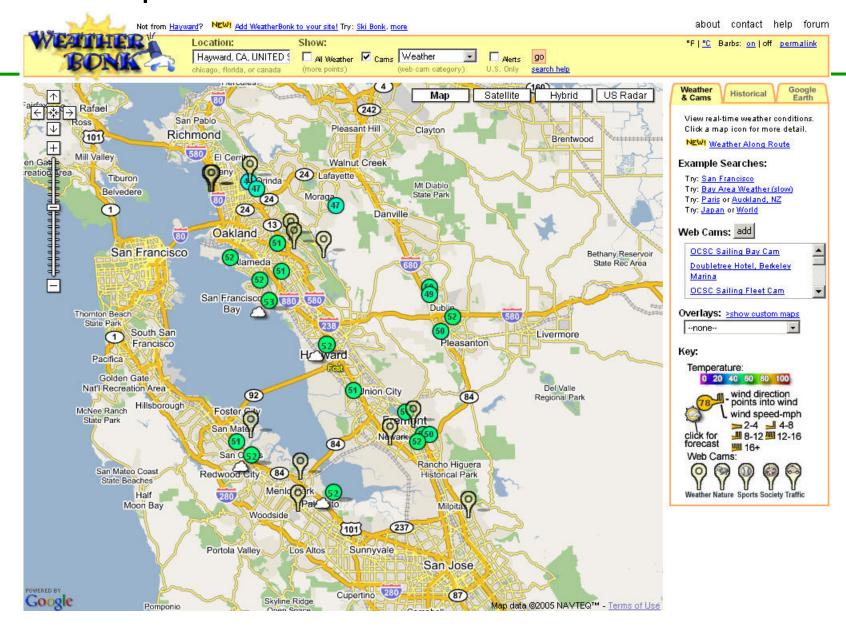
Pushing Out Content – RSS – Has Become Commonplace



RSS Example



Mash-ups



This is made possible by accessible APIs fostering creativity

A Goal of Web 2.0 - A Rich User Experience

- Get the user to content they want
- Link the user to content they might want
- Don't tell the user how to find content
- Let the user decide how to use the content
- Do all of the above quickly and efficiently

Web as "Point of Presence" "visiting vs. immersion"

- Evolution of the Web has split into (at least) two directions
- "Data-centric" e.g., the Semantic Web
- "User-centric" e.g., Web 2.0
- These two "children of Web 1.0" are not at odds with one another

The Semantic Web

"The Semantic Web is a Web of data. There is lots of data we all use every day, and its not part of the web. I can see my bank statements on the Web, and my photographs, and I can see my appointments in a calendar. But can I see my photos in a calendar to see what I was doing when I took them? Can I see bank statement lines in a calendar?

Why not? Because we don't have a web of data. Because data is controlled by applications, and each application keeps it to itself."

---http://www.w3.org/

"The Web is more a social creation than a technical one. I designed it for a social effect — to help people work together — and not as a technical toy. The ultimate goal of the Web is to support and improve our 'Web-like' existence in the world. We clump into families, associations, and companies. We develop trust across the miles and distrust around the corner. "

---Tim Berners-Lee, Weaving The Web

Social Networking

- "A social network is a social structure between actors, mostly individuals or organizations" – Wikipedia (!)
- Social networks view social relationships in terms of nodes and ties.
 - Nodes are the individual actors within the networks
 - Ties are the relationships between the actors
- "The interaction between community, computers and society."
- The first social networking Website was SixDegrees.com, which began in 1997
- Isn't E-Learning a form of social networking?

Both a "Data-centric Web" and a "User-Centric Web" See Value in Social Networking

FOAF

- A 'rigid' Semantic Web (RDFS) description of relationships
- Illustrates very rich and powerful relationships

XFN

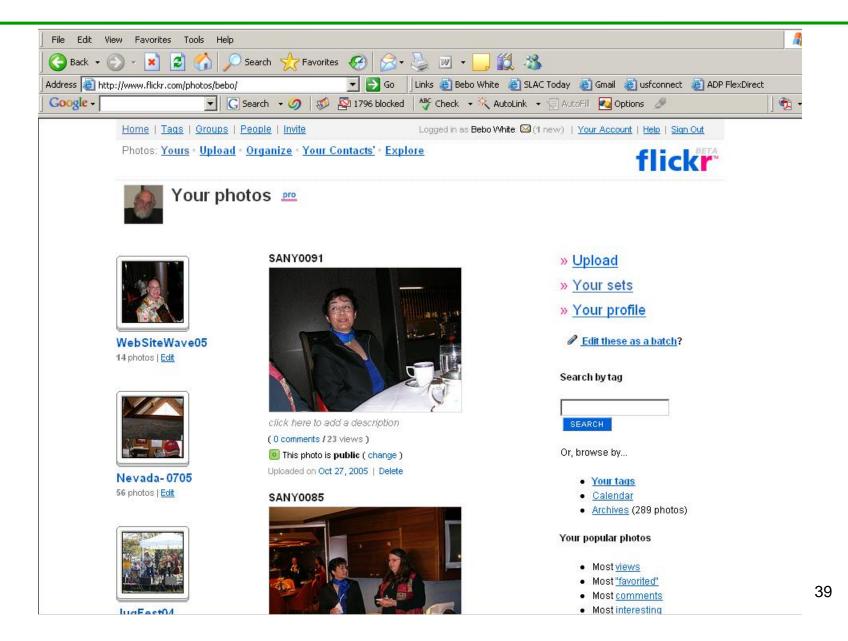
 A simple description of relationships that is easily implemented and displayed in a wide variety of ways

```
<a href="http://www.stanford.edu/~bebo/" rel="friend met">Bebo</a>
<a href="http://john.example.com/" rel="met acquaintance">John</a>
<a href="http://.example.com/" rel="co-worker friend met">Mary</a>
<a href="http://nick.example.com/">Nick</a>
```

Web 2.0 and Social Networking

- People (not just Websites) can/have become entities on the Internet
- It's not just people using data, but people developing capabilities
- Blogs combined with aggregation tools
- Social networking Web sites goal is to connect people with one another
- Geographical mapping
- Comment systems
- Folksonomies
- etc., etc.

Flickr is a Photo-Sharing Social Network



Del.icio.us is a Bookmark-Sharing Social Network

to links. Tags are searchable <u>File Edit View Go Bookmarks Tools Help</u> ▼ C nass amatuerization http://del.icio.us/ del.icio.us bookmarks | inbox | post | settings | logout | about | popular del.icio.us del.icio.us / jimbler social bookmarks most active « earlier | later » 12 items total | page 1 of 2 Omniglot - a guide to written language (alphabets, hieroglyphs, Chinese characters, etc) Stylegala ★ design | css | standards blog to language writing by icreed ... <mark>and 156 other people</mark> ... on 2005-05-18 05:04:34 ... copy this item web macProVideo.com to Tutorial Video by bunlee ... on 2005-05-18 05:04:31 ... copy this item software programming Thousands of tutorials Digital Web Magazine - Web 2.0 for Designers to tutorials tech by sensei ... and 70 other people ... on 2005-05-18 05:04:30 ... copy this item Chronos by Alexander Brazie, Thott: ajax Chronos manages time. You can schedule a function to be called in X se.. music reference to wow.addon by jstncblir ... on 2005-05-18 05:04:26 ... copy this item linux Kmax: Blog Links for your blog links news to blogs by Colsen ... and 11 other people ... on 2005-05-18 05:04:26 ... copy this item blogs

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* D II = 7 =

windows

development

normally: In search of the perfect MMORPG - Part 3

Starring two figurines in some incredibly detailed bondage fetish attire.

to SENG400 by qwijybo ... on 2005-05-18 05:04:03 ... copy this item

to games 3d ps3 by lhl ... on 2005-05-18 05:03:49 ... copy this item

DHTML Lemmings%u2122 by crisp - Menu

to art sex weird humour japan by jkstyle ... on 2005-05-18 05:04:19 ... copy this item

Voodoo Extreme: Epic's Mark Rein On Playstation 3 E3 Footage

to visualization by cmeknit ... and 549 other people ... on 2005-05-18 05:03:45 ... copy this item

mark rein comments on the ps3 video (like the omg killzone demo - OMG)

2005-05-18 05:04:23 ... copy this item

Emily in Bondage : Fleshbot

Therac-25 Notes

The Brick Testament

New testament illustrated with Legos

TouchGraph GoogleBrowser V1.01

to fun bible legos by srjones ... and

Extensive notes

Done Done

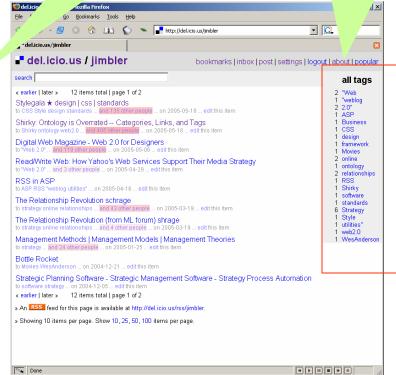
quest shadowbane gameplay PC computergame skills characterflaws playercharacter by kdjfhrdg ... on

ple ... on 2005-05-18 05:04:00 ... copy this item

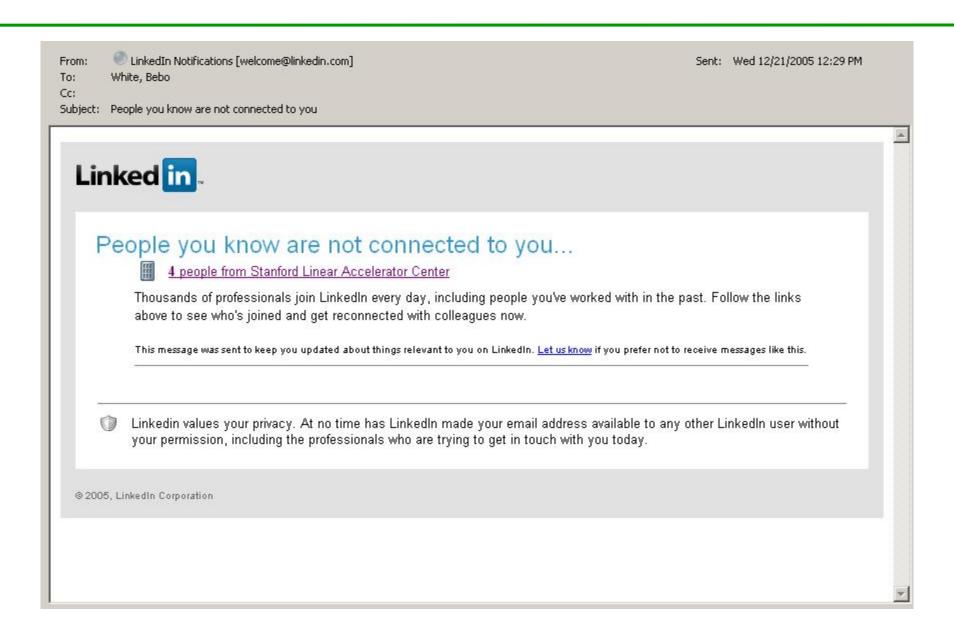
35 other people ... on 2005-05-18 05:03:53 ... copy this item

Tags: Descriptive words applied by users to links. Tags are searchable

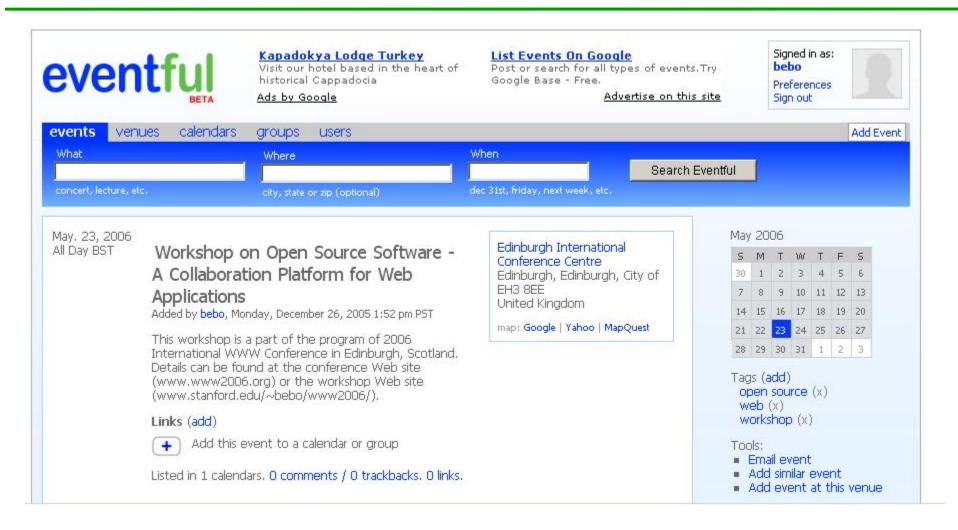
My Tags: Words I've used to describe links in a way that makes sense to me



LinkedIn is a Business Contact Social Network



Eventful is a Calendar/Announcement Social Network



SaveMeSites is a "Begging" Social Network



Because asking for help should always be free

Home Site Listing Useful Sites Resources Hints and Tips

Sites:

<u>Webrings</u>

<u>Designers</u>

Commerce |

<u>Donations</u>

<u>Banner</u> Exchanges

Search Engines

Link Exchanges

Individual Sites

There are a lot of people out there on the web who need help. If you're looking for someone to help, this site can be a good place to start. If you're looking for help, you can look at some of these sites for ideas, link exchanges, and even moral support.

We're currently helping 16614 active sites. We've sent 412734 visitors to our listed sites and we've provided 3672 free pages for people in need

You can also look at just sites that have debt or sites that have dreams.

The sites are currently in date order, you could see them by title too.

if you have already built your own site somewhere else, you can <u>advertise</u> it here for free. If you don't have your own site, but would like a page, you can <u>request</u> a free site on SaveMeSites.Com. The whole process should take less than 10 minutes.

SINGLE MOTHER OF 3 ON SSD NEEDS HELP!!!!!! (Debts)

I am a single moher of 3 ,and I recieve \$674.00 on ssd a month. This is our only income for our family, and we are having a lot of problems right now making it on that because we rent a house out in the country that uses propane, and that is using all our 6 visitors from here since March 8, 2006

Invalid pensioner is tired of struggling to survive (Debts)

I have very serious chronic illnesses that will put me in a wheelchair. I have debt that I would like to clear and need some money in the bank to help with medical needs.

4 visitors from here since March 8, 2006

GeoURL Helps Build Physical Networks

- GeoURL is a location-to-URL reverse directory
- Allows you to find URLs by their proximity to a given location

```
<meta name="ICBM" content="37.766929, -122.447782" /> <meta name="DC.title" content="Bebo White" />
```



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YackPack is simple, web-based voice messaging for groups.

Simple As easy as Click, Talk, Send.

Web-based Get to your YackPack from any computer with an Internet connection.

Voice messaging Think email, but with voice.

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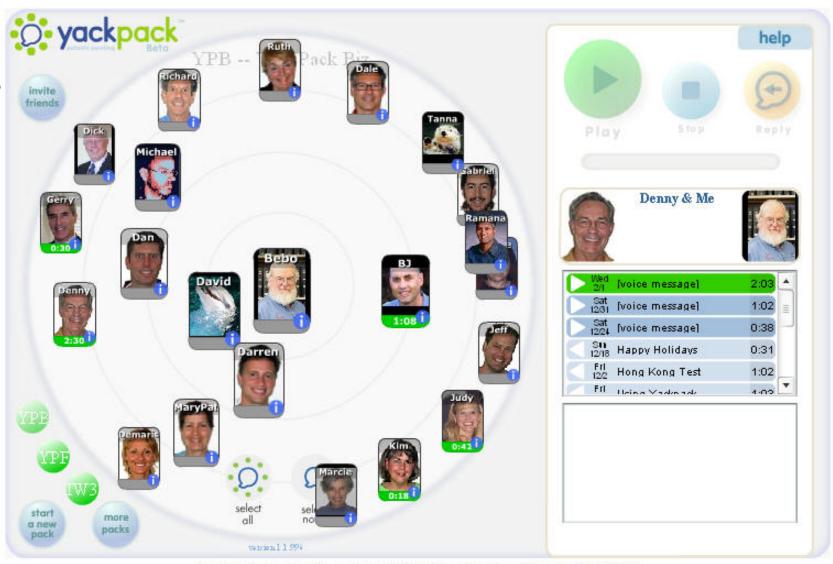
It's easy to get started using YackPack - and it's free!

Get started using YackPack Putting YackPack on your web page is quick and easy – and free.

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Summary: The Great Ideas Behind Web 2.0

- Focus on users, not technologies (and not just data...)
- Focus on utility, not functionality
- Value delivery, not data
- Focus on agility, not reactivity
- Provide constant improvements
- Drive innovation by user (not consumer) satisfaction

Thanks for your patience!

Questions? Comments?

Slides available at http://www.stanford.edu/~bebo/talks/

bebo@slac.stanford.edu

"I'm always ready to hear great new application ideas for Web 2.0!"