

Web 2.0 and Social Networks

Irwin King

king@cse.cuhk.edu.hk

<http://www.cse.cuhk.edu.hk/~king>

Department of Computer Science & Engineering
The Chinese University of Hong Kong



Billionaires' Shuffle

2007



2008



Facebook in 2004.02

2008

at **23** and \$**1.5** billion later...

Web 2.0 and Social Networks by Irwin King



Global Traffic Rankings

Alexa Global Traffic Rankings

2005 ⁽¹⁾		2007 ⁽²⁾	
Rank	Web site	Rank	Web site
1	yahoo.com	1	yahoo.com
2	msn.com	2	google.com
3	google.com	3	msn.com
4	ebay.com	4	youtube.com
5	amazon.com	5	live.com
6	microsoft.com	6	myspace.com
7	myspace.com	7	facebook.com
8	google.co.uk	8	orkut.com
9	aol.com	9	wikipedia.org
10	go.com	10	hi5.com

Traffic rank is based on three months of aggregated historical traffic data from Alexa Toolbar users and is a combined measure of page views / users (geometric mean of the two quantities averaged over time).

Morgan Stanley

*(1) Rankings as of 12/31/05, excludes Microsoft Passport; (2) Rankings as of 10/15/07
Source: Alexa Global Traffic Rankings, Morgan Stanley Research*

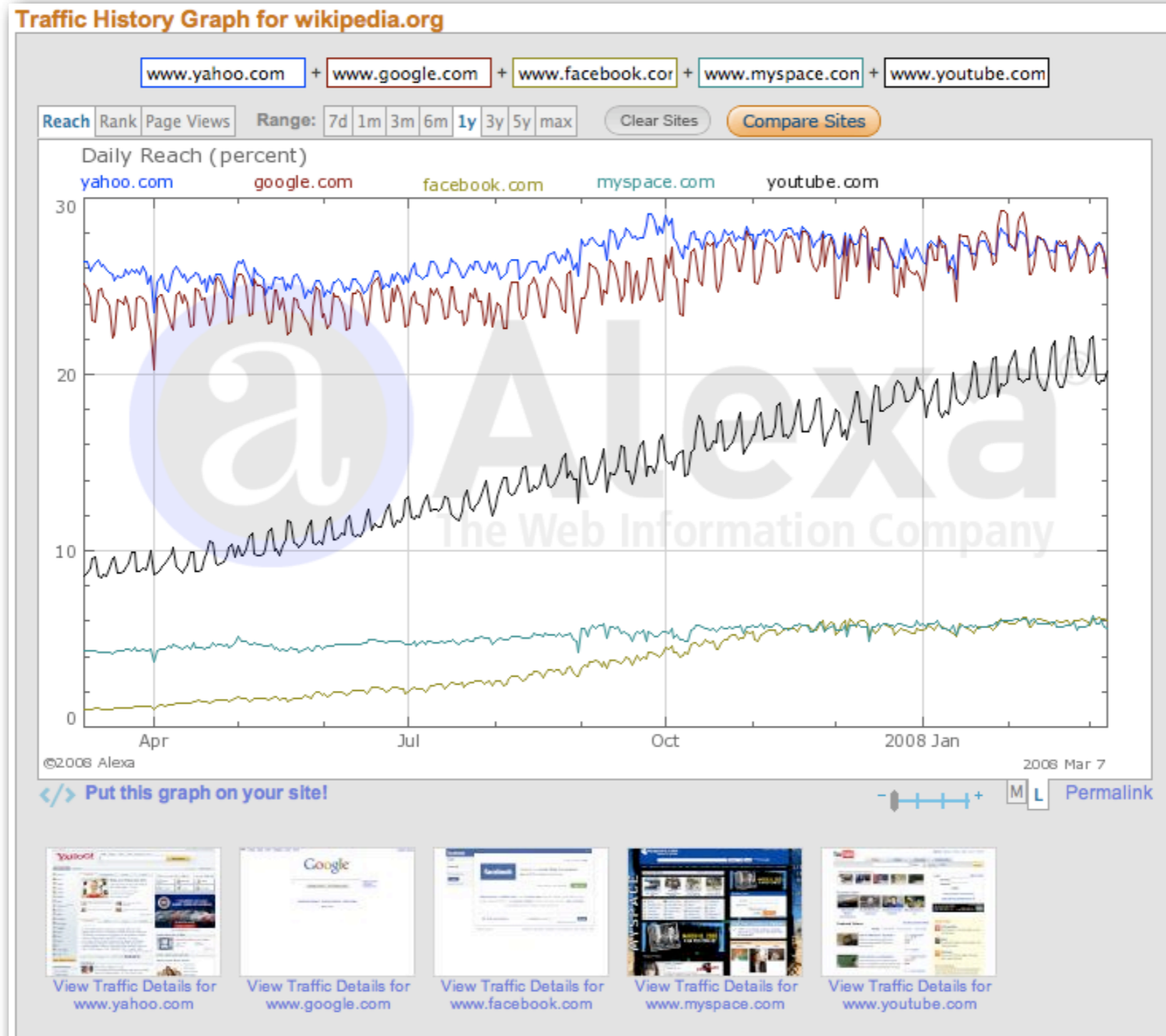
Morgan Stanley

Web 2.0 and Social Networks by Irwin King

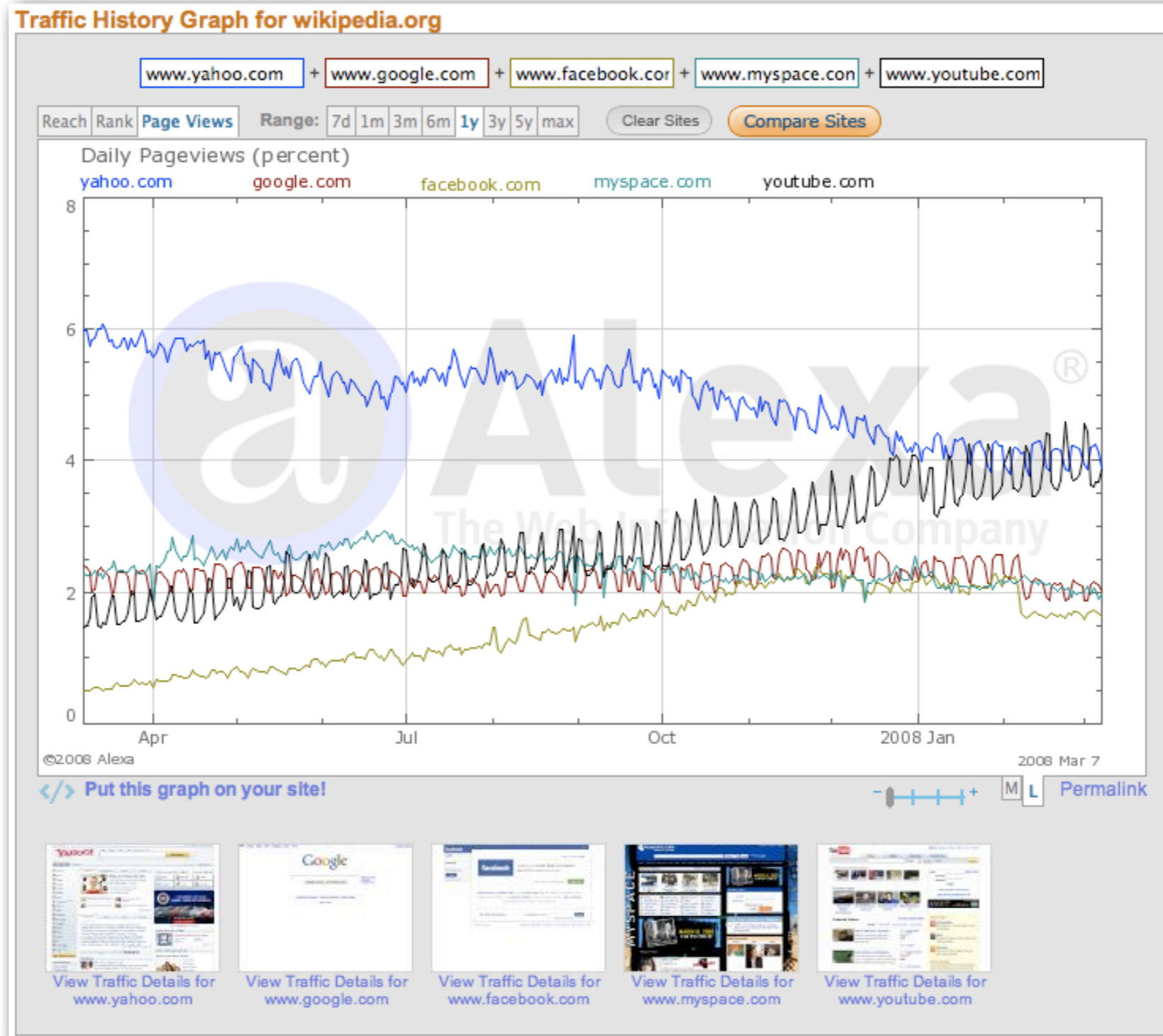
*Source: Alexa Global Traffic Rankings, Morgan Stanley Research
(1) Rankings as of 12/31/05, excludes Microsoft Passport; (2) Rankings as of 10/15/07*



Internet Reach



Internet PageView



Web 2.0 Growth

Web 2.0 Two Year Growth



Navigation Bar

- The Web 2.0 **Revolution...**
- Social **XXX**
- What's Cooking...



Web 2.0 Manifesto

Web 2.0 is the **network as platform**, spanning all **connected devices**; Web 2.0 applications are those that make the most of the intrinsic advantages of that platform: delivering software as a **continually-updated service** that gets better the **more people use** it, consuming and remixing data from multiple sources, including individual users, while providing their own data and services in a form that allows **remixing** by others, creating network effects through an **"architecture of participation,"** and going beyond the page metaphor of Web 1.0 to deliver **rich user experiences.**



Web 2.0 Defined

"Web 2.0 is the **business revolution** in the computer industry caused by the move to the **Internet as platform**, and an attempt to understand the rules for success on that new platform."

Tim O'Reilly, 2004

"Web 2.0 is a **knowledge-oriented** environment where human interactions generate content that is published, managed and used through **network applications** in a **service-oriented architecture**."

Dario de Judicibus, 2008



Levels of Web 2.0

	Characteristics	Examples
Level-0	Operate well offline as well as online	MapQuest, Yahoo! Local and Google Maps, etc.
Level-1	Operate offline and gain features online	Google Docs & Spreadsheets, iTunes, etc.
Level-2	Operate offline and gain advantage online	Flickr, YouTube, etc.
Level-3	Exist ONLY on the Internet	eBay, Craigslist, Wikipedia, del.icio.us, Skype, AdSense, etc.



Web 2.0

- Web as a medium vs. **Web as a platform**
- Read-Only Web vs. **Read-and-Write Web**
- Static vs. **Dynamic**
- Restrictive vs. **Freedom & Empowerment**
- Technology-centric vs. **User-centric**
- Limited vs. **Rich User Experience**
- Individualistic vs. **Group/Collective Behavior**
- Consumer vs. **Producer**
- Transactional vs. **Relational**
- Top-down vs. **Bottom-up**
- People-to-Machine vs. **People-to-People**
- Search & browse vs. **Publish & Subscribe**
- Closed application vs. **Service-oriented Services**
- Functionality vs. **Utility**
- Data vs. **Value**



Web 2.0 Revolution

- **Glocalization**-think globally and act locally!
- **Weblication**-Web is the application!

- **3 Cs**

- **Connectivity**
- **Collaboration**
- **Communities**

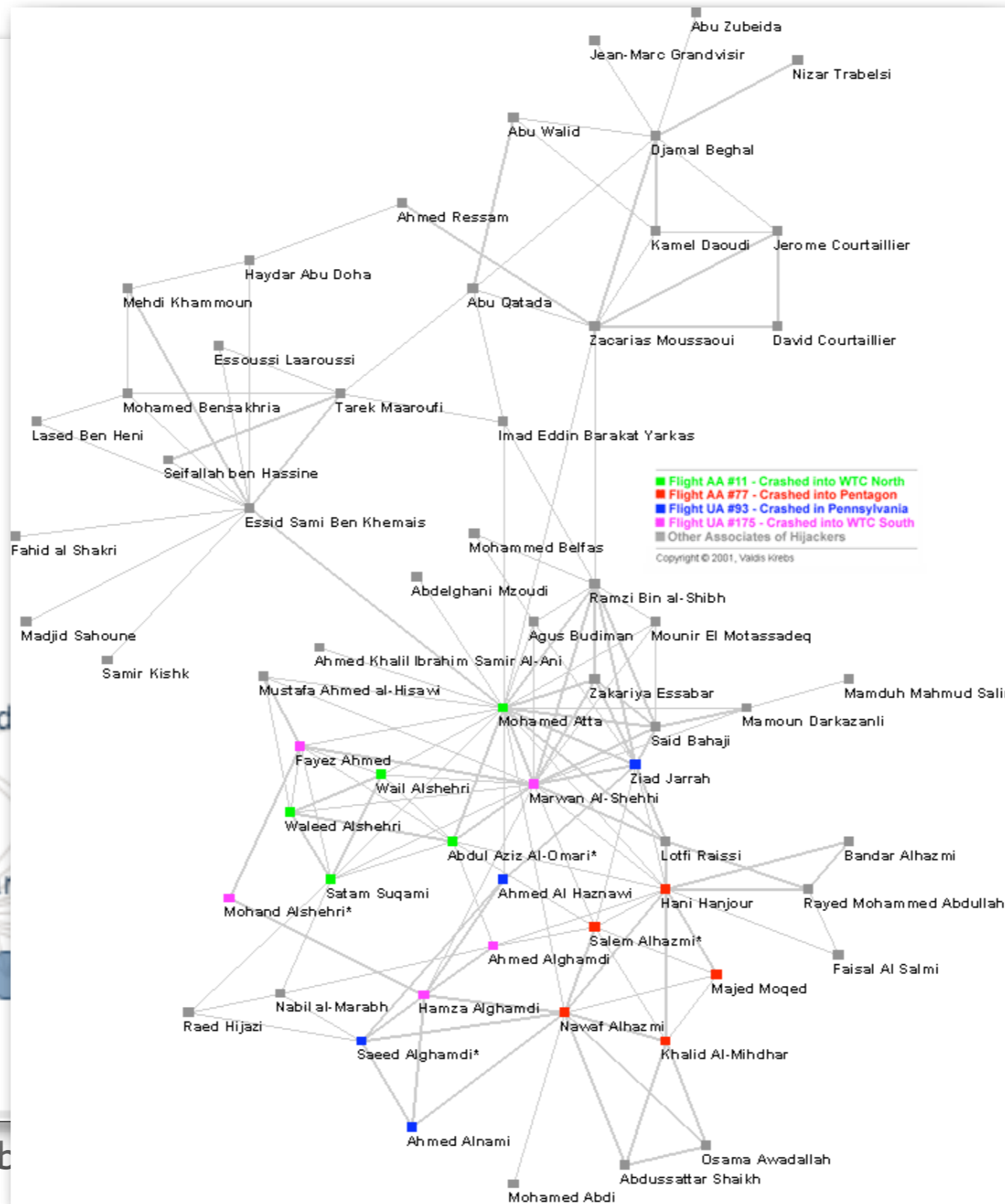


Technology Overview

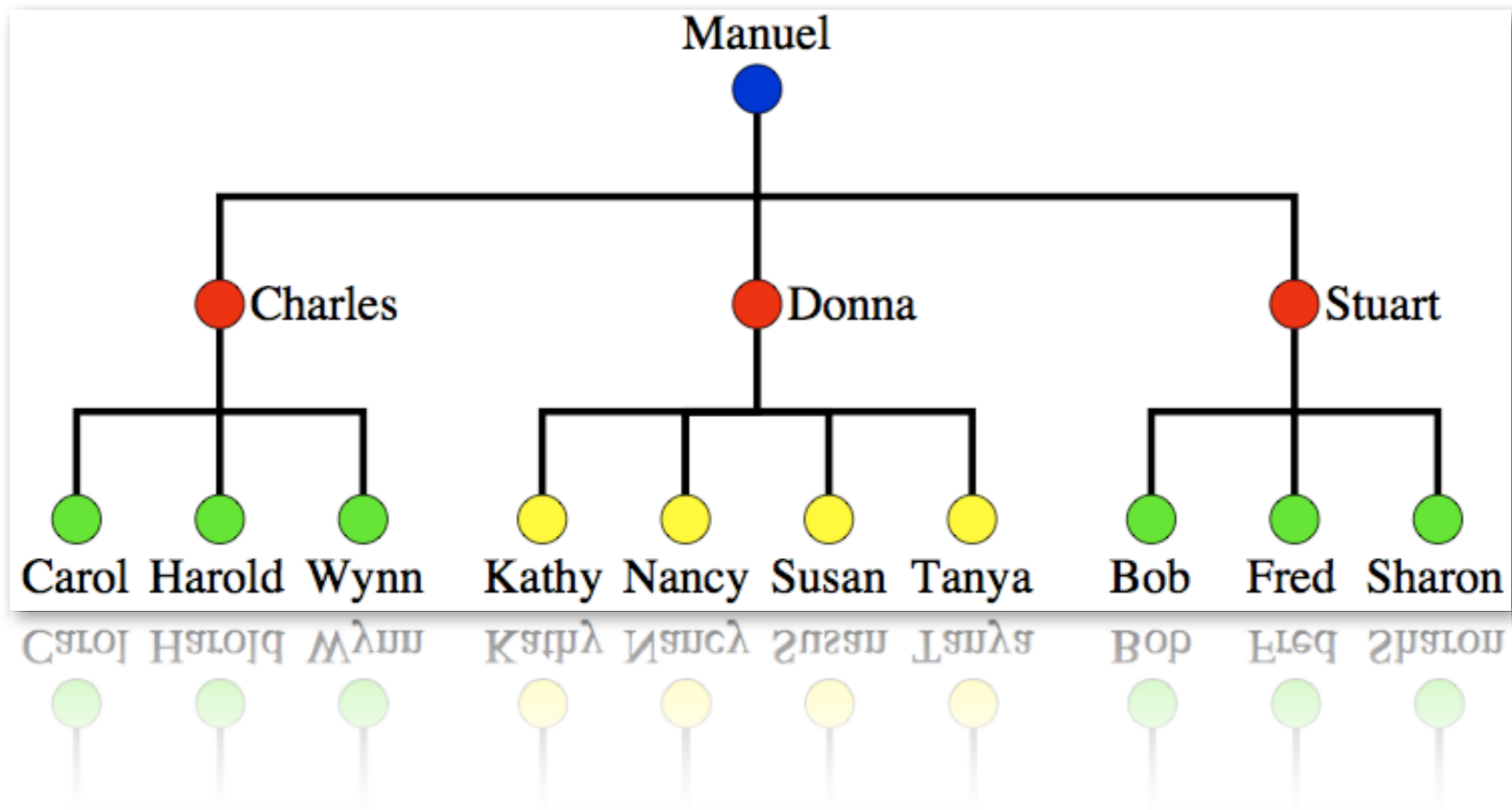
- The **RICH** Internet experience, e.g., Ajax, Flash, CSS, XHTML, ...
- **Collaborative** and **user-generated** software, e.g., weblog, wiki, forum, ...
- **Folksonomies**, e.g., collaborative tagging, social classification, indexing, ...
- **Syndication**, **aggregation**, and **notification**, e.g., RSS, Atom, ...



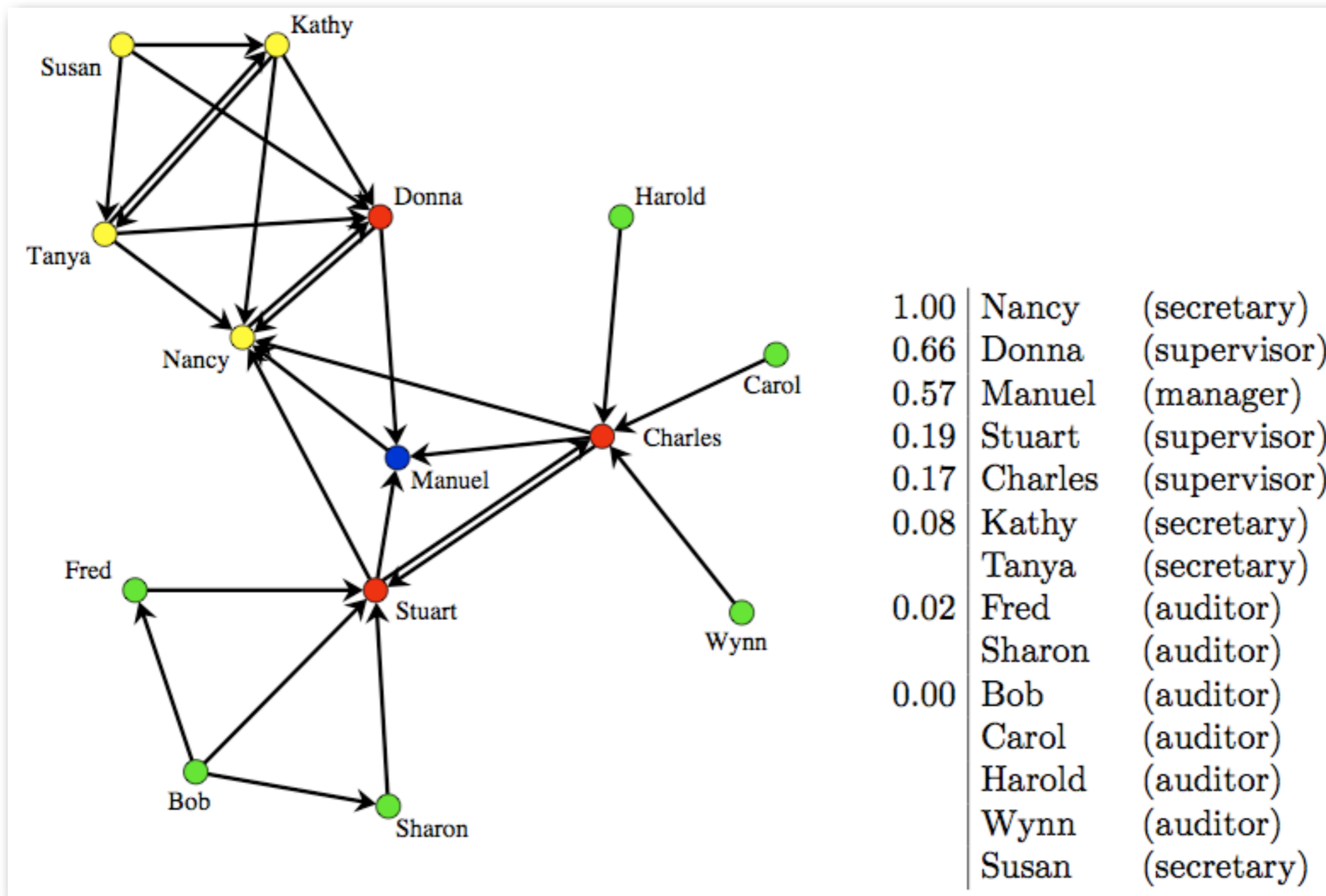
The Social Web



Organizational Chart



Social Network Chart



Web 2.0 and Social Networks by Irwin King



Social Networking

The screenshot shows the Facebook profile of Irwin King. The profile includes a search bar, navigation tabs (Profile, Friends, Networks, Inbox), and a profile picture. The profile information is as follows:

- Name:** Irwin King
- What are you doing right now?** What are you doing right now?
- Networks:** CUHK Faculty
- Sex:** Male
- Hometown:** Taipei, Taiwan
- Religious Views:** Christian

The Mini-Feed shows several updates:

- Irwin has a new address: Department of Computer Science and Engineering, The Chinese University of Hong Kong. 8:14pm
- Irwin edited Education Info, Hometown, Work Info, Website and Religious Views in his profile, and changed his profile picture. 8:14pm
- Irwin and Chi Chung Chan are now friends. 7:54pm
- Irwin and Tom Hung are now friends. 7:54pm
- Irwin and David Shepherd are now friends. 7:54pm
- Irwin joined the CUHK network. 7:54pm
- Welcome to Facebook! We're glad you're here. 7:54pm

The Information section includes:

- Contact Info:** Email: king@cse.cuhk.edu.hk; Current Address: Department of Computer Science and Engineering, The Chinese University of Hong Kong, Hong Kong, Hong Kong; Website: http://www.cse.cuhk.edu.hk/~king
- Education and Work:** Education Info: University Of Southern California '88 M.Sc., Computer Science; University Of Southern California '03 Ph.D., Computer Science

The Friends section shows 3 friends: Chi Chung Chan, Tom Hung, and David Shepherd.

The screenshot shows the MySpace profile of drmanhattan. The profile includes a search bar, navigation tabs (Home, Browse, Search, Invite, Film, Mail, Blogs, Favorites, Forum, Groups, Events, MySpaceTV, Music, Comedy, Classifieds), and a profile picture. The profile information is as follows:

- Name:** drmanhattan
- Rock**
- Wauconda, IL**

The profile features several sections:

- Cool New Videos:** 60,874 uploaded today! Includes videos like "Imaginary Car Accident", "Grab A Seat With Style", "Steve Carell Talks Myspace", and "Backflip Off Of Building".
- Member Login:** E-Mail: [input field]; Password: [input field]; Remember Me; LOGIN; SIGN UP!
- Find Your Friends on MySpace:** Check your Gmail, Yahoo!, Hotmail, AIM and AOL contacts and find them on MySpace!
- Cool New People:** Derreck, Konvict, Freshman ..
- MySpace Music:** [more music]
- MySpace Specials:** MySpace Secret Stand Up Presents... Aisha Tyler in Boston! You've seen her on Talk Soup, Reno 911 and Friends, now see her live and up close! For our next installment of MySpace Secret Stand Up, we are proud to bring you Aisha Tyler LIVE in Boston on March 9th. All FREE thanks to our friends at Toyota. > Get ready to laugh!
- Sponsored Links:** Hong Kong Chat: Hong Kong singles for dating. View photo profiles. Find love today! www.HongKongCupid.com



Social Search

- Social Search Engine
- Leveraging your social networks for searching

eurekasterswicki login | sign up

build new swicki swicki directory about swickis about eurekaster

Search and vote for your faves

swicki search

a custom search portal around the topic of your choice powered by your community

Build a swicki!

A swicki is a custom social search portal on the topic of your choice. With every search, vote and click, your swicki generates more relevant results and turns into a valuable asset for you and your community. [Take a tour](#) to find out more about how swickis work.

- Choose from text, multimedia or video content
- Customize the swicki widget look and feel
- Share your swicki widget with your community

[Build a swicki](#)

Eurekaster news

Now out of beta!

- Come join the network for swicki builders
- Swicki Users Go Green
- CEO Speaking at SES New York

Get swicki illustrated
For the latest news and trends in social search, subscribe now.

Build a swicki!

Even fresher swickis with RSS and Autodetect. [Learn More.](#)

Browse the directory

Try searching one of over 100,000 swickis already created, or grab one to add to your site or blog.

Recently created

- askforkids
- e-learning et didactique ...
- denver news
- home repairs any gal can ...
- creative ideas for green ...
- easy woodworking projects...

[More >](#)

Top swickis

- techcrunch
- born2ikea
- popular science
- readwriteweb
- lockergnome
- neopets
- larkswicki

[More >](#)

DIY: home improvement swicki showcase

- Home Repairs Any Gal Can Do
- Make Yourself a Man Pad
- Making Room for Baby
- Creative Ideas for Green Home Improvement

Computers

- dot net search engl...
- php resource search
- rails on ruby
- software factories
- web 2.0 workgroup

[More >](#)

Business

- adblogging
- alternative search ...
- bubblegeneration - ...
- contextual advertis...
- digging into search
- freelance tipster
- green building reso...

[More >](#)

Home

- about color for hom...
- gardening and plant...
- home improvement se...
- homemade baby food ...
- homemaking
- salmon

[More >](#)

Regional

- amazon river
- atlanta business se...
- atlanta home and ga...
- berkeley public lib...
- pittsburgh news
- pittsburgh wedding ...
- ski tahoe

[More >](#)

delver:: liad agmon edit

My Profile | My Network

Your friends are the best source of information!
Look for information, media and people within your network

(Go)

Noa Rabiner
Noa Rabiner is connected to you directly

- This is me!
- I know this person
- Add as Connection
- Send Message



Social News/Tagging



The screenshot shows the Digg website interface. At the top, there is a navigation bar with the Digg logo, links for 'Join Digg', 'About', and 'Login', and a search box. Below this is a secondary navigation bar with categories like 'All', 'News', 'Videos', 'Images', 'Podcasts', and 'Customize'. A third bar lists sub-categories: 'Technology', 'World & Business', 'Science', 'Gaming', 'Lifestyle', 'Entertainment', 'Sports', and 'Offbeat'. The main content area is titled 'News, Videos, Images' and includes a 'Most Recent' filter and sorting options: 'Top in 24 Hr', '7 Days', '30 Days', and '365 Days'. A promotional banner for Microsoft Visual Studio is on the right. The main list of articles includes:

- 104 diggs** | **Microsoft Demos "ADD TO DIGG" Feature in IE8**
microsoft.com — Using the new "Activities" XML feature in IE8, users can right-click on any page and "ADD TO DIGG". Check out the screenshot on Microsoft's site! Other new IE8 features: Atom feeds in normal web pages using Microformats, Data URI support (fast page renders), CSS2.1 fully supports, and of course, tons of bug fixes... [More...](#) (Microsoft)
16 Comments | Share | Bury | renesix made popular 6 min ago
- 161 diggs** | **It was only a matter of time, The SIMS 3 Official**
strategyinformer.com — Maxis have already showcased The Sims 3 in a non-disclosure agreement (NDA) event with press, the blockade is said to end on March 19. Wasting no time to rally the Sim communities around their latest expansion-spawner 'The Sims 3' website has launched promising more once the March embargo is lifted. [More...](#) (PC Games)
36 Comments | Share | Bury | JamieSI made popular 14 min ago
- 151 diggs** | **Universe submerged in a sea of chilled neutrinos**
space.newscientist.com — 'Cosmic' neutrinos produced in the big bang fill space, according to five years of data from NASA's WMAP satellite - they can't be detected on Earth [More...](#) (Space)
21 Comments | Share | Bury | MaggieMcKee made popular 26 min ago
- 180 diggs** | **Unique locks on microchips could reduce hardware piracy**
ns.umich.edu — The technique is called EPIC, short for Ending Piracy of Integrated Circuits. [More...](#) (Hardware)
45 Comments | Share | Bury | cosmikdebris made popular 45 min ago
- 519 diggs** | **Warren Buffett Passes Gates To Become World's Richest Man**
Business Insider — Billionaire Warren Buffett has surpassed Microsoft CEO Steve Ballmer to become the world's richest man, according to a new report by Forbes magazine. Buffett's net worth is now estimated at \$37 billion, up from \$35 billion last year. [More...](#) (Business)
100 Comments | Share | Bury | cosmikdebris made popular 42 min ago

The sidebar on the right features a 'Top in All Topics' section with the following items:

- 2387 | **The ravages of aging: Sean Connery, 20 years ago vs Today**
- 1718 | **A 10-Year Prison Sentence for Selling Light Bulbs**
- 1175 | **Tree circus**
- 1075 | **Is this the perfect celebrity?**
- 1064 | **Top 10 Worst Urban Myths**
- 1029 | **8 Movie Adaptations that Must be Stopped**
- 850 | **Wanna protect Windows from Hackers?...Set NO Password !!**
- 820 | **Wanna protect Windows from Hackers?...Set NO Password !!**
- 4038 | **8 Movie Adaptations that Must be Stopped**

At the bottom of the page, there is a footer with the text 'Web 2.0 and Social Networks by Irwin King' and a small logo on the right.

Social Bookmarking

The screenshot shows the del.icio.us homepage. At the top left is the logo and the text "del.icio.us social bookmarking". To the right is a search bar with "del.icio.us" and a "search" button, and links for "login", "register", and "help". Below the logo are three main navigation links: "» all your bookmarks in one place", "» bookmark things for yourself and friends", and "» check out what other people are bookmarking". A "learn more..." link is also present. In the center, there is a "» get started «" link. On the right side, there is a "Tags" section with a definition: "A tag is simply a word you use to describe a bookmark. Unlike folders, you make up tags when you need them and you can use as many as you like. The result is a better way to organize your bookmarks and a great way to discover interesting things on the Web." Below this is a "tags to watch" section with a "more ..." link. The main content area is titled "hotlist" and "what's hot right now on del.icio.us". It features a "HOT NOW" section with a "see also: popular | recent" link. The list includes: "Video: Twitter in Plain English | Common Craft - Explanations In Plain English" (130 people, posted by jtyerse, tags: twitter, video, howto, commoncraft, web2.0), "Home | NotchUp Beta" (212 people, posted by sokrates_af, tags: jobs, interview, career, search, job), "PrimeTimeRewind - The TV Cube" (145 people, posted by david.rothman, tags: tv, video, streaming, television, media), "The Simple Dollar » Planning a Kitchen Garden" (133 people, posted by lantzilla, tags: gardening, food, garden, cooking, vegetables), and "Office Live Workspace vs Google Docs: Feature-by-Feature Comparison - ReadWriteWeb" (135 people, posted by gariig, tags: microsoft, google, office, google_docs, live). On the right side of the hotlist, there are several tag categories: "illustration" (karenklassenillustration, Dave Devries's Monster Engine, current work), "family" (Cozi, Comeeko - Creating comic strips from your photos, Let's Have More Teen Pregnancy), "living" (Home - tiny living, Eartheasy homepage, The Simple Dollar » Nourishment on a Desperate Income), "cool" (Browse Goods, rssWheel, Laptop Stand By LapDawg - A Revolutionary, Ergonomic Laptop Holder), and "itunes".



Social Media

The screenshot shows the YouTube homepage with the following elements:

- Header:** YouTube logo with the tagline "Broadcast Yourself™". Navigation tabs for Home, Videos, Channels, and Community. A search bar and an "Upload" button.
- Videos being watched right now...:** A row of five video thumbnails with their durations: 02:13, 03:29, 01:58, 07:01, and 03:53.
- Promoted Videos:** A row of four video thumbnails with titles: "Think Again Awards", "Think Again Awards", "第14屆十大電視廣告頒獎典禮 - 搬出...", and "紅館觀眾向肥姐獻花".
- Featured Videos:** A list of five featured videos with thumbnails, titles, and view counts:
 - David Sedaris delivers a pizza:** From weaknights, 11,313 views, 5 stars, 01:01 duration. More in Comedy.
 - Erbert and Gerbert's Candle Cannon:** From candlecannon, 109,029 views, 5 stars, 02:34 duration. More in Entertainment.
 - Girl's Night Out:** From dianidevine, 169,435 views, 5 stars, 03:49 duration. More in Comedy.
 - Lionel Neykov - Freeze My Senses:** From LionelNeykov, 150,758 views, 5 stars, 03:35 duration. More in Music.
- What's New:** A yellow box containing three items:
 - YouTube Mobile:** New! Watch ALL YouTube videos on your mobile device.
 - Warp!** Visually fly through YouTube videos in the Fullscreen player.
 - RSS Feeds:** Click on the "RSS this page" link to get fresh videos delivered.
- SXSW on YouTube:** For the next week and a half, the SXSW festival is taking over Austin, Texas, to celebrate music, film and all things interactive. Read more in our Blog.

The screenshot shows the Flickr homepage with the following elements:

- Header:** Flickr logo and a "Sign In" link.
- Main Content:** A large photo of a small yellow flower growing from a crack in the pavement. Below it, text says "3,602 photos uploaded in the last minute · 558,832 photos tagged with urban · 2.2 million photos geotagged this month · Take the tour".
- Right Side:** A "Create Your Account" button with the text "Only takes a moment with your Yahoo! ID". Below it, the text "Share your photos. Watch the world." and a "SEARCH" button.
- Bottom Section:** Four icons representing different features: "Share & stay in touch", "Upload & organize", "Make stuff!", and "Explore...". A "Take the Tour" button is also present.

The screenshot shows the Second Life website with the following elements:

- Header:** Second Life logo with the tagline "Your World. Your Imagination." and a "Resident Login | Join" link.
- Navigation:** Links for "WHAT IS SECOND LIFE?", "SHOWCASE", "COMMUNITY", "BLOG", and "SUPPORT". A search bar labeled "Search Second Life".
- Main Content:** A large image of two avatars flying through a blue sky. To the right, a "Get Started!" button with the text "Membership is FREE!". Below it, text says "Second Life is an online, 3D virtual world imagined and created entirely by its Residents." and "Discover a whole new world of friends, fashion, music, videos and fun! Explore the best of Second Life >>".
- Bottom Section:** A section titled "Your Organization in Second Life!" with text: "Find out why your business, school or nonprofit organization should get its own virtual world presence." and a "VISIT SECOND LIFE GRID" button.

Social Media Applications

- Communication
 - Blogs-Wordpress, Blogger, ...
 - Microblogs-Twitter
 - Social networking-Facebook, LinkedIn, MySpace, Orkut, ...
 - Social network aggregation-FriendFeed, SocialThing, Youmeo



Social Media Applications

- Collaboration
 - Wikis-Wikipedia, PBWiki, ...
 - Social bookmarking-del.icio.us, StumbleUpon, ...
 - Social news sites-Digg, Reddit, ...
 - Opinion sites-epinions, Yelp, ...



Social Media Applications

- Multimedia
 - Photo sharing-Flickr, Zoomr, ...
 - Video sharing-YouTube, Vimeo, ...
 - Livecasting-Ustream, Justin.tv, ...
 - Audio and Music Sharing-imeem, ...



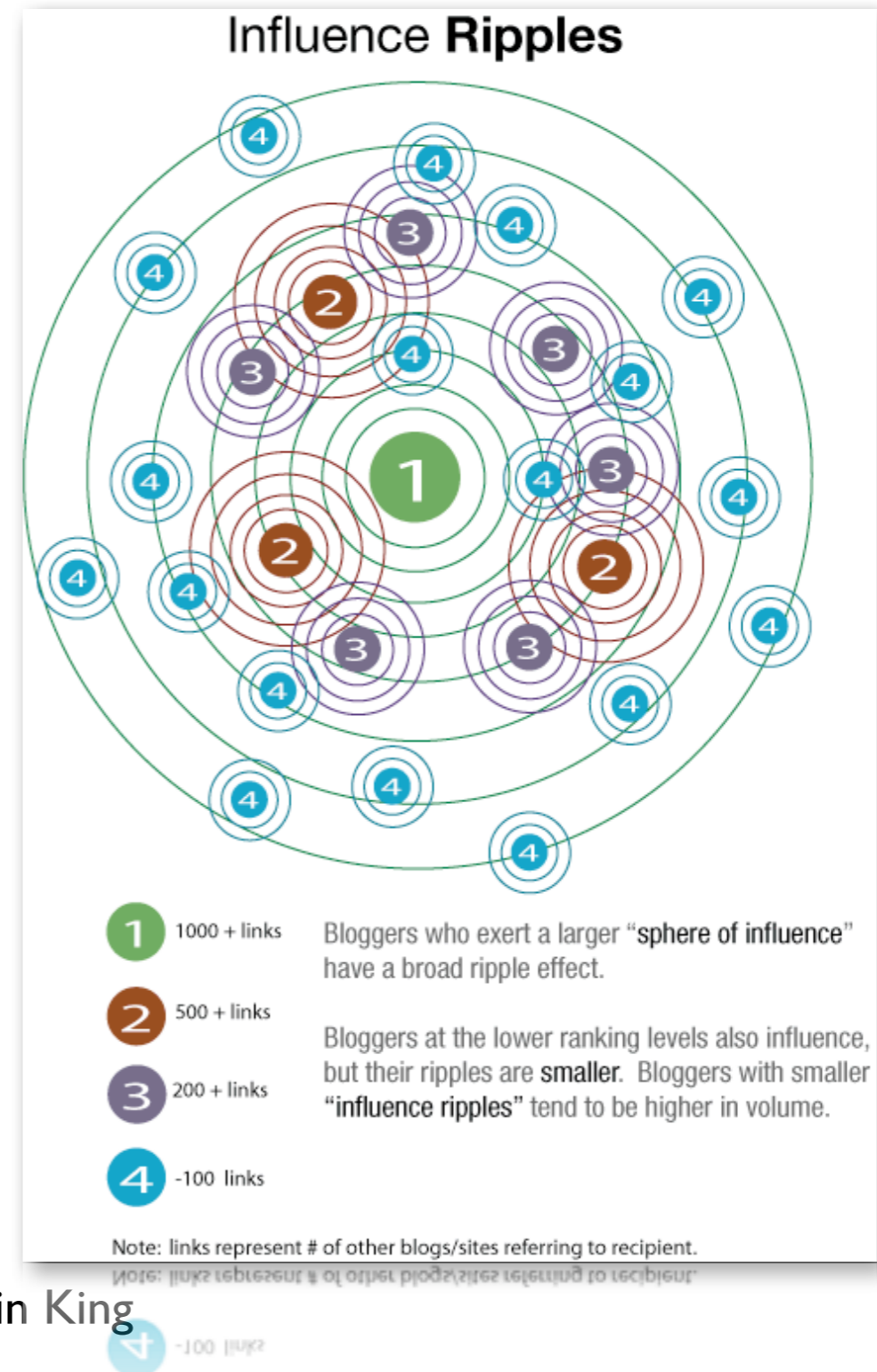
Social Media Applications

- Entertainment
 - Virtual worlds-Second Life, ...
 - Online gaming-World of Warcraft, ...
 - Game sharing-Miniclip.com, ...



Social Marketing

- Viral marketing
- Who are the **brokers**?
- Who can exert the **most influence** on buying/selling?
- How **much** should one advertise?

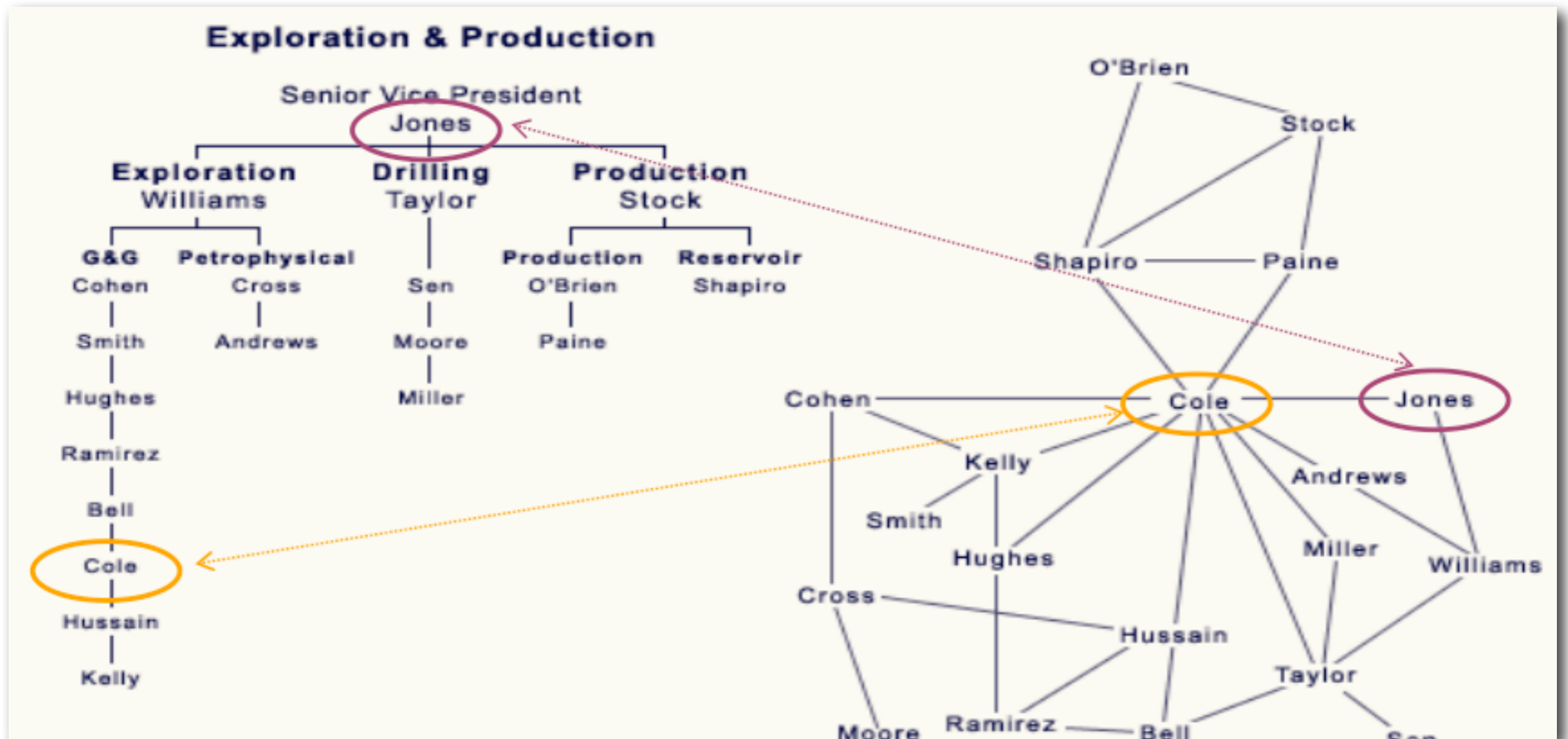


The Golden Rules

- Gives away valuable products or services
- Provides for effortless transfer to others
- Scales easily from small to very large
- Exploits common motivations and behaviors
- Utilizes existing communication networks
- Takes advantage of others' resources



Social Management



Social/Human Computation

Security Check: Enter **both** words below, separated by a space. [What's This?](#)
Can't read this? [Try another.](#)
[Try an audio captcha](#)

discharge **Carolina**

Text in the box:

I have read and agree to the [Terms of Use and Privacy Policy](#)

[Sign Up](#)

[Problems signing up? Check out our help pages](#)

Security Check: Enter **both** words below, separated by a **space**. [What's This?](#)
Can't read this? [Try another.](#)
[Try an audio captcha](#)

discharge **tesbiten**

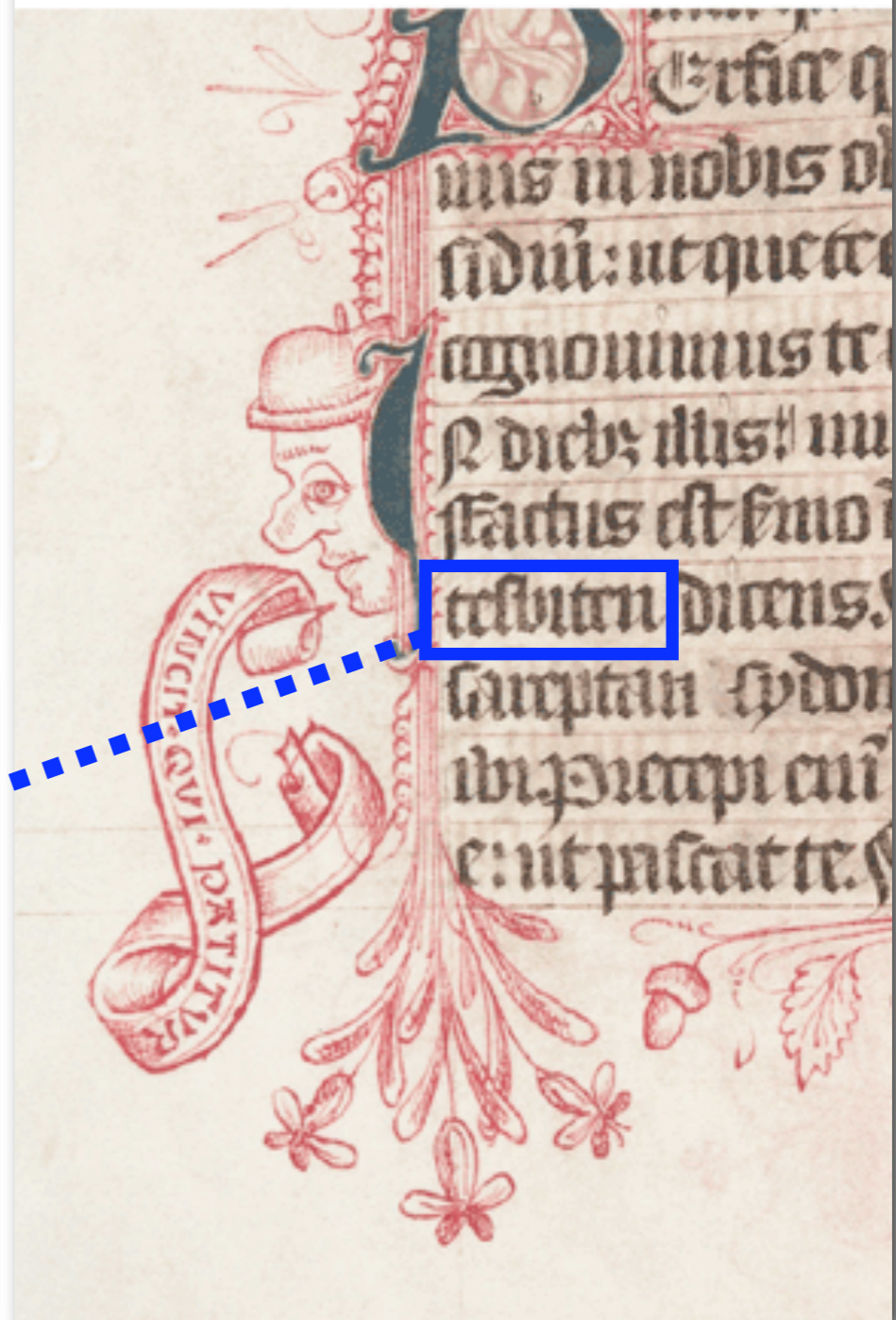
Text in the box:

I have read and agree to the [Terms of Use and Privacy Policy](#)

[Sign Up](#)

[Problems signing up? Check out our help pages](#)

MS. Don. b. 6, fol. 48v (detail) © Bodleian Library, University of Oxford



Google's Image Labeler

The screenshot shows the Google Image Labeler interface. At the top left is the Google logo with 'Image Labeler BETA' and 'Google Image Labeler' text. On the right are links for 'Help' and 'Sign In'. Below the header, there is a 'time left' section showing '01:17', a 'score' of '0', and 'passes' of '0'. A central text box says 'Your partner has suggested 10 labels.' with 'label' and 'pass' buttons. Below this is a landscape image of a lake and mountains, with a 'zoom out' button underneath. On the right side, there is a list of labels: 'off-limits', 'sky', 'water', 'blue', 'lake', 'mountain', and 'my labels'. Red starburst shapes are overlaid on the interface, highlighting the 'time left', 'score', 'passes', the central text box, the image, and the label list.




Games With A Purpose



- **Matchin**
 - Image search by aesthetic value
- **Babble**
 - Translate foreign language into English
- **InTune**
 - Tags songs with description text
- **Squigl**
 - Image segmentation
- **Verbosity**
 - Database of common knowledge description



Facebook's Travel Brain

 **Travel Brain** Travel Much? See what your travels say about you!

[Home](#) [My Travel Profile](#) [Compare Friends](#) [Ranking](#) [Tips & Answers](#) [Invite Friends](#)

Irwin's Travel Profile

The Travel Brain has determined their current score is...

1180
Irwin's score

Irwin has been to **158 cities** in **27 countries!**
Farthest distance traveled: 14278 km to Acapulco de Juarez
[Add more cities?](#)

Irwin's overall Travel Cred is **great**

Irwin's Travels



- Africa**
 - Tunisia: Tunis
- Asia**
 - Bangladesh: Dhaka
 - China: Chendu
 - China: Huangshan
 - China: Beijing
 - China: Shenzhen
 - China: Zhuhai
 - China: Suzhou
 - China: Shenyang
 - China: Pudong
 - China: Shanghai
 - China: Dali
 - China: Kunming
 - China: Lijiang
 - China: Hangzhou
 - Hong Kong (SAR): Ha Keng Hau
 - Hong Kong (SAR): Hong

Irwin's Travel Score Breakdown

The Worldliness Factor

Based on the number of cities visited and where they are relative to the home base.



is an explorer (311 points, level 3)

The Shrewdness Factor

How savvy a traveler are you? Have you survived pickpockets, touts, and more?



is immune to thieves and outbargain touts (336 points, level 4)

The Danger Factor

Are you a risk-taker? How dangerous are the places you go?



flirts with danger (125 points, level 3)

The Roughing-it Factor

How down and dirty do you get? Are you willing to do without running water?



is happy with a roof and running water (145 points, level 3)

The Off the Beaten Track Factor

Do you seek out random small places or do you prefer traveling along the main circuits?



does their own thing (264 points, level 3)



Social Caveats

- Security and privacy
 - Identity thief, break-ins, stolen information, ...
- Adversarial information retrieval
 - Link spam, keyword spamming, cloaking, malicious tagging, click fraud detection, advertisement blocking, stealth crawling, ...



What's Cooking

- Link-based Similarity
- Negative Opinion
- Diffusion Rank
- Collaborative Filtering
- Social computing modeling and applications



Link-based Similarity

- How to find **similar** pages given a starting page?
- Compute only based on **links**
- Extended Neighborhood Structure (ENS)
 - **Bi-directional**
 - **Multi-hop**



Extend Co-citation and Bibliographic Coupling

- **Co-citation**

$$Sim(a, b) = |I(a) \cap I(b)|$$

- **Bibliographic coupling**

$$Sim(a, b) = |O(a) \cap O(b)|$$

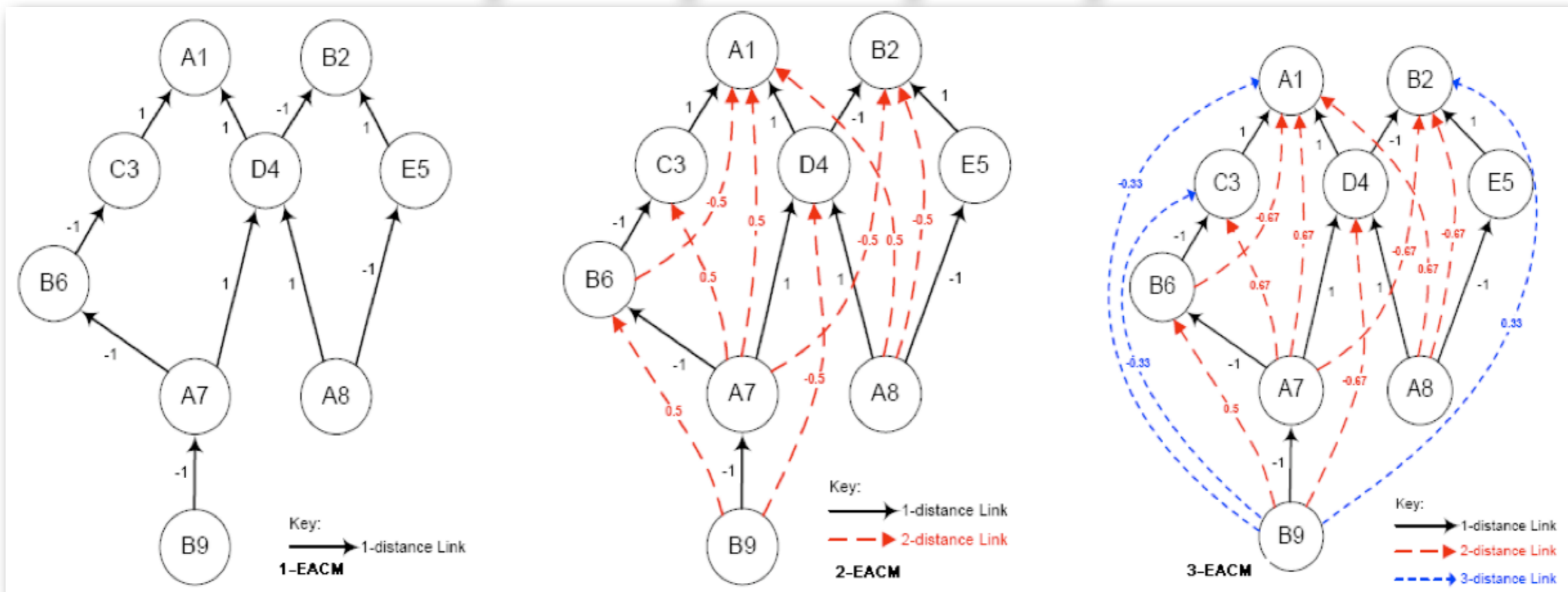
- **ECBC**

$$Sim(a, b) = \alpha |I(a) \cap I(b)| + (1 - \alpha) |O(a) \cap O(b)|$$



Negative Opinions

- Links are **positive** reinforcements
- How about **negative** feedback?
- **The enemy of my enemy is my friend!**



Diffusion Rank

- Web **spamming** is a headache on the rise!
- Can we use the **heat diffusion** equation to model the flow of information in a graph?
- Heat diffusion flow on **manifolds**, e.g., DG, UDG, RDG
- Advantages
 - **Closed-form** solution
 - **Group-to-group** relations
 - **Graph cuts**
 - **Anti-manipulation**



Collaborative Filtering

- Online recommendations are often quite **sparse**, e.g., MovieLens
- How can we use sparse data to **predict missing data** for recommendation?

	i_1	i_2	i_3	i_4	i_5	i_6	i_7	i_8	i_9	i_n
u_1	$r_{1,1}$			$r_{1,4}$						
u_2		$r_{2,2}$						$r_{2,8}$		
u_3						$r_{3,6}$				
u_4				$r_{4,4}$						$r_{4,n}$
u_5			$r_{5,3}$				$r_{5,7}$			
u_6									$r_{6,9}$	
u_m			$r_{m,2}$							$r_{m,n}$

(a)

	i_1	i_2	i_3	i_4	i_5	i_6	i_7	i_8	i_9	i_n
u_1	$r_{1,1}$	0	$\hat{r}_{1,3}$	$r_{1,4}$	0	$\hat{r}_{1,6}$	0	$\hat{r}_{1,8}$	$\hat{r}_{1,9}$	0
u_2	0	$r_{2,2}$	0	$\hat{r}_{2,4}$	$\hat{r}_{2,5}$	0	$\hat{r}_{2,7}$	$r_{2,8}$	0	$\hat{r}_{2,n}$
u_3	$\hat{r}_{3,1}$	0	$\hat{r}_{3,3}$	$\hat{r}_{3,4}$	$\hat{r}_{3,5}$	$r_{3,6}$	0	$\hat{r}_{3,8}$	$\hat{r}_{3,9}$	0
u_4	$\hat{r}_{4,1}$	$\hat{r}_{4,2}$	0	$r_{4,4}$	$\hat{r}_{4,5}$	$\hat{r}_{4,6}$	$\hat{r}_{4,7}$	0	$\hat{r}_{4,9}$	$r_{4,n}$
u_5	$\hat{r}_{5,1}$	$\hat{r}_{5,2}$	$r_{5,3}$	0	$\hat{r}_{5,5}$	0	$r_{5,7}$	$\hat{r}_{5,8}$	$\hat{r}_{5,9}$	$\hat{r}_{5,n}$
u_6	$\hat{r}_{6,1}$	$\hat{r}_{6,2}$	0	$\hat{r}_{6,4}$	$\hat{r}_{6,5}$	$\hat{r}_{6,6}$	$\hat{r}_{6,7}$	0	$r_{6,9}$	$\hat{r}_{6,n}$
u_m	$\hat{r}_{m,1}$	0	$r_{m,2}$	$\hat{r}_{m,4}$	0	$\hat{r}_{m,6}$	0	$\hat{r}_{m,8}$	$\hat{r}_{m,9}$	$r_{m,n}$

(b)



Social Computing Modeling and Applications

Time left:
1:39

對聯

Score:
500

上聯: 爆竹一聲辭舊歲

- 下聯:
1. 桃符萬戶換新春
 2. 桃符萬戶迎新年
 3. 桃符萬戶迎新春
 4. 歡歌起舞迎新春
 5. 桃符萬象迎新年

太難

全錯

Time left:
1:39

Chinese Word
segmentation

Score:
500

中國長城的修築始於春秋戰國時代，已有2000多年的歷史，其中尤以秦、漢、明三代的規模最大。

請輸入句子中的名詞:

已輸入
中國

禁用字
歷史

你的對手已輸入 2 個詞語



WWW2008

SWKM2008

Social Web and Knowledge Management

Social Web 2008 Workshop

Located at the 17th World Wide Web Conference [WWW2008](#)
April 22nd, 2008 (Workshop day)
Beijing, China

Supported by the EU projects [KIWI](#) and [Active](#)

[The session on Social Web Search and Mining of the Social Web Workshop can be found here](#)

Programme	Topics	Organisation committee	Program committee	Submission	Important dates
---------------------------	------------------------	--	-----------------------------------	----------------------------	---------------------------------

Objectives

The social web, the most interesting part of the Web 2.0, aims at bringing people together and facilitating richer interaction among them. It is characterized by a strong focus on communities where people share experiences, information and knowledge, meet and discuss, or do business together. The social web challenges will be studied in this workshop from two perspectives: knowledge management and social web search and mining.

Knowledge management systems focus on knowledge and experience sharing. They enhance organization capabilities by externalizing knowledge of its employees and combine them in novel forms. Therefore, there is a common interest in social structures as well as social computing in both fields. The social web can be the common underlying platform for novel and web-based knowledge management systems. It breaks up rigid processes and enables much richer interaction possibilities and creativity. In this workshop we will bring together people from the areas of social web technologies, semantic systems, and knowledge management. We would like to study synergies between social computing, social web, semantic systems, and knowledge management and provide a look at the current state of the art in the area.

This event is supported by the EU projects [ACTIVE](#) and [KIWI](#).

Programme

To ensure a creative atmosphere during the workshop, the presenters will be selected based on their submitted papers and demonstrations. In order to obtain an intensive exchange of ideas between the participants, enough time for discussion will be ensured.

A programme will be published here upon notification of the authors and receiving the camera ready versions of the submissions.



WWW2008 Workshop on Social Web Search and Mining (SWSM2008)

Beijing, China
April 22th, 2008

[The session on Social Web and Knowledge Management of the Social Web Workshop can be found here](#)

Objectives

Invited Speaker

Topics of Interests

Important Dates NEW

Submissions

Workshop Chairs

Program Committee

Contact us

Objectives

The workshop aims to discuss key issues of searching and mining a special kind of increasingly important sources: Social Web and Social Networks (SWN).

There are a growing number of highly-popular user-centric applications, especially with the popularity of the Web 2.0. Such examples include blogs, folksonomies, wikis and Web communities in specific topics such as in academic research area. They have formed a new Web, Social Web and further formed social networks. SWN generates a lot of structured and semi-structured information. This information greatly enlarges the content of Web. At the same time, it introduces many interesting research issues (e.g., social web storage, search and mining, social network building, expertise oriented search and association search in social networks) and as well many real-world applications (e.g. web community detection and search, hot-topic detection in a specific web community). These research issues have been receiving in the recent years growing attentions.

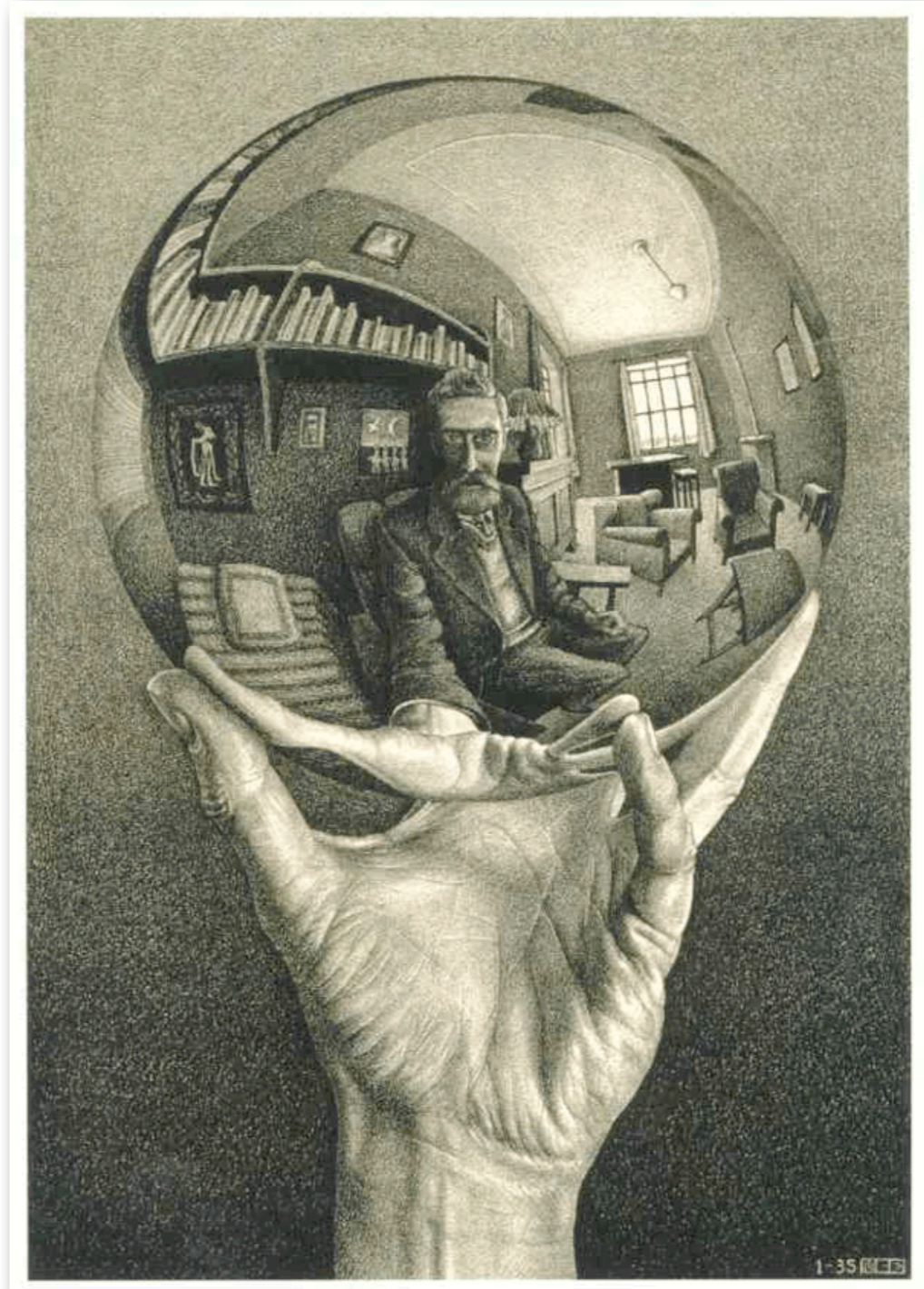
This workshop solicits contributions on SWN search and mining including Webbased and Semantic Web-based social applications, the emerging applications of the Web as a social medium such as its typical application in the academic area. Workshop Papers will elaborate related methods, issues associated to SWN extraction, storage, search, and mining.

Web 2.0 and Social Networks by Irwin King



On the Horizon...

- **CLOUD** (broadband + wireless)
- **Web Services**
- **Monetization** of Social Interactions
- **Security & Privacy**
- **Web 3.0?**



Web 3.0?

The Many-to -Many Connection?

- Transformation to a more **seamless** and **interoperable** whole--read-write-execute
- **Ubiquitous** connectivity and **network computing**
- **Open** technologies and open identity
- **Distributed** databases
- **Intelligent** applications and web



Acknowledgments

- Prof. Michael R. Lyu
- Prof. Jimmy Lee
- Dr. Kaizhu Huang
- Dr. Haixuan Yang
- Patrick Lau (R.A. on CUPIDE)
- Thomas Chan (M.Phil)
- Hongbo Deng (Ph.D.)
- Zhenjiang Lin (Ph.D.)
- Hao Ma (Ph.D.)
- Haiqin Yang (Ph.D.)
- Wei Wei (Ph.D.)
- Zenglin Xu (Ph.D.)



One More Thing...

There's an old Wayne Gretzky quote that I love. ***"I skate to where the puck is going to be, not where it has been."*** And we've always tried to do that at Apple. Since the very very beginning. And we always will.



Steve Jobs



Q & A

<http://www.cse.cuhk.edu.hk/~king>



References

1. General

- 1.1. <http://www.google.com>
- 1.2. <http://en.wikipedia.org/>
- 1.3. <http://www.forbes.com/>
- 1.4. <http://www.wired.com/>
- 1.5. <http://graphics8.nytimes.com/>
- 1.6. <http://www.nec-labs.com/>
- 1.7. <http://www.morganstanley.com/>
- 1.8. <http://www.hitwise.com/>
- 1.9. <http://www.technologyreview.com/>
- 1.10. <http://www.ibm.com>
- 1.11. <http://www.time.com>
- 1.12. <http://www.alexa.com/>

2. Web 2.0/Social Networks

- 2.1. <http://informationarchitects.jp/>
- 2.2. <http://www.boingboing.net/2006/02/06/dozens-of-web-20-com.html>

- 2.3. <http://oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html>
- 2.4. <http://www.esv.org/>
- 2.5. <http://services.alphaworks.ibm.com/manyeyes/>
- 2.6. <http://www.orgnet.com/>
- 2.7. http://www.cmu.edu/joss/content/articles/volume2/BradesRaabWagner_files/brw-envsd-01.pdf
- 2.8. <http://video.google.com/videoplay?docid=-8246463980976635143>
- 2.9. <http://www.gwap.com/>
- 2.10. <http://www.readwriteweb.com/>
- 2.11. <http://www.wilsonweb.com/wmt5/viral-principles.htm>
- 2.12. <http://www.propr.ca/index.php/2006/a-case-study-of-a-viral-post/>
- 2.13. <http://www.cs.cmu.edu/~biglou/>

