

CMSC5733 Social Computing

01-Introductions

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Course Information

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- <https://www.cse.cuhk.edu.hk/irwin.king/teaching/cmssc5733/2015>
- Office hours: M3 and T3 from 10:30 am - 11:30 am
- Tutor: Mr. Shenglin Zhao



A Quick Survey

- Programming languages and tools
 - Python (packages and APIs)
 - R or Matlab
 - Graphviz
 - Web crawler
 - NetworkX
- Machine learning and data mining
 - Classification and clustering algorithms
 - Graph theory
 - Matrix operations, linear algebra, etc.
 - Natural language processing
 - PageRank, HITS, etc.



Grade Assessment Scheme

- Assignments (20%)
 - Written assignments
 - Optional quizzes
- Midterm Examination (30%)
- Project (50%)
 - Report (30%)
 - Presentations (20%)
- Extra Credit (There is no penalty for not doing the extra credit problems. Extra credit will only help you in borderline cases.)

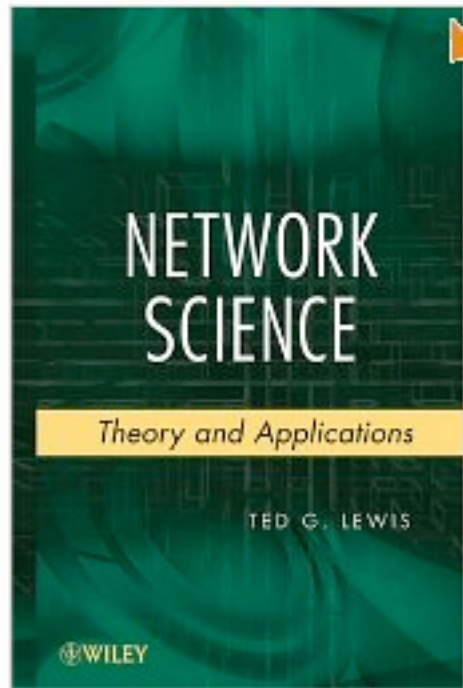


Class Project

- Project is for everyone
- Up to three persons per project group
- Sept. 28 - Project proposal submission
- Oct. 5 - Project feedback
- Nov. 2 - Midterm check
- Nov. 30 - Project presentations



Click to **LOOK INSIDE!**



Network Science:
Theory and Applications

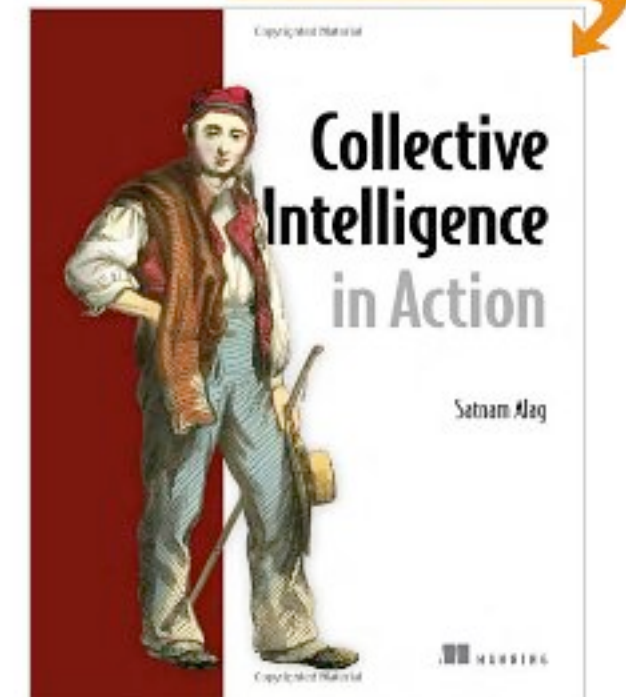
References

Click to **LOOK INSIDE!**



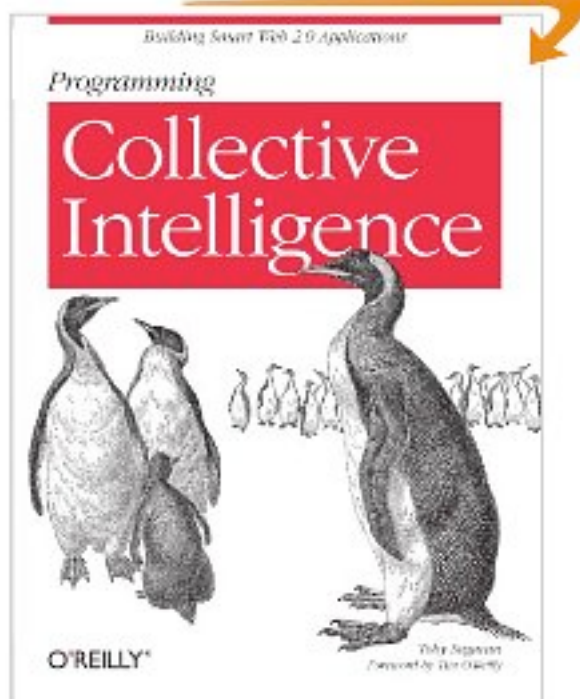
Mining the Social Web:
Analyzing Data from
Facebook, Twitter,
LinkedIn, and Other Social
Media Sites

Click to **LOOK INSIDE!**



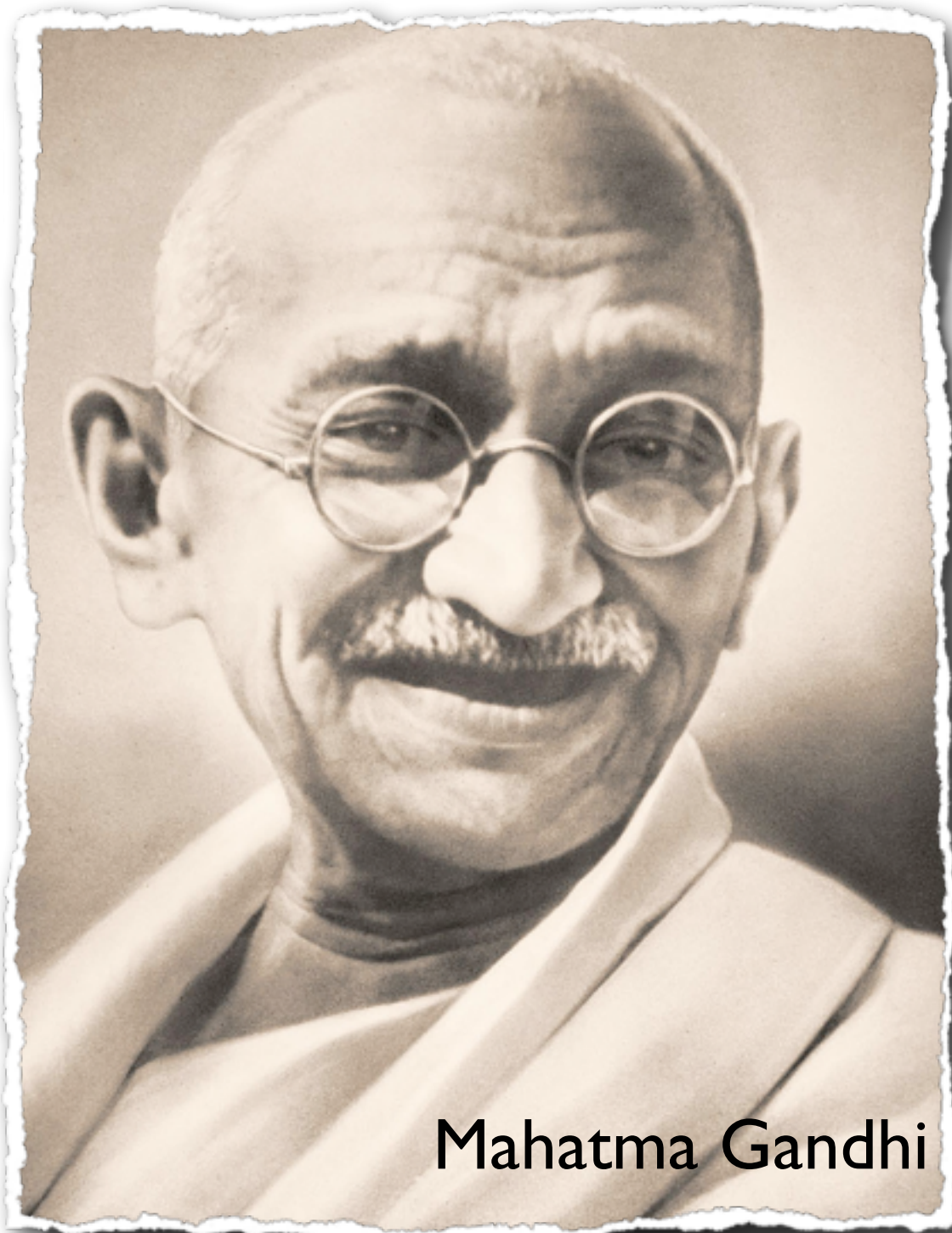
Collective Intelligence in
Action

Click to **LOOK INSIDE!**



Programming Collective Intelligence:
Building Smart Web 2.0 Applications





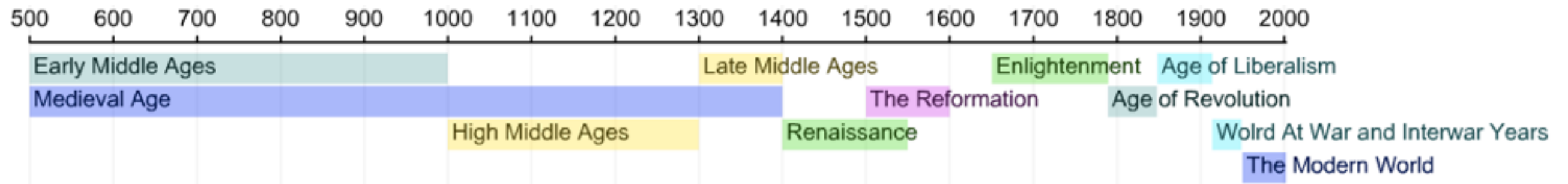
Mahatma Gandhi

Interdependence is and ought to be as much the ideal of man as self-sufficiency.

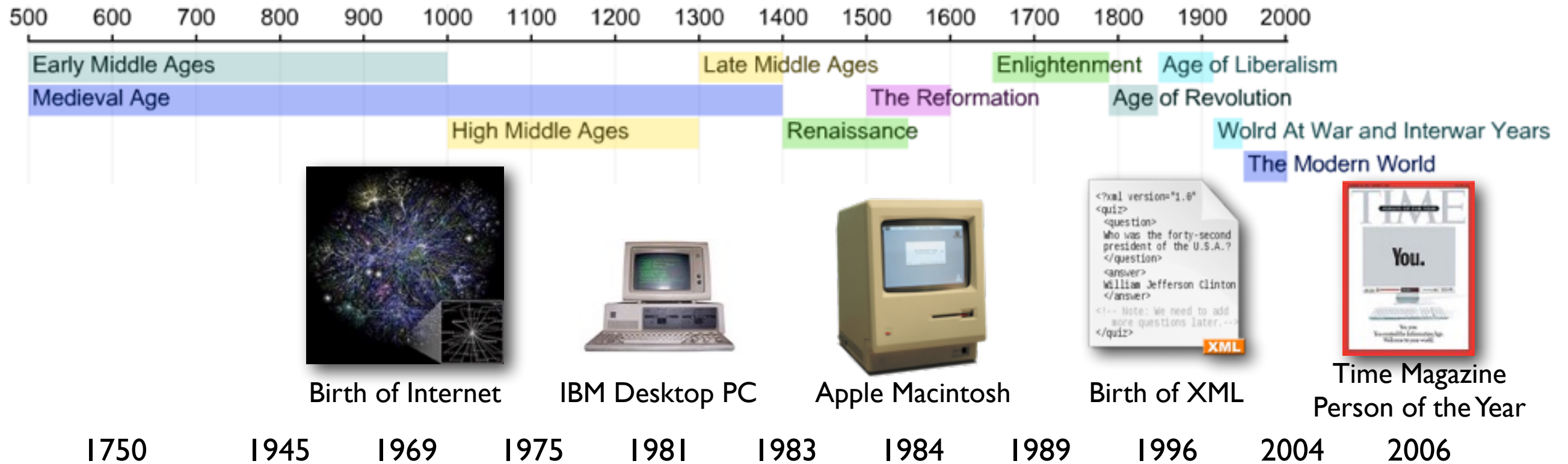
Man is a social being.



A Brief History of the World



A Brief History of the World



Industrial Revolution

Information Age

Internet Age

WWW Age

Attention Age

ENIAC



The MITS Altair
Apple II



Time Magazine
Person of the Year



Birth of WWW



Birth of Web 2.0





intel.

revolution in evolution

Highlights from the Journey to 1 Billion PCs



1971 - Intel, founded by Robert Noyce, Gordon Moore and Andy Grove, introduces the world's first microprocessor and calls it the Intel® 4004.

1974 - Intel introduces the 8080 microprocessor, which was used in the first commercially successful personal computer - the Altair.

1976 - Apple Computer, Inc. releases the Apple I, the first single-board computer. The following year, the company introduces the Apple II, the first for a personal computer, the Apple II featured external graphics.



Microsoft ships the Windows® operating system with a graphical user interface.

1984 - The number of PCs shipped worldwide reaches nearly 60 million and a 15-year period of continuous growth begins.



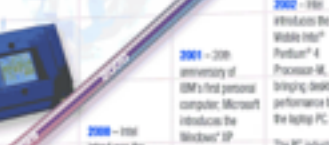
1991 - Creative Labs introduces a Multimedia Upgrade Kit containing a CD-ROM drive, Sound Blaster® Pro sound speakers and multimedia software.



1996 - The number of PCs shipped worldwide reaches 200 million.



1998 - The number of PCs shipped worldwide reaches 300 million.



2001 - The number of PCs shipped worldwide reaches 400 million.

2002 - Intel introduces the Pentium® 4 Processor M, bringing desktop performance to the laptop PC.

2003 - Intel introduces the Pentium® 4 Processor M, bringing desktop performance to the laptop PC.

2004 - Intel introduces the Pentium® 4 Processor M, bringing desktop performance to the laptop PC.

2005 - The number of PCs shipped worldwide may reach 2 billion, according to industry analyst firm Gartner Dataquest.

1981 - IBM introduces its first personal computer featuring the Intel® 8088 microprocessor. Established the PC revolution and set industry standards that still exist today. The IBM platform enabled hardware makers and software programmers to develop programs and add-on accessories. IBM PCs, most PCs had been cloned and proprietary.

Shugart Associates introduces the hard drive, bringing high-capacity data storage to the PC.

Acer Osborne completes the first portable computer, the Osborne 1. It weighs 24 pounds and plugs into the wall.

1982 - Lotus Development Corporation introduces Lotus 1-2-3, which becomes a best-seller application.

3D0 Systems Corporation brings to market the first battery-powered laptop and launches the portable computer industry.

1984 - Apple introduces the Macintosh with a GUI. A GUI is a graphical user interface that provides visual representation for what was previously lines of DOS code, making PCs more usable for non-technical people.

1985 - Intel introduces the 386™ microprocessor featuring 275,000 Transistors - more than 100 times as many as the original 4004. The 386™ microprocessor was a 32-bit chip that brought "multi-tasking" capabilities to the PC.

1986 - In Geneva, Switzerland, Tim Berners-Lee develops a new technique for distributing information on the internet, eventually called the World Wide Web.

Leading PC manufacturers begin to introduce laptops equipped with Microsoft Windows® and the Intel® 386™ - the first processor designed specifically for a mobile computer.

1989 - Intel introduces the Pentium® processor and Microsoft introduces Windows® 3.1, providing a solid multimedia platform for consumer games and learning applications. Increased processing capabilities, created with the availability of affordable CD-ROM drives and sound cards, usher in multimedia on the PC.

Max Anderson creates an Internet browser called Netscape.

PC gaming comes of age when id Software® introduces DOOM, one of the most popular PC games ever.

DOOM also introduced multiplayer gaming to the masses, allowing players to compete in intense 4-player LAN or head-to-head, modem competitions.

1990 - The number of PCs shipped worldwide reaches nearly 100 million.

1991 - Microsoft launches Windows® 95 and its Internet Explorer. Selling more than 1 million copies in the first four days, the operating system helps move PCs into more than 250 million businesses, homes, and schools around the world.

1992 - The number of PCs shipped worldwide reaches nearly 200 million.

1993 - Intel introduces the Pentium® processor and Microsoft introduces Windows® 95. The number of PCs shipped worldwide reaches more than 400 million.

Recordable and re-writable DVD discs become available.

Approximately 40 million people are connected to the Internet and more than 1 billion dollars change hands online.

1994 - Intel introduces the Pentium® 333 processor and the number of PCs shipped worldwide reaches more than 600 million.

1995 - The number of PCs shipped worldwide reaches 800 million.

1996 - The number of PCs shipped worldwide reaches 1 billion.

1997 - The number of PCs shipped worldwide reaches 1.5 billion.

1998 - The number of PCs shipped worldwide reaches 2 billion.

1999 - The number of PCs shipped worldwide reaches 3 billion.

2000 - The number of PCs shipped worldwide reaches 4 billion.

2001 - The number of PCs shipped worldwide reaches 5 billion.

2002 - The number of PCs shipped worldwide reaches 6 billion.

2003 - The number of PCs shipped worldwide reaches 7 billion.

2004 - The number of PCs shipped worldwide reaches 8 billion.

2005 - The number of PCs shipped worldwide reaches 9 billion.

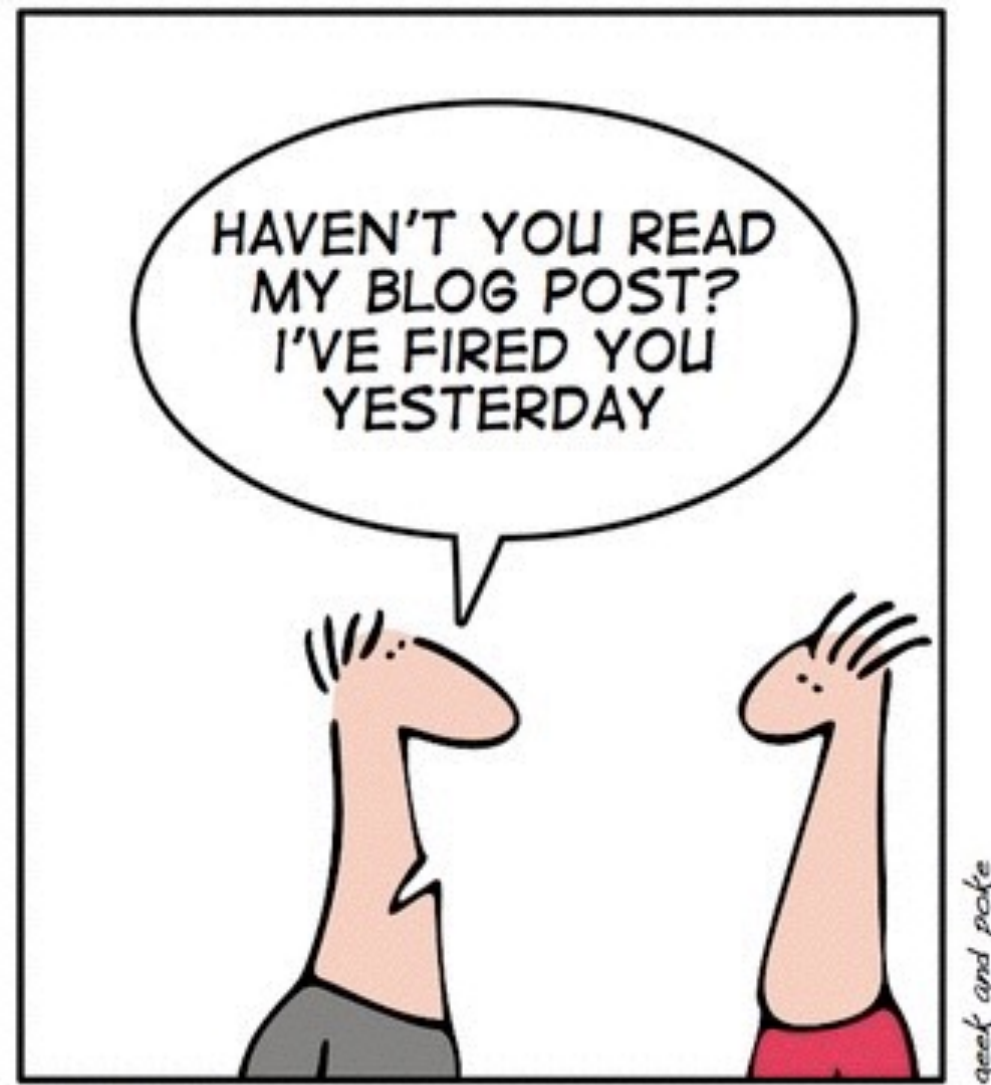
For more information, please visit <http://www.intel.com>

Small text providing legal disclaimers and copyright information for Intel and various software companies.



Social Networking

HOW TO USE WEB 2.0 IN THE ENTERPRISE



*PART 1:
COMMUNICATE WITH YOUR EMPLOYEES*



Billionaires' Shuffle

2007



2008



Facebook in 2004.02

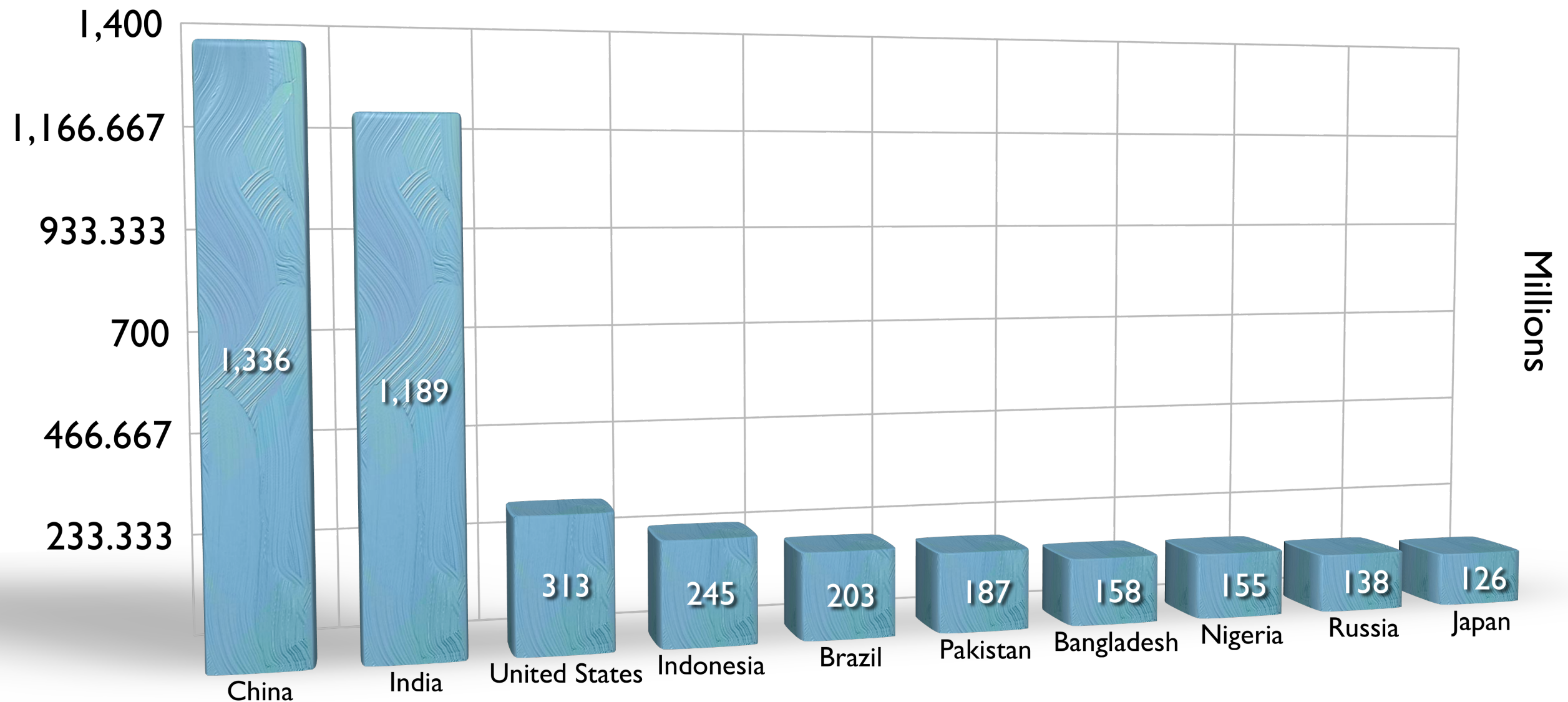
2008

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



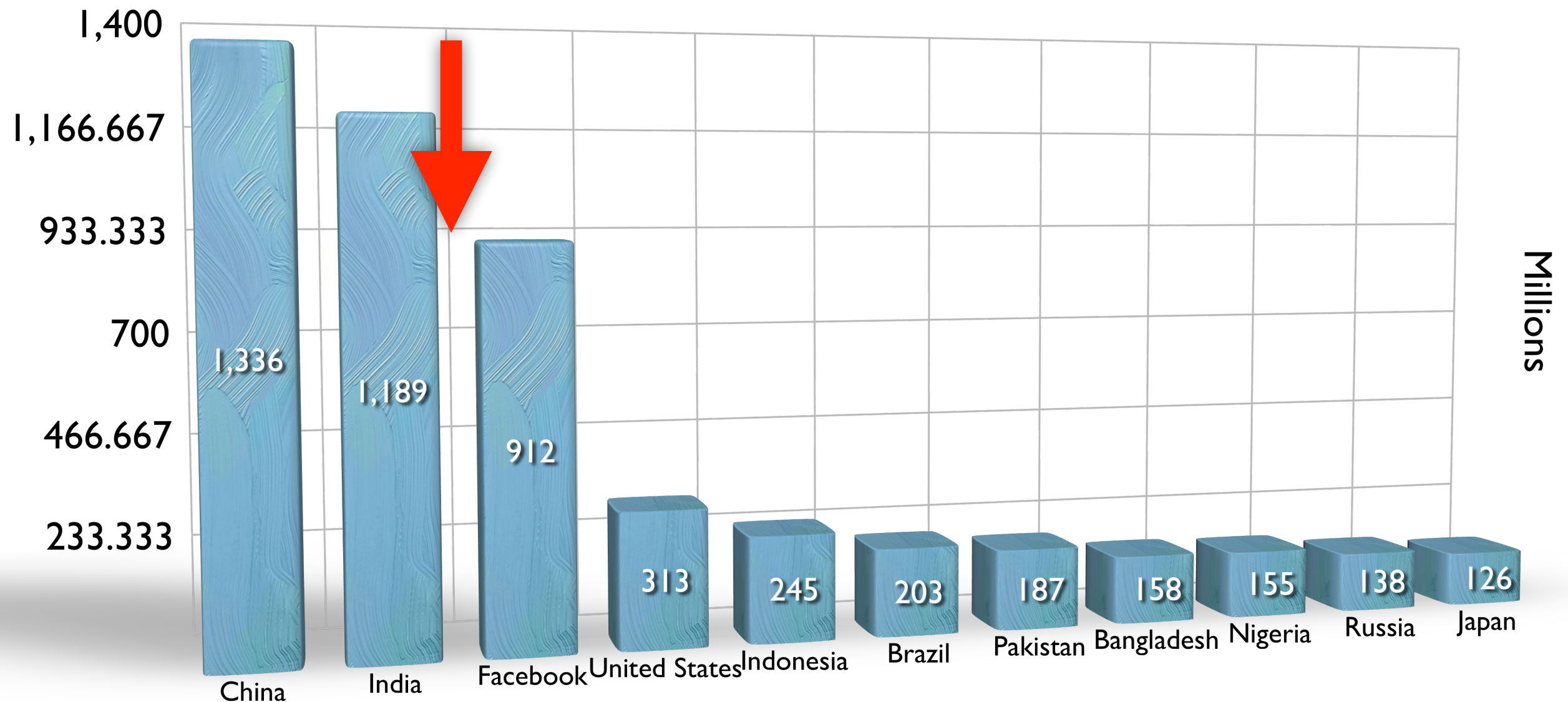
Top 10 Populations by Countries

as of December 31, 2011



Top 10 Populations by Countries

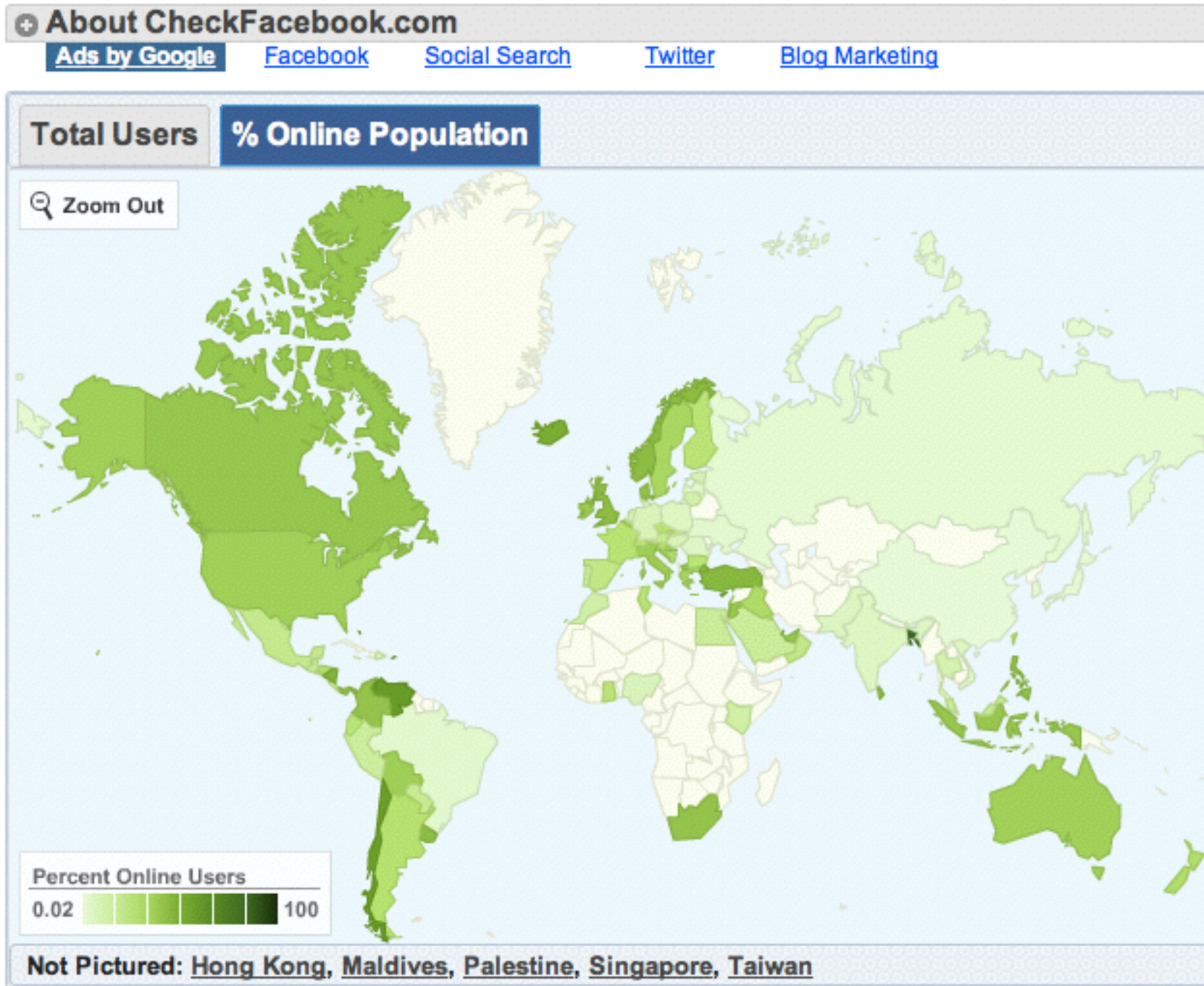
as of September 8, 2012



Facebook's Global Audience

Global Audience: 316,402,840

Data for 11/03/2009



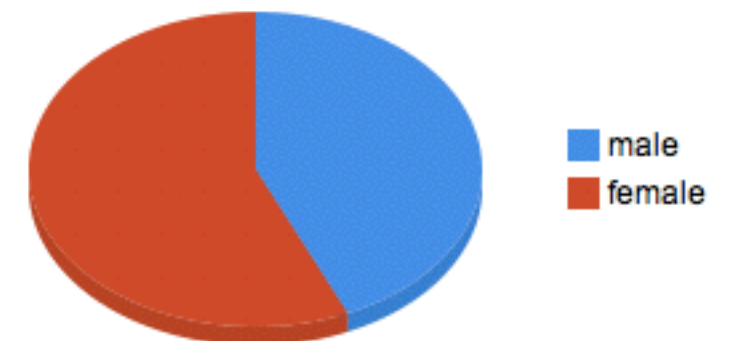
United States

Country Audience: 94,748,820

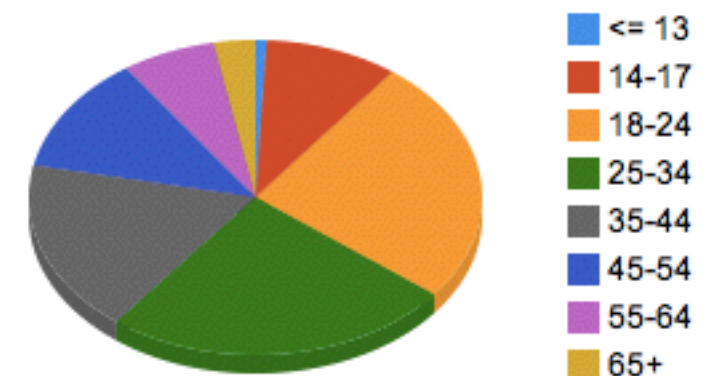
Percent of Global Audience: 29.95%

Share This Site 1543 retweet

United States Male / Female



United States Age Distribution



Facebook's Global Audience

Global Audience: 912,496,580

Data for 09/08/2012

About CheckFacebook.com



Start monitoring your Facebook Page today!

- ✓ Analyze your competition
- ✓ Track most engaging content
- ✓ Compare your results with leaders

Most comprehensive analytics platform for Facebook out there

Start right NOW!

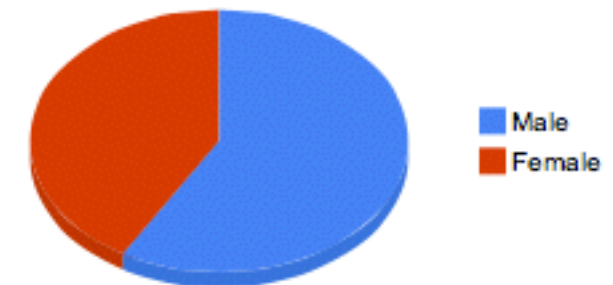
George May | DOB

China

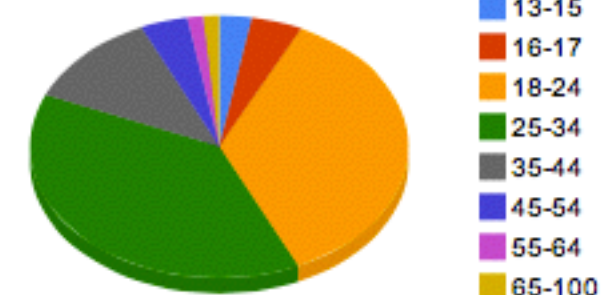
Country Audience: 552,560
Percent of Global Audience: 0.13%

Share This Site 4163 retweet

China Male / Female

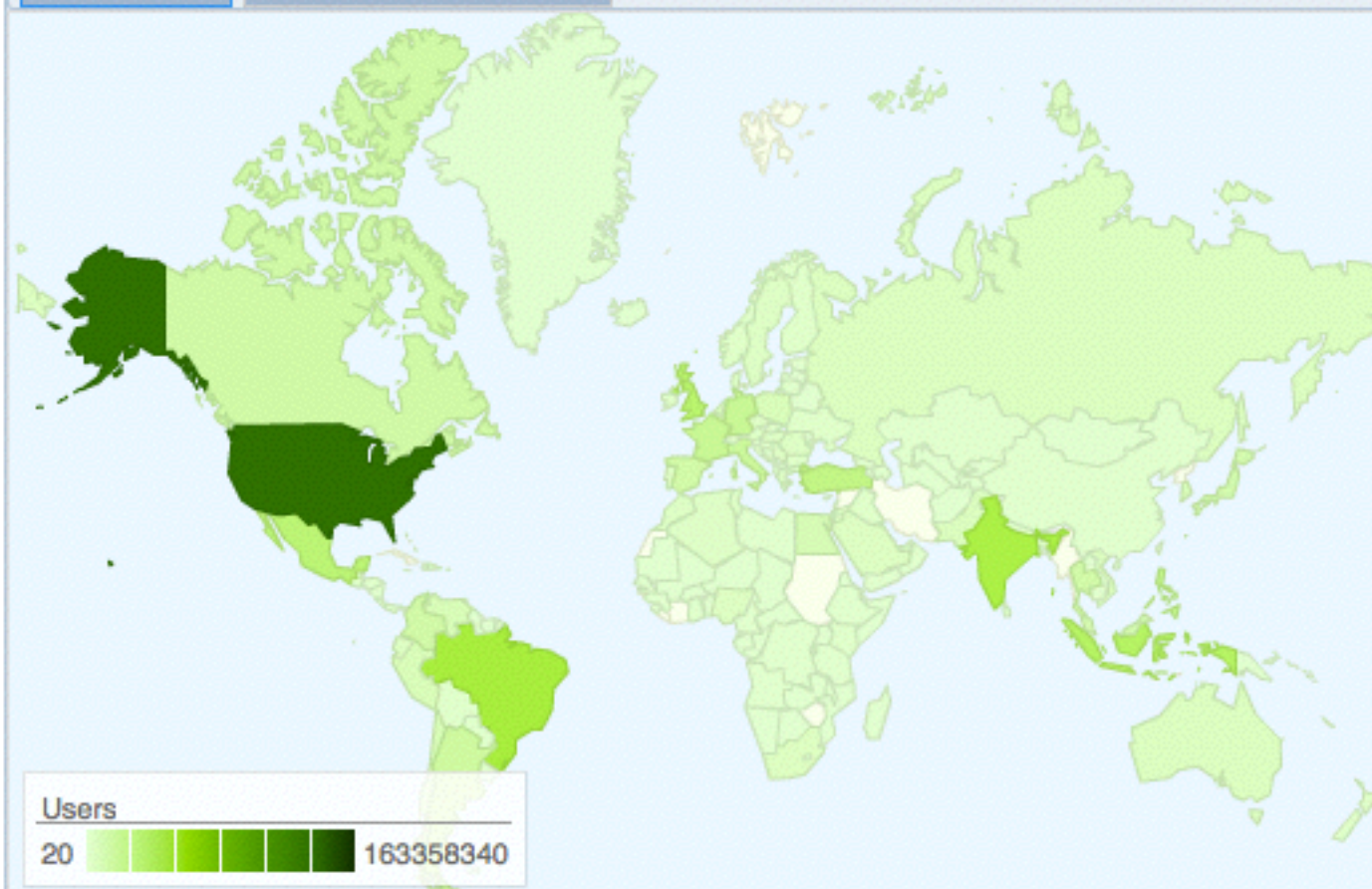


China Age distribution



Total Users

% Online Population



Users

20 163358340

Not Pictured: Hong Kong, Maldives, Palestine, Singapore, Taiwan

PRO Analytics
for facebook page!

- ✓ Local Industry benchmarks
- ✓ Discover what works
- ✓ Competitive reporting



Facebook's Growth Stats

Statistics

Company Figures

More than 400 million active users
50% of our active users log on to Facebook in any given day
More than 35 million users update their status each day
More than 60 million status updates posted each day
More than 3 billion photos uploaded to the site each month
More than 5 billion pieces of content (web links, news stories, blog posts, notes, photo albums, etc.) shared each week

10 Largest Countries

1. United States	94,748,820
2. United Kingdom	22,261,080
3. Turkey	14,215,880
4. France	13,396,760
5. Canada	13,228,380
6. Italy	12,581,060
7. Indonesia	11,759,980
8. Spain	7,313,160
9. Australia	7,176,640
10. Philippines	6,991,040

10 Fastest Growing Over Past Week

1. Poland	12.46 %	137,900
2. Thailand	10.96 %	161,300
3. Portugal	9.81 %	80,040
4. South Africa	9.25 %	189,080
5. Taiwan	7.82 %	367,400
6. Romania	7.65 %	28,060
7. Germany	7.54 %	350,240
8. Malaysia	7.43 %	236,840
9. Indonesia	6.84 %	752,640
10. Iraq	6.72 %	6,380



Facebook's Growth Stats

(as of September 2012)

Statistics

955 million monthly active users at the end of June 2012.

Approximately 81% of our monthly active users are outside the U.S. and Canada.

552 million daily active users on average in June 2012.

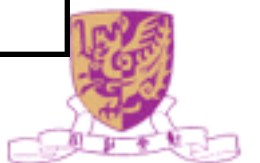
543 million monthly active users who used Facebook mobile products in June 2012.

10 Largest Countries		10 Fastest Growing Over Past Week	
1. United States	163,358,340	1. Vietnam	100.09 % 3,598,480
2. Brazil	56,804,900	2. Brazil	0.18 % 100,060
3. India	53,624,320	3. Thailand	0.21 % 34,780
4. Indonesia	44,156,440	4. Colombia	0.19 % 32,060
5. United Kingdom	40,036,380	5. Romania	0.44 % 21,940
6. Mexico	37,542,740	6. Croatia	0.84 % 13,120
7. Turkey	31,108,760	7. Netherlands	12.76 % 9,720
8. Philippines	29,136,040	Antilles	
9. France	24,639,540	8. Canada	0.05 % 9,700
10. Germany	24,300,340	9. Chile	0.10 % 9,560
		10. Jordan	0.37 % 8,980



Global Internet Traffic

Alexa as of August 2011	China	USA	Japan	India	Brazil	Global
1	Baidu	Google	Yahoo.jp	Google.in	Google.br	Google
2	QQ	Facebook	Google.jp	Google	Google	Facebook
3	Sina	Yahoo!	FC2	Facebook	Facebook	YouTUBE
4	Taobao	YouTUBE	YouTUBE	YouTUBE	YouTUBE	Yahoo!
5	Google.hk	Amazon	Google	Yahoo!	Universo Online	Blogger
6	163	Wikipedia	Ameblo.jp	Blogger	Windows Live	Baidu
7	Weibo	Blogger	rakuten	Wikipedia	Globo	Wikipedia
8	Google	Twitter	livdoor	LinkedIn	Orkut.com.br	Windows Live
9	ifeng	eBay	Facebook	Twitter	Yahoo!	Twitter
10	Yahoo	Craigslist	Wikipedia	Rediff	Orkut.com	QQ



Alexa as of May 2009	China	USA	Japan	India	Brazil	Global
1	Baidu	Google	Yahoo.jp	Google.in	Google	Google
2	QQ	Yahoo!	FC2	Google	Orkut.br	Yahoo!
3	Sina	Facebook	Google.jp	Yahoo	Windows Live	YouTube
4	Google.cn	YouTube	YouTube	Orkut.in	Universo Online	Facebook
5	Taobao	Myspace	Rakuten	YouTube	YouTube	Windows Live
6	163	MSN	Livedoor	Blogger	Globo	MSN
7	Google	Windows Live	Ameblo.jp	Rediff	MSN	Wikipedi
8	Sohu	Wikipedia	mixi	Facebook	Google	Blogger
9	Youku	Craigslist	Wikipedi	Wikipedi	Yahoo!	Baidu
10	Yahoo	EBay	Google	Windows Live	Terra	Myspace

Alexa as of August 2011	China	USA	Japan	India	Brazil	Global
1	Baidu	Google	Yahoo.jp	Google.in	Google.br	Google
2	QQ	Facebook	Google.jp	Google	Google	Facebook
3	Sina	Yahoo!	FC2	Facebook	Facebook	YouTube
4	Taobao	YouTube	YouTube	YouTube	YouTube	Yahoo!
5	Google.hk	Amazon	Google	Yahoo!	Universo Online	Blogger
6	163	Wikipedia	Ameblo.jp	Blogger	Windows Live	Baidu
7	Weibo	Blogger	rakuten	Wikipedi	Globo	Wikipedi
8	Google	Twitter	livedoor	LinkedIn	Orkut.com.br	Windows Live
9	ifeng	eBay	Facebook	Twitter	Yahoo!	Twitter
10	Yahoo	Craigslist	Wikipedi	Rediff	Orkut.com	QQ



The Brave New Words

博客

維基

avatar

头像

tag cloud

推特

unfriend

tweet

blogosphere

twitterati

defriend

SEXTING

hashtags

Folksonomy



Politics

REVOLUTION 2.0?

social media and political changes in Egypt & beyond



merlyna lim

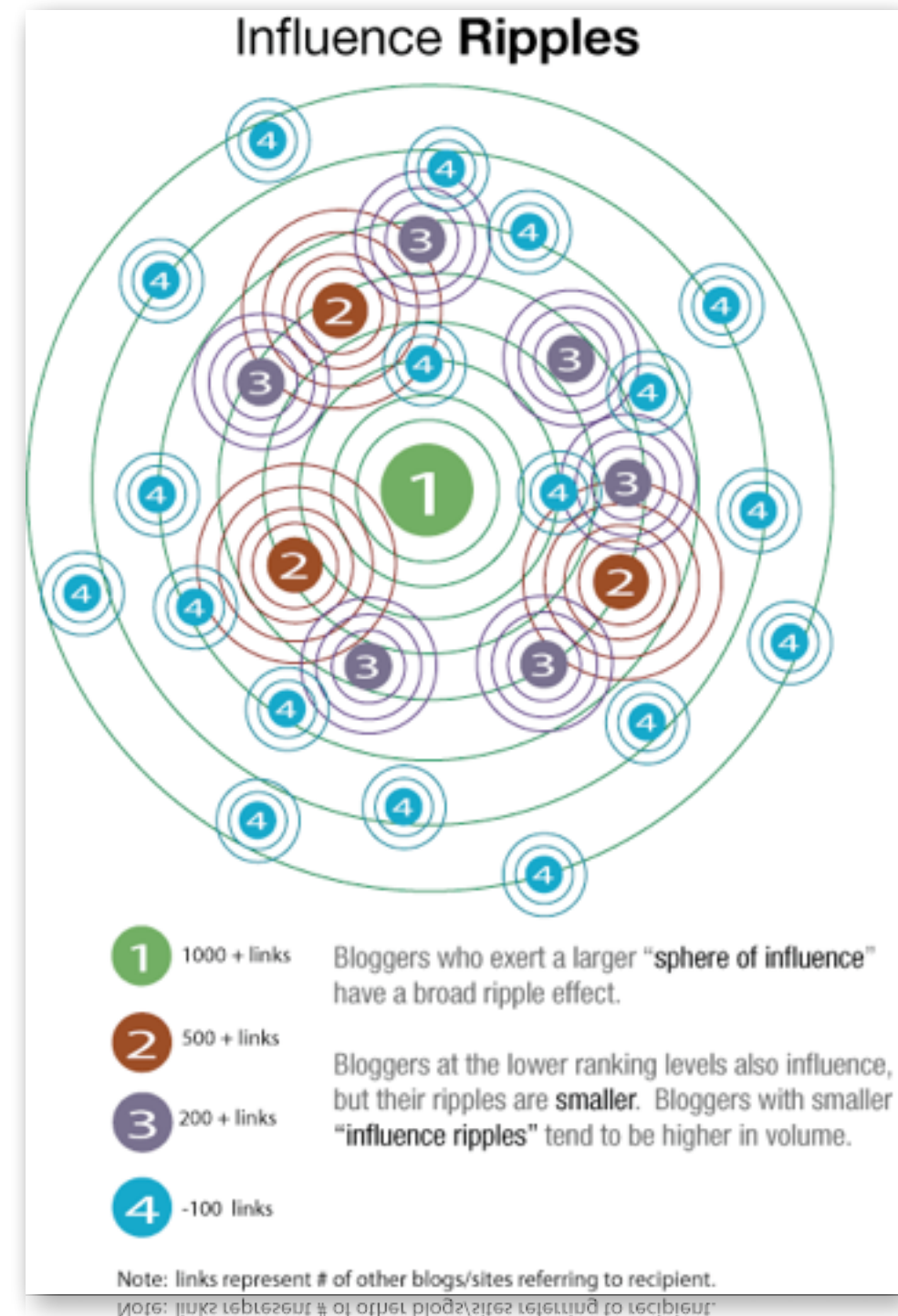
consortium for science, policy & outcomes (cspo)
school of social transformation - justice & social inquiry

kh
www.cscu.hk
2011-01-18-19



Commerce

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



Public Health

- People's **behavior** can be monitored
- What is on people's mind translates to **search queries**
- Google predicts flu trends...

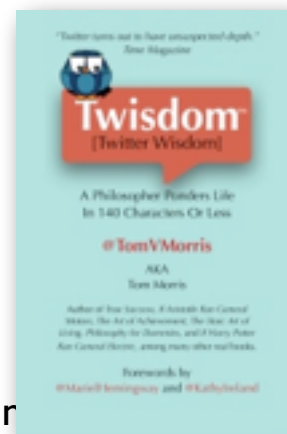
2007–2008 U.S. Flu Activity - Mid-Atlantic Region

ILI percentage



Pop Culture

- Twisdom: Twitter Wisdom
 - A Philosopher Ponders Life in 140 Characters or Less
 - “I don’t know the key to success, but the key to failure is trying to please everybody.” Bill Cosby Do what you know in your soul is right!
 - It is a miserable state of mind to have few things to desire, and many things to fear. – Francis Bacon
- The Longest Poem In the World-the awesome twitter poem! 956,644 verses this morning and ~4,000 a day!



The Chair of Philosophy of Hong Kong, CSC!



The Social Media Generation

The screenshot shows the YouTube channel page for the Academy of Motion Picture Arts and Sciences. At the top left is the Oscar statuette logo. The channel name is "Oscar®" with "Oscars's Channel" below it. Navigation buttons include "Subscribe", "Uploads", and "Favorites". In the top right, there are links for "VISIT OSCARS.ORG", "BECOME A FAN", and "SIGN UP FOR NEWS". The main video player shows a wide shot of the Oscars ceremony stage, with a progress bar at 0:01 / 9:45 and 360p resolution. Below the video are options for "Info", "Comments", "Favorite", "Share", "Playlists", and "Flag". The video title is "Steve Martin and Alec Baldwin hosting the Oscars®" with 61 ratings and 312 views. A description follows: "Steve Martin and Alec Baldwin, co-hosts of the 82nd Academy Awards®, in their opening monologue." To the right is a search bar and a list of related videos, including "Opening Number at the 2010 Oscars®", "The Hurt Locker winning Best Picture", "John Hughes Tribute at the Oscars®", "Kathryn Bigelow winning the Oscar® for Directing", "Sandra Bullock winning Best Actress", "Jeff Bridges winning Best Actor", "Steve Martin and Alec Baldwin hosting the", and "Editing Oscar® Nominees".



The Age of FaceBook

The screenshot shows the Facebook interface for Barack Obama's page. At the top, the Facebook logo and navigation links (Home, Profile, Account) are visible. The page header includes the name "Barack Obama" and a "Become a Fan" button. Below this, there are tabs for "Wall", "Info", "Boxes", "Events", "Notes", and "Photos". The main content area displays several posts:

- A post titled "Barack Obama 8: the number of people every minute who are denied coverage, charged a higher rate, or otherwise discriminated against because of a pre-existing condition." It features a large number "8" and a link to "Health Reform by the Numbers: 8" on www.whitehouse.gov. The post is dated "27 minutes ago" and has 4,913 views.
- A post titled "Barack Obama Speaking about health insurance reform this morning at Arcadia University - starting at 11:00 a.m. ET." It includes a "LIVE" video player and a link to "President Obama Speaks on Health Insurance Reform" on www.whitehouse.gov. The post is dated "Yesterday at 12:21am" and has 12,287 views.
- A post titled "Barack Obama I need your help in urging all Americans who want health reform to make their voices heard." It features a video player and a link to "President Obama's message to supporters: 'We need you in this final march for reform'" on www.youtube.com. The post is dated "March 5 at 8:14am" and has 22,867 views.

On the right side of the page, there is a sidebar with a "Create an Ad" button and a section titled "Connect With More Friends" which includes an envelope icon and text encouraging users to share the Facebook experience with more friends.

This page is run by Organizing for America, the grassroots organization for President Obama's agenda for change. To visit the White House Facebook page, go to: <http://bit.ly/2bVCm>. OFA is a special project of the Democratic National Committee.

Information

Current Office
Office:
President of the United States

President of the United States
Office:
Current Office

Information



Outline

- Introduction to Social Computing
- Social Network Theory
- Graph mining
- Ranking and Link Analysis
- Recommender Systems
- Human Computation
- Opinion Mining/Sentiment Analysis
- Opinion mining and sentiment analysis
- Social Computing in Education
- Social Monetization
- and possibly more...



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**

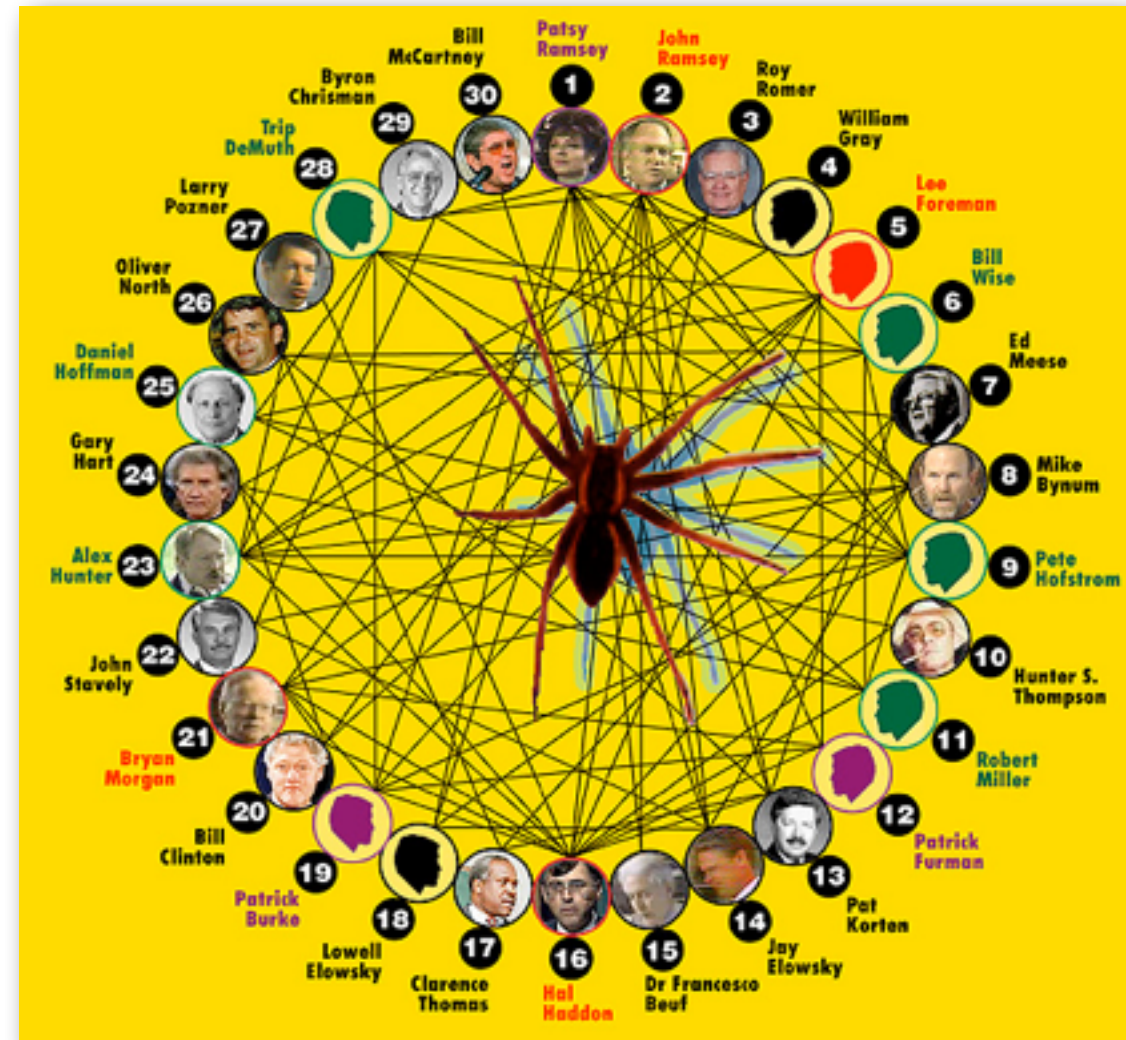


Social Networks

Society:

Nodes: individuals

Links: social relationship
(family/work/friendship/etc.)

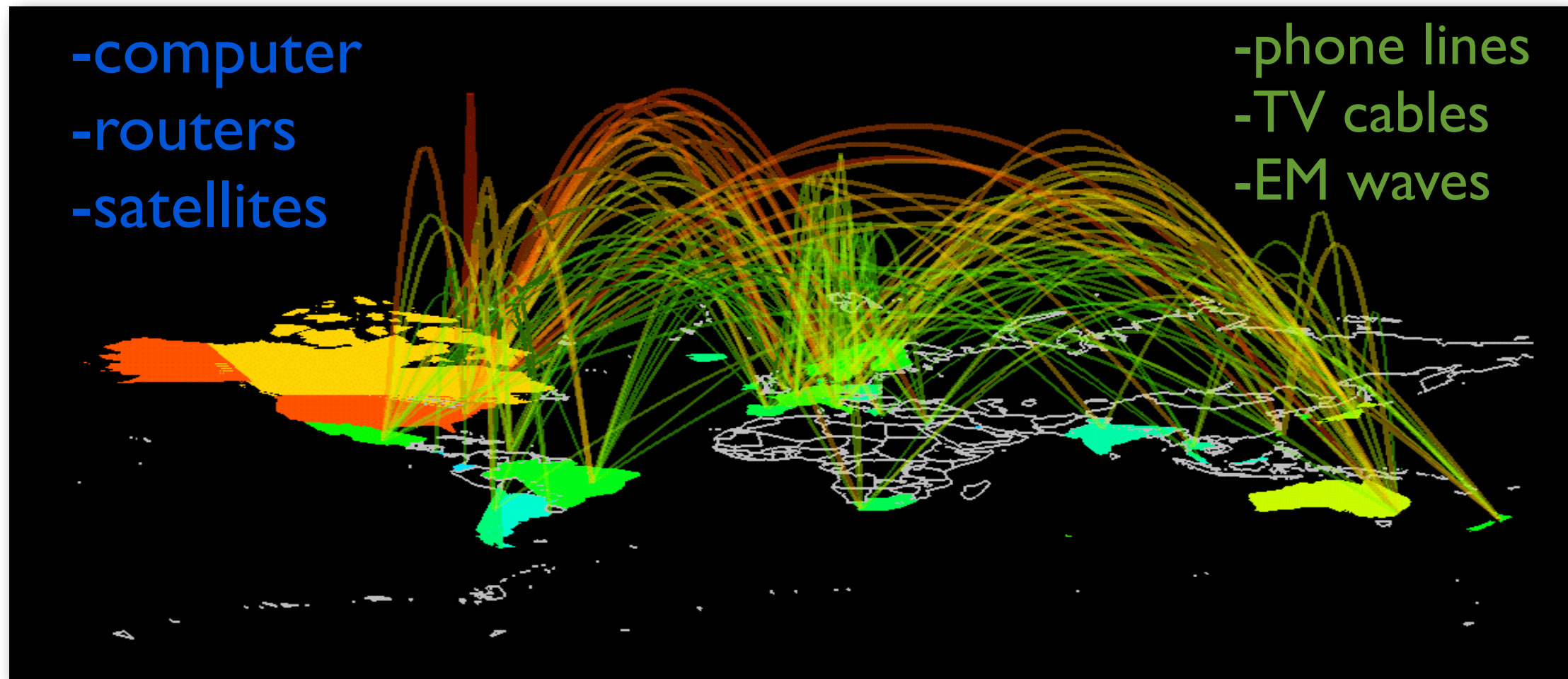


S. Milgram and John Guare: **Six Degree of Separation.**
Social networks: Many **individuals** with diverse **social interactions** between them.



Social Networks

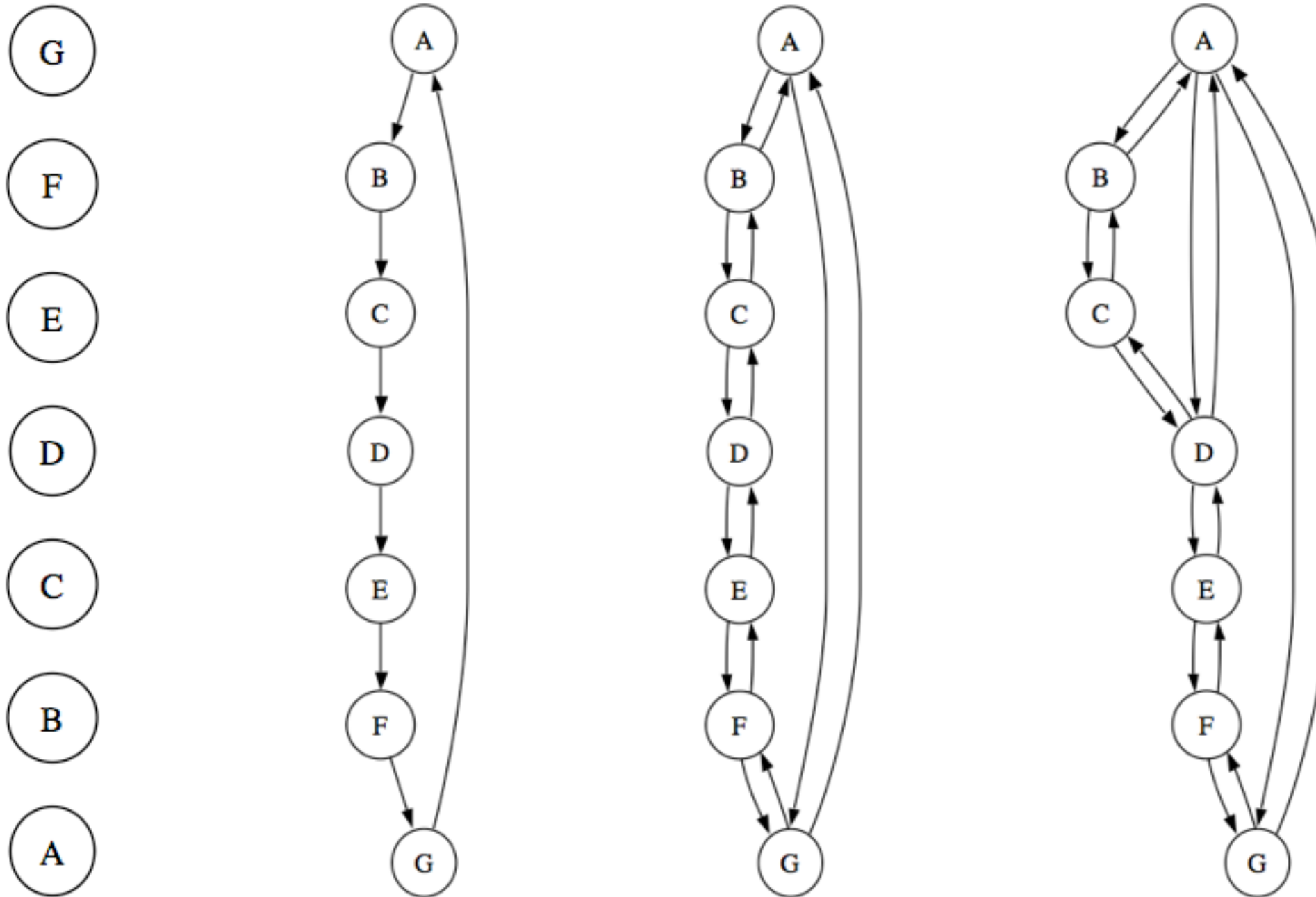
- The Earth is developing an electronic nervous system, a network with diverse **nodes** and **links**.



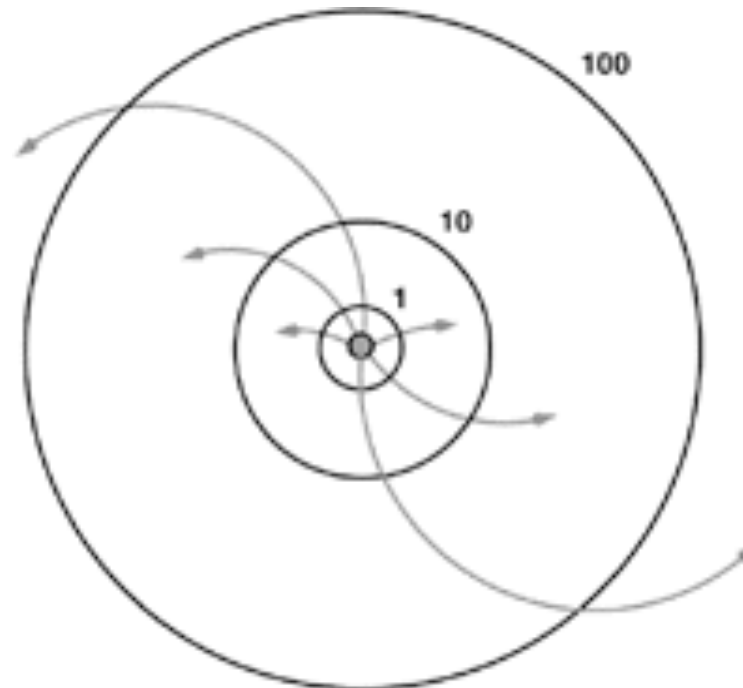
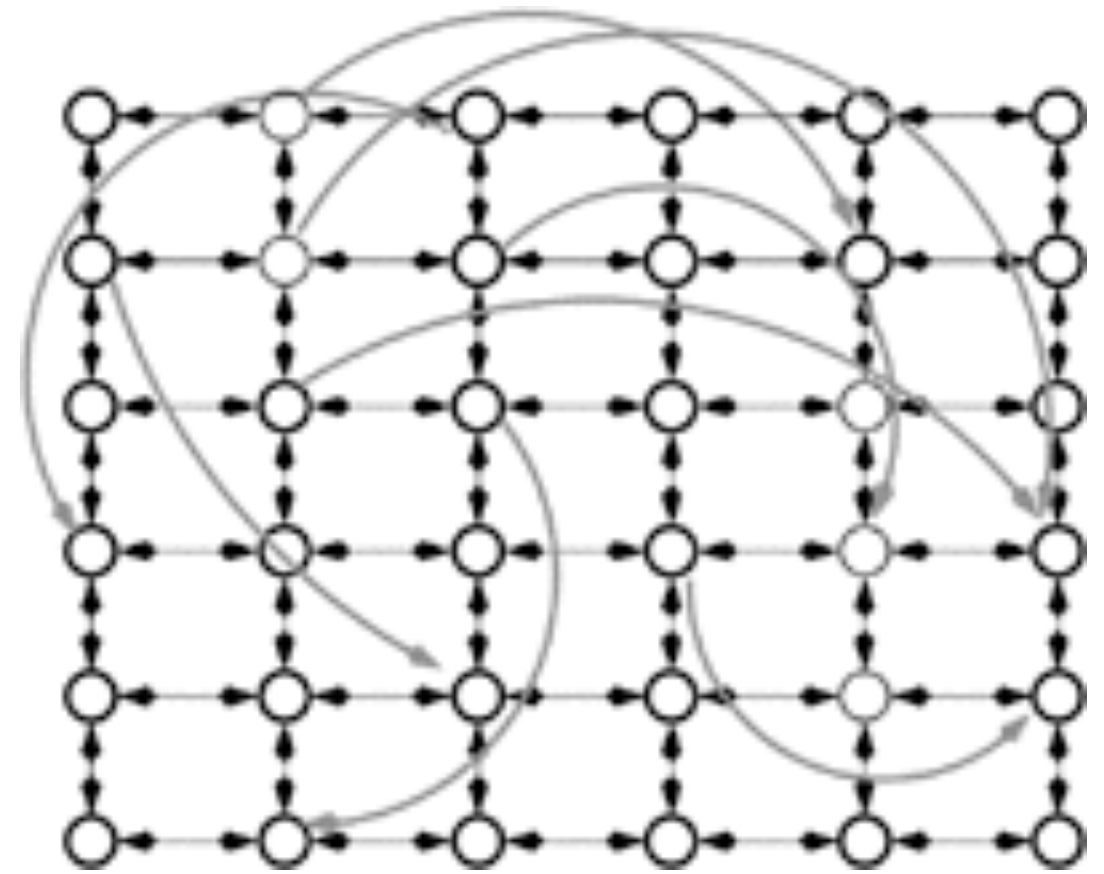
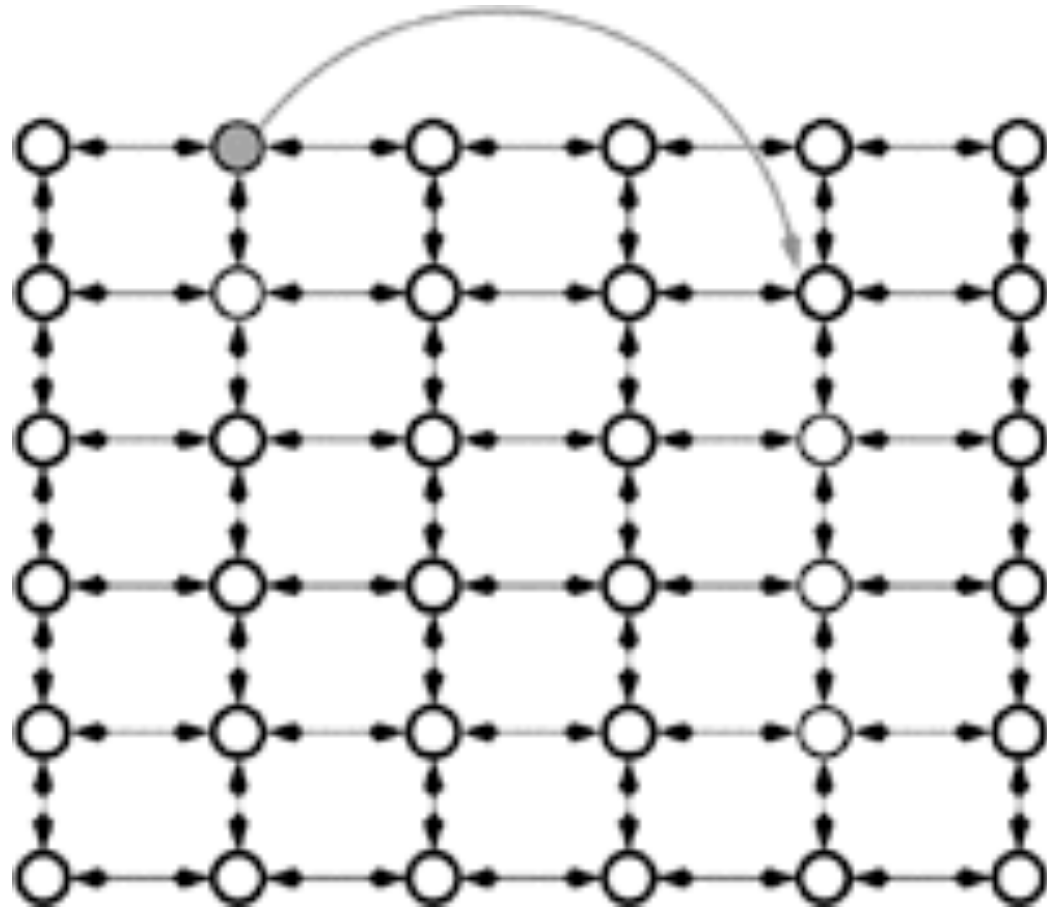
Communication networks: many non-identical components with diverse connections between them.



The Flow of Information



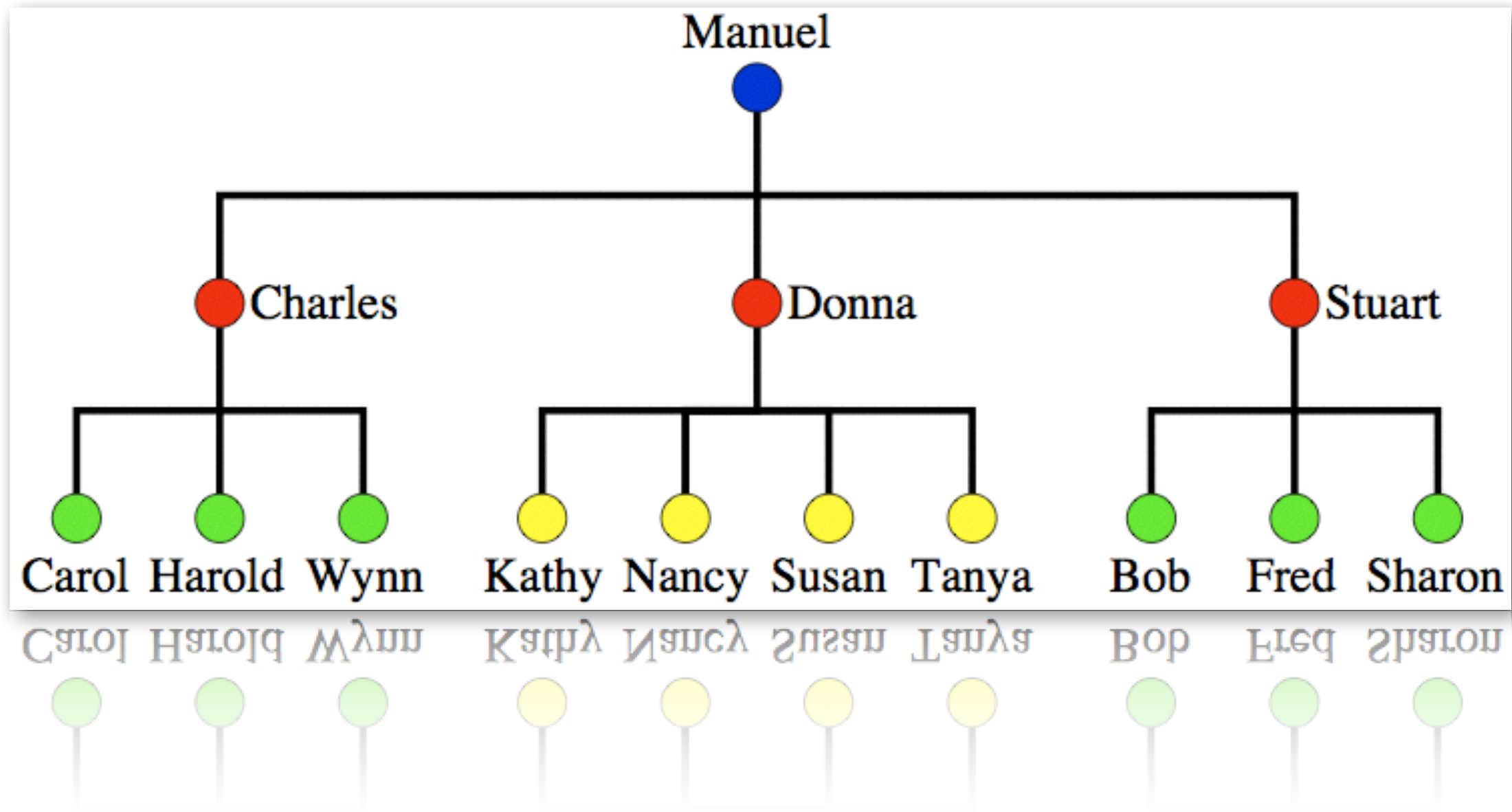
Examples



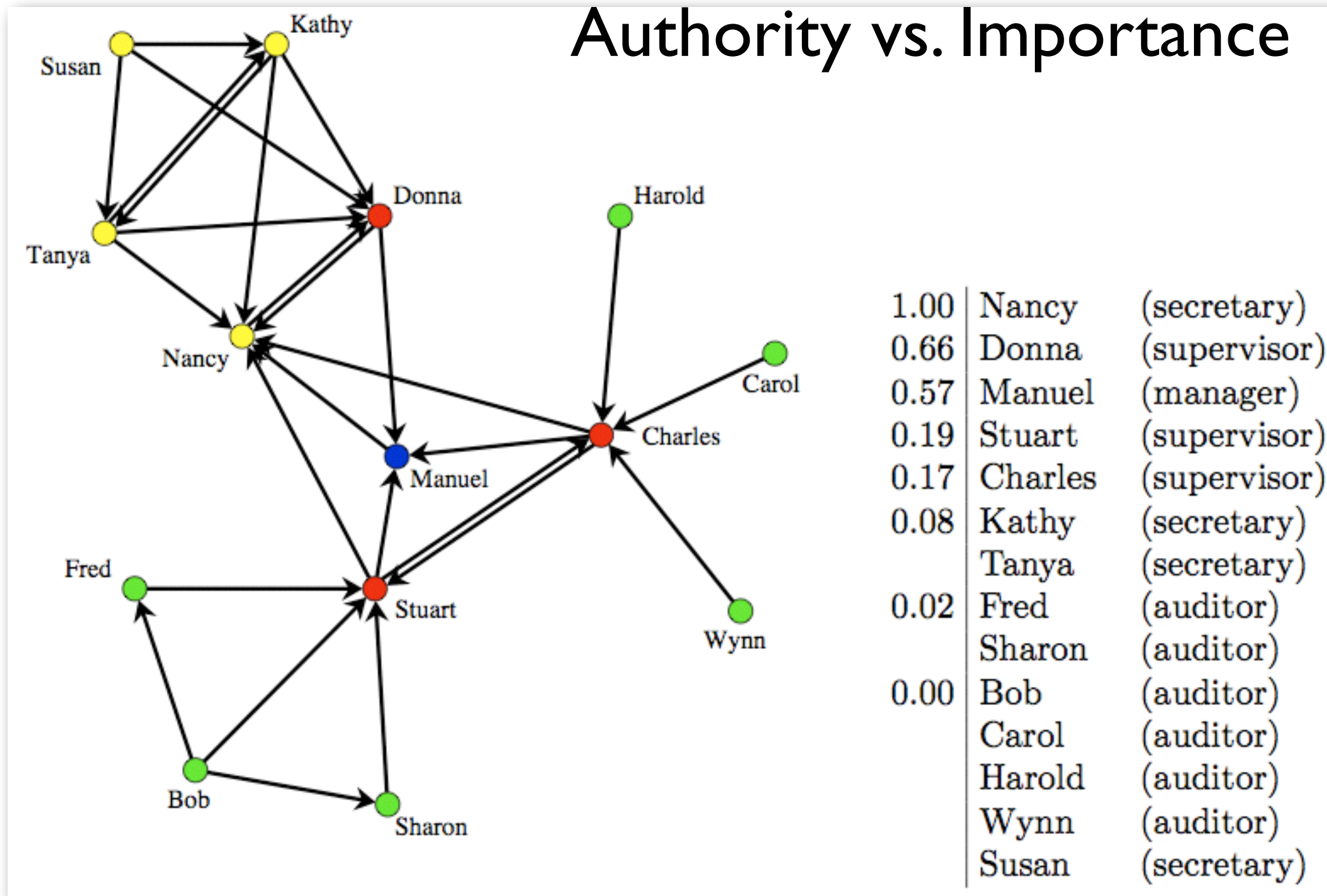
[Kleinberg 1999]



Organizational Chart



Social Network Chart



Social Networking Sites

- Example of Social Networking Sites: FaceBook, MySpace, Blogger, QQ, etc.



Social Search

- Social Search Engine
- Leveraging your social networks for searching

eureka!swicki login | sign up

build new swicki | swicki directory | about swickis | about eureka!

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](#)

Eureka! 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.

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 <ul style="list-style-type: none">askforkidse-learning et didactique ...denver newshome repairs any gal can ...creative ideas for green ...easy woodworking projects ... More >	Top swickis <ul style="list-style-type: none">techorunchborr2ikeapopular sciencereadertweblockergnomeneopetslarkswicki More >	DIY: home improvement swicki showcase	
Computers <ul style="list-style-type: none">dot net search engl...php resource searchrails on rubysoftware factoriesweb 2.0 workgroup More >	Business <ul style="list-style-type: none">adbloggingalternative search ...bubblegeneration - ...contextual adverti...digging into searchfreelance tipstergreen building reso... More >	Home <ul style="list-style-type: none">about color for hom...gardening and plant...home improvement se...homemade baby food ...homemakingsalmon More >	Regional <ul style="list-style-type: none">amazon riveratlanta business se...atlanta home and ga...berkeley public lib...pittsburgh newspittsburgh 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 Media

The screenshot shows the YouTube homepage with the following sections:

- Navigation:** Home, Videos, Channels, Community. Search bar with "Videos" dropdown and "Upload" button.
- Videos being watched right now...:** A row of five video thumbnails with durations: 02:13, 03:29, 01:58, 07:01, 03:53.
- Promoted Videos:** Four video thumbnails with titles: "Think Again Awards", "Think Again Awards", "第14屆十大電視廣告頒獎典禮 - 播出...", "紅館觀眾向更姐獻花".
- Featured Videos:** A list of four featured videos:
 - David Sedaris delivers a pizza:** From *weeknights*, Views: 11,313, 5 stars, 01:01. Description: "Author and NPR personality David Sedaris delivers piping hot dinner right to your door in 30 bleak anecdotes or less— or your ire (more)".
 - Erbert and Gerbert's Candle Cannon:** From *candlecannon*, Views: 109,029, 5 stars, 02:34. Description: "See the world's largest and most powerful air vortex cannon in action - www.candlecannon.com Erbert & Gerbert's has been makin (more)".
 - Girl's Night Out:** From *glandevine*, Views: 169,435, 5 stars, 03:49. Description: "Newly single Mary Olson (Etta Devine) goes to the grocery store to find true love. Written and directed by Gabriel Diari. Shot a (more)".
 - Lionel Neykov - Freeze My Senses:** From *LionelNeykov*, Views: 150,758, 5 stars, 03:35. Description: "Hey! If you like this song, you can download the mp3 from itunes. Just type my name in the search box, and you'll find me. You ca (more)".
- What's New:** A yellow box containing:
 - 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, "Sign In", "Create Your Account" button, and a sub-header "Only takes a moment with your Yahoo! ID".
- Main Content:** A large photo of a small plant growing from a crack in a sidewalk, credited to "By jim343". Below it, text says "3,802 photos uploaded in the last minute · 558,832 photos tagged with urban · 2.2 million photos uploaded this month · Take the tour".
- Navigation:** "Share & stay in touch", "Upload & organize", "Make stuff", "Explore...".
- Footer:** "Take the Tour" button and text: "Explore Flickr Blog, the World Map, Camera Finder or interesting photos from the last 7 days".

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

- Header:** "SECOND LIFE" logo, "Your World. Your Imagination.", "Resident Login | Join", and navigation links: "What is Second Life?", "Showcase", "Community", "Blog", "Support".
- Main Content:** A large image of a man and a woman flying through a blue sky. Text on the right says "Get Started! Membership is FREE!" and "Second Life is an online, 3D virtual world imagined and created entirely by its Residents." Below this, it says "Discover a whole new world of friends, fashion, music, videos and fun! Explore the best of Second Life >>".
- Footer:** "Your Organization in Second Life! Find out why your business, school or nonprofit organization should get its own virtual world presence. VISIT SECOND LIFE GRID >>".

Social News/Mash Up

The screenshot shows the Digg website interface. At the top, there's a navigation bar with 'Join Digg', 'About', and 'Login'. Below that, there are tabs for 'All', 'News', 'Videos', 'Images', 'Podcasts', and 'Customize'. A secondary navigation bar lists categories like 'Technology', 'World & Business', 'Science', 'Gaming', 'Lifestyle', 'Entertainment', 'Sports', and 'Offbeat'. The main content area is titled 'News, Videos, Images' and features a list of articles. The first article is 'Microsoft Demos "ADD TO DIGG" Feature in IE8' with a sub-headline 'Discover the best of the web! Learn more about Digg by taking the tour.' Other articles include 'It was only a matter of time, The SIMS 3 Official' and 'Universe submerged in a sea of chilled neutrinos'. On the right side, there's a 'Visual Studio' advertisement and a 'Top in All Topics' section with various trending items like 'The ravages of aging: Sean Connery, 20 years ago vs Today'.

The screenshot shows the Twitter website homepage. At the top, there's a 'Select Language' dropdown. The main heading is 'What is Twitter?' with sub-sections for 'What?', 'Why?', and 'How?'. A large graphic features a yellow bird on a branch. Below the graphic, there's a list of tweets, including one from 'Ly' about waiting for PCML and another from 'Maggie' about landing in LA. On the right side, there's a sign-in section with fields for 'user name or email address' and 'password', and a 'Remember me' checkbox. A 'Watch a video!' button is also present. Below the sign-in section, there's a message: 'Already using Twitter from your phone? Click here.'

The screenshot shows the FoxyTunes website for the artist Björk. The top navigation bar includes 'Search', 'Genres', and 'Tools'. The main content area is titled 'Björk' and features a large image of her performing. Below the image, there's a description: 'Björk Guðmundsdóttir (['pjærɔk 'kunnvynstóttir] (help·)) (born November 21, 1965 in Reykjavík, Iceland) is an Icelandic singer/songwriter and com... (more)'. There are social media sharing options for 'Share this artist' and 'Blog this artist'. The page is divided into several sections: 'Videos on YouTube' with a video for 'All is full of love', 'Lyrics from Yahoo! Music' listing songs like '5 Years', 'Alarm Call', and 'Bachelorette', 'Flickr Photos' showing a gallery of images, and 'Artist on Last.fm' featuring 'The Sugarcubes' and 'Goldfrapp'. There's also a 'Music on Hype Machine' section with a 'Play All' button.

The screenshot shows the TwitterVision website, which is a mashup of Twitter data and a map. The map displays the United States and surrounding regions, with a pink bird icon indicating a tweet location. A tooltip for a tweet from 'Killane' is shown, stating 'I feel odd' and '17 minutes ago in North of Seattle'. The top of the page says '8 new tweets' and 'twittervision'. The map includes labels for 'Chukchi Sea', 'Beaufort Sea', 'Baffin', 'Gulf of Alaska', and 'United States'.

Social Knowledge Sharing

WIKIPEDIA

English
The Free Encyclopedia
2 268 000+ articles

Deutsch
Die freie Enzyklopädie
718 000+ Artikel

Français
L'encyclopédie libre
631 000+ articles

日本語
フリー百科事典
474 000+ 記事

Nederlands
De vrije encyclopedie
414 000+ artikelen

Español
La enciclopedia libre
339 000+ artículos

Svenska
Den fria encyklopedin
277 000+ artiklar

Polski
Wolna encyklopedia
477 000+ hasel

Italiano
L'enciclopedia libera
421 000+ voci

Português
A enciclopédia livre
364 000+ artigos

search · suche · rechercher · szukaj · 検索 · ricerca · zoeken · busca
buscar · sök · поиск · 搜索 · søk · haku · suk · cerca · căutare · ara

English

KNOL™
BETA

Welcome to Knol

Share what you know

Write and post a knol (nōl) — a unit of knowledge.

Create
easy to write and manage

Search
searchable through popular search engines

Control
each knol is owned by you, the author

English

search · suche · rechercher · szukaj · 検索 · ricerca · zoeken · busca
buscar · sök · поиск · 搜索 · søk · haku · suk · cerca · căutare · ara

the author
each knol is owned by you'
Control



Social News and Knowledge Sharing

- Social news refers to websites where users can submit their own information. Users can also vote on news or other links to determine which links are presented

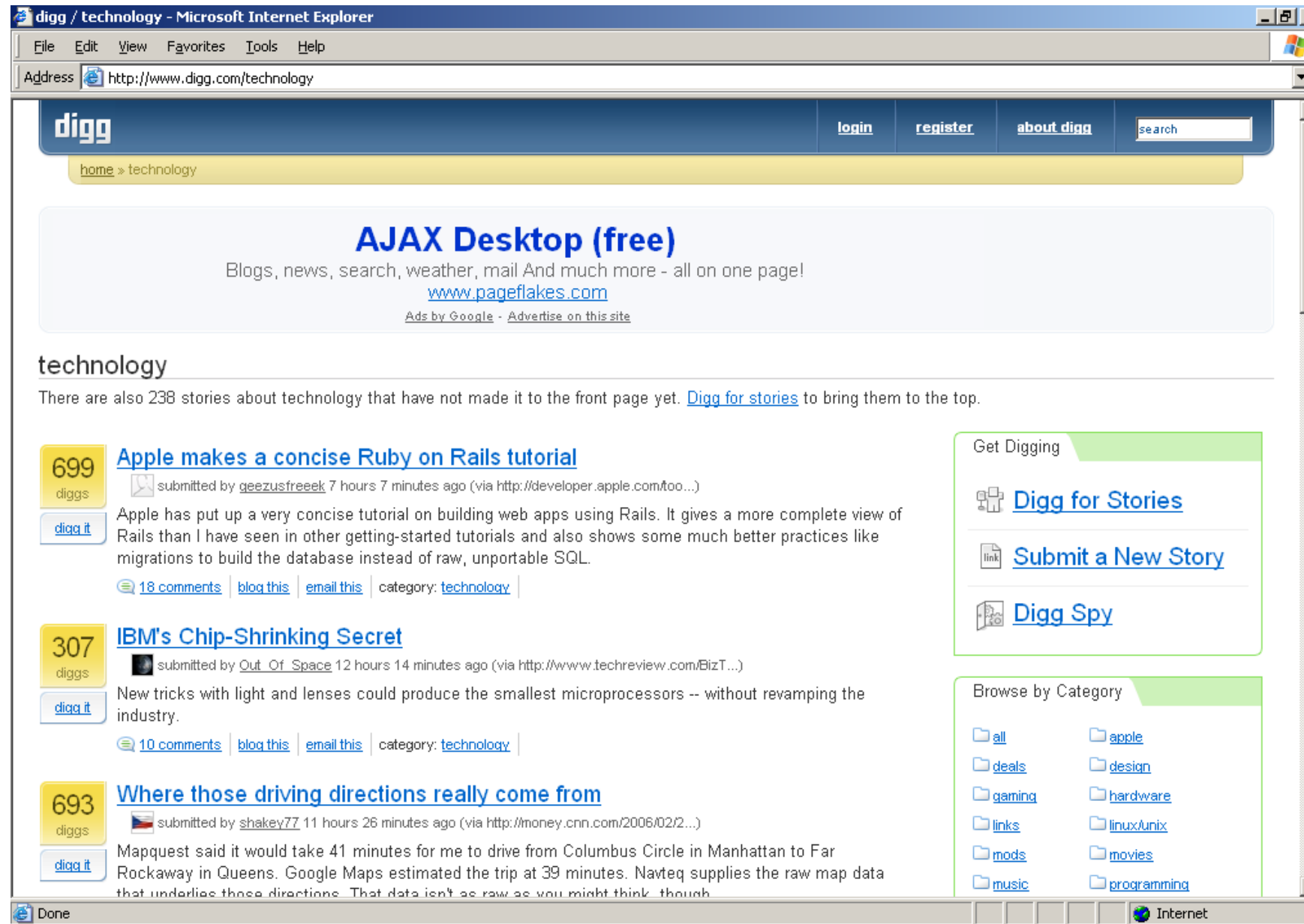


The screenshot shows a WikiHow article page. At the top, there is a navigation bar with links for 'Create an account or log in', 'How', and 'wikiHow'. Below this is the WikiHow logo and the tagline 'The How-To Manual That Anyone Can Write or Edit'. A search bar is present with the text 'Search wikiHow'. The article title is 'How to Repair a CD Using Toothpaste'. A red arrow points to a notice: 'It has been suggested that this article or section be merged with *How to Fix a Scratched CD*. (Discuss)'. The main text begins with 'When finding out that your favorite music CD or Playstation disc will not work due to excessive scratching, many of us feel upset and angry. There is actually a quick simple solution to solve this increasing problem. Some would tell you to spend money on a repair kit while other wasteful folk would tell you to toss the CD into the garbage. As long as the disc is not deeply scratched into its core, it may still be a repairable item and may be able to extend its life of entertainment. Please note that this method will only repair a CD if it is scratched. If you have a disc that is not scratched but still does not function properly, the problem lies elsewhere. However, this tactic will repair virtually any type of optical disc, from DVDs to software CDs to disc-based video games.'

Wikis allow collaborative publishing. Anyone can create new articles or edit existing articles. All versions are kept.



Social News and Knowledge Sharing



- **Digg.com** members “vote” for stories to appear on the home page



Social News and Knowledge Sharing

- The notion that each individual contributes to a collective pool of knowledge is further realized in AnswerBus, Webclopedia, Yahoo's babelfish, etc.

AnswerBus

Type in your question in English, French, Spanish, German, Italian or Portuguese.

Webclopedia

Targeted Delivery of Multilingual Information

YAHOO! BABEL FISH



Social News and Knowledge Sharing

- Question and answering

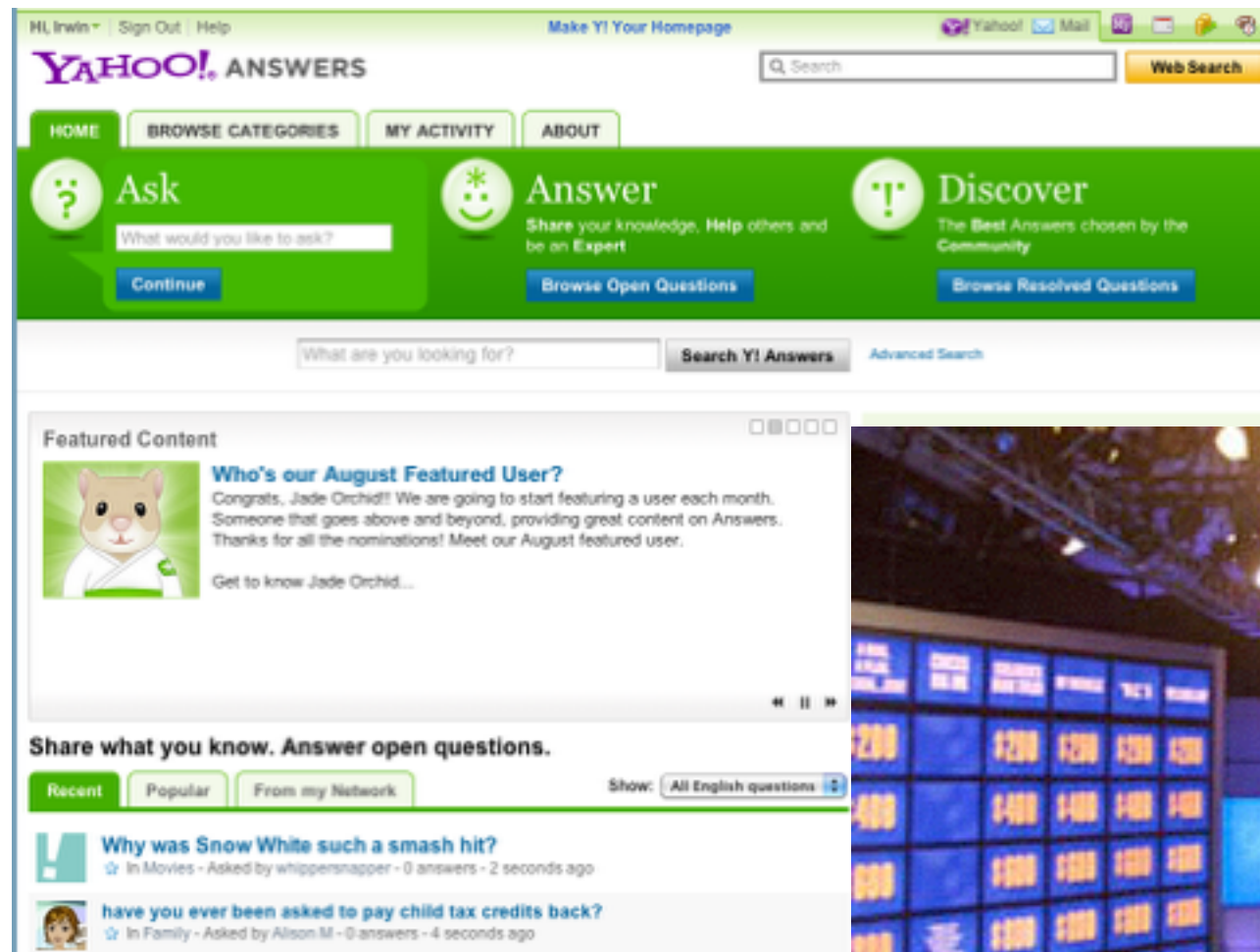


PHOTO: JULIANNE PEPITONE/CNNMONEY



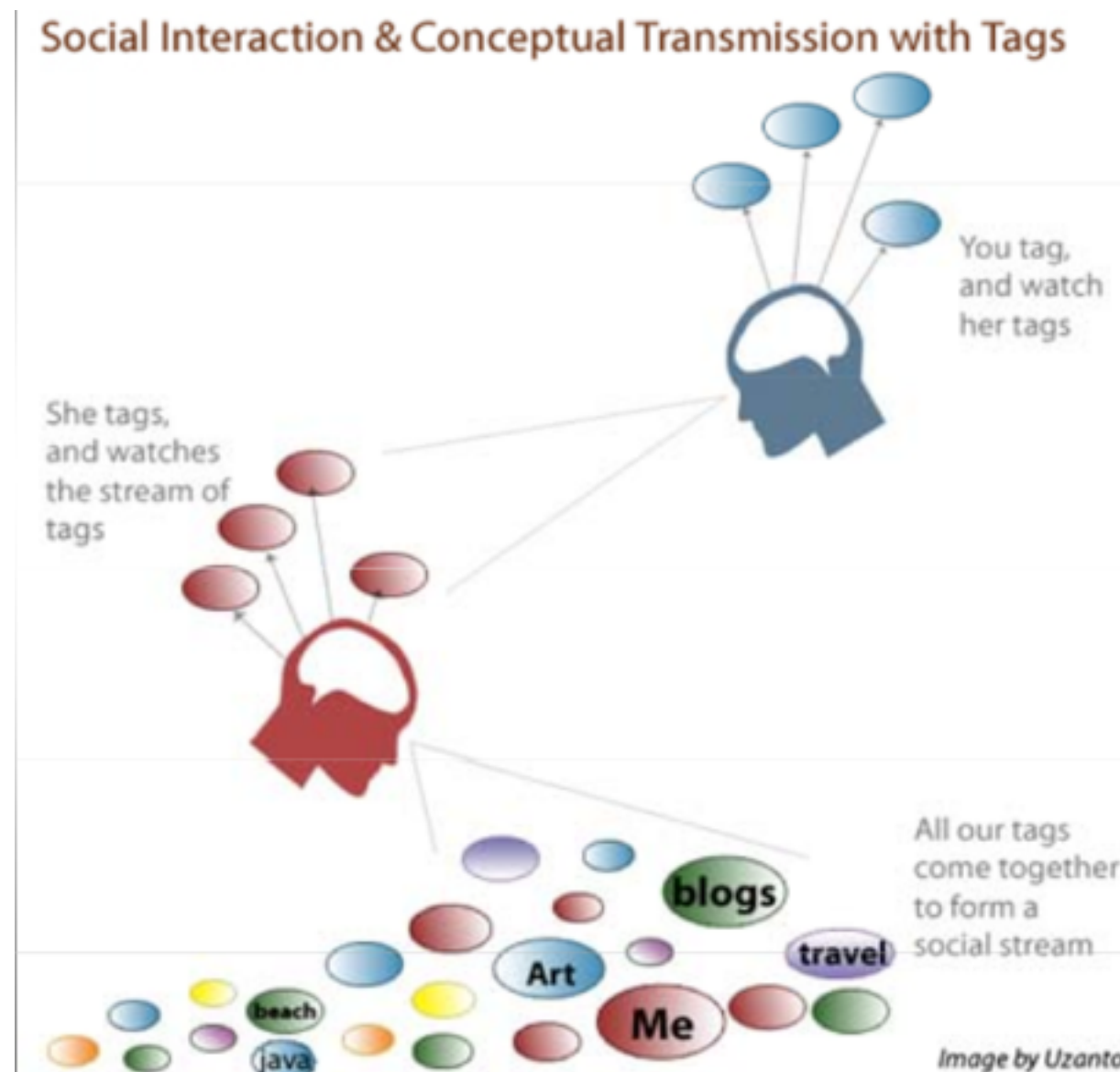
Social Bookmarking

- **What is a tag?**
 - Descriptive metadata
 - A keyword or term associated with or assigned to a piece of information
 - User defined, created and shared
 - Many web users do it every day, with very little conscious awareness that they are “cataloging”
- **What gets tagged?**
 - Pictures, blog posts, video clips, catalog entries, just about anything...



Social Bookmarking

- Share one's tags
- Make the individual browsing experience a social one

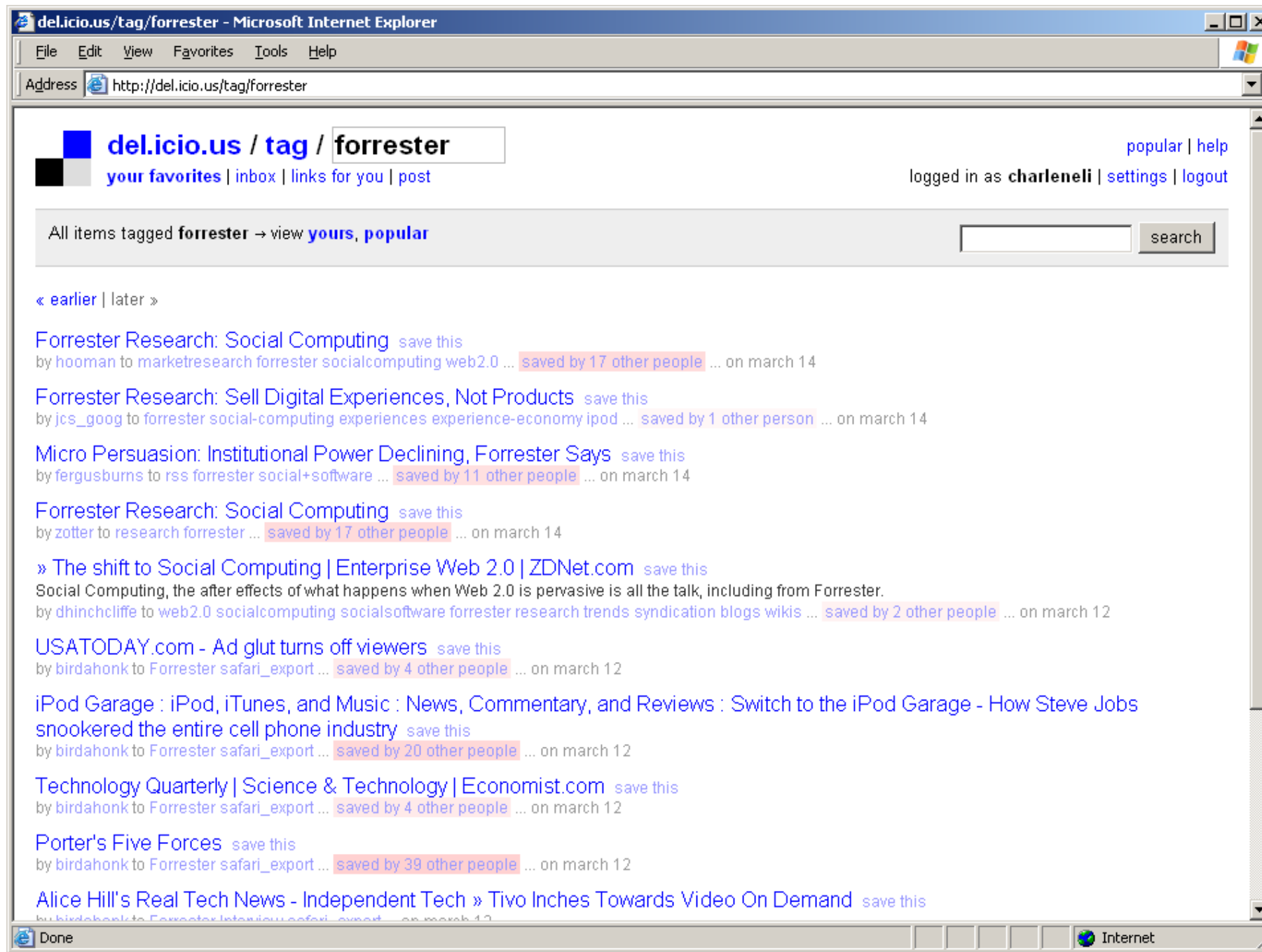


Why users tag?

- Tagging means something specific to the user
- It is easy -- anyone can do it
- Finding things on the Internet
- Serendipitous discovery
- It is social
- New ways to share and discover



Social Bookmarking in del.icio.us



Social Bookmarking in StumbleUpon

- **StumbleUpon** allows users to discover and rate web pages, photos, and videos. It chooses which web page to display based on the user's ratings of previous pages, ratings by his/her friends, and by the ratings of users with similar interests.



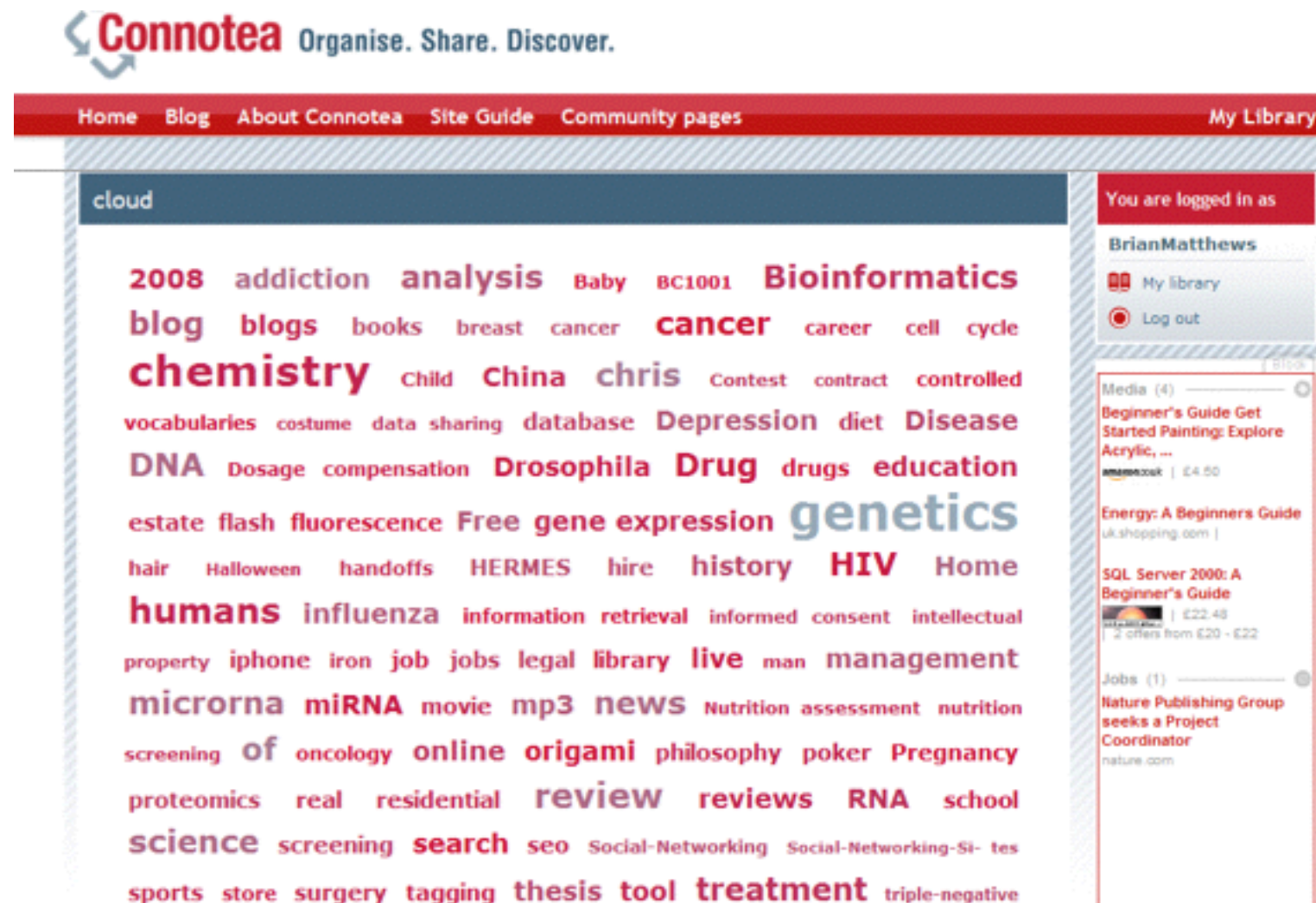
Folksonomies

- Folksonomies are the actual output result of collaborative tagging
- Literally, it is taxonomy by “folks”
- Grass-roots
- Community based
- Inclusive -- everyone can get involved
- Scalability



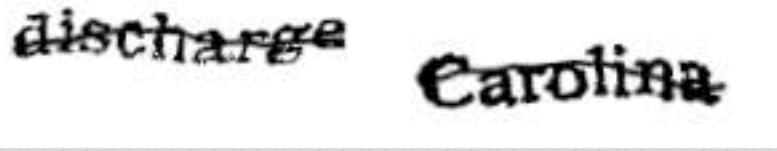
Tag Clouds

- Visualization of tags
- Weighted value -- based on size, frequency of use of tag



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](#)



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?](#)
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[Try an audio captcha](#)



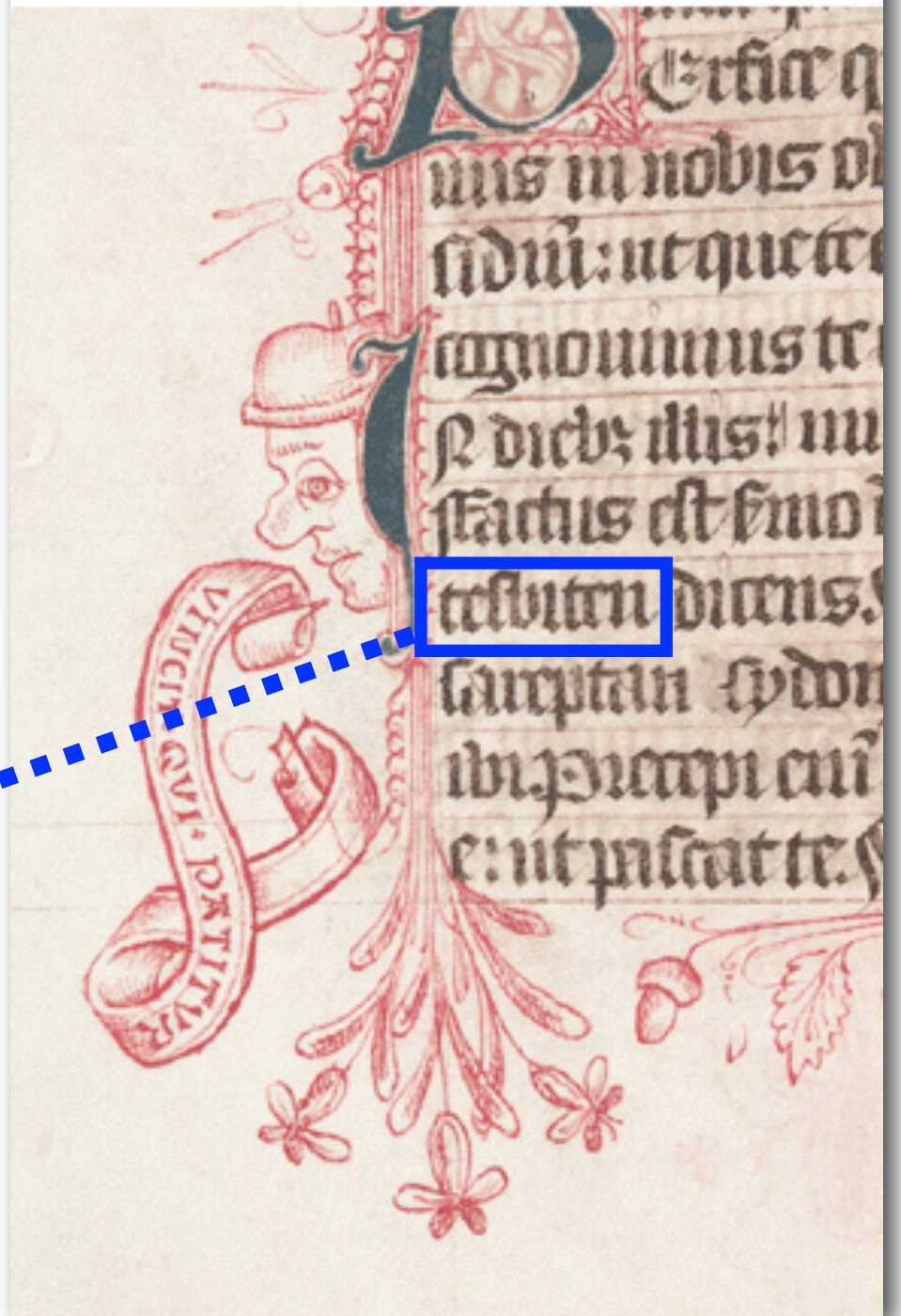
Text in the box:

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Sign Up

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

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



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

Sign Up

I have read and agree to the [Terms of Use](#) and [Privacy Policy](#) The Chinese University of Hong Kong, CSCI5733 Social Computing, Irwin King



Human Computation

The screenshot shows the Google Image Labeler interface. At the top left is the Google logo and 'Image Labeler BETA'. The main title is 'Google Image Labeler'. On the left, there is a sidebar with 'time left' (01:17), 'score' (0), and 'passes' (0). The main area contains a text input field, a 'label' button, and a 'pass' button. Below the input field, it says 'Your partner has suggested 10 labels.' A central image of a lake and mountains is shown with a 'zoom out' button below it. On the right, there are two sections: 'off-limits' with labels 'sky', 'water', 'blue', 'lake', and 'mountain', and 'my labels' which is currently empty. Red starburst shapes are overlaid on the interface, highlighting the input field, the 'off-limits' list, and the 'my labels' section.

Google Image Labeler BETA

Help | Sign In

time left
01:17

score
0

passes
0

label pass

Your partner has suggested 10 labels.

zoom out

off-limits

sky
water
blue
lake
mountain

my labels

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Crowdsourcing

amazonmechanical turk Artificial Intelligence
Your Account | HITs | Qualifications
Introduction | Dashboard | Status | Account Settings

Already have an account?
Sign in as a Worker | Requester

Mechanical Turk is a marketplace for work.
We give businesses and developers access to an on-demand, scalable workforce.
Workers select from thousands of tasks and work whenever it's convenient.
210,857 HITs available. [View them now.](#)

Make Money by working on HITs

HITs - *Human Intelligence Tasks* - are individual tasks that you work on. [Find HITs now.](#)

As a Mechanical Turk Worker you:

- Can work from home
- Choose your own work hours
- Get paid for doing good work



or [learn more about being a Worker](#)

Get Results from Mechanical Turk Workers

Ask workers to complete HITs - *Human Intelligence Tasks* - and get results using Mechanical Turk. [Register Now](#)

As a Mechanical Turk Requester you:

- Have access to a global, on-demand, 24 x 7 workforce
- Get thousands of HITs completed in minutes
- Pay only when you're satisfied with the results



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EVENTS

PopTech
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BLOG



Should organizations establish a Crowdsourcing



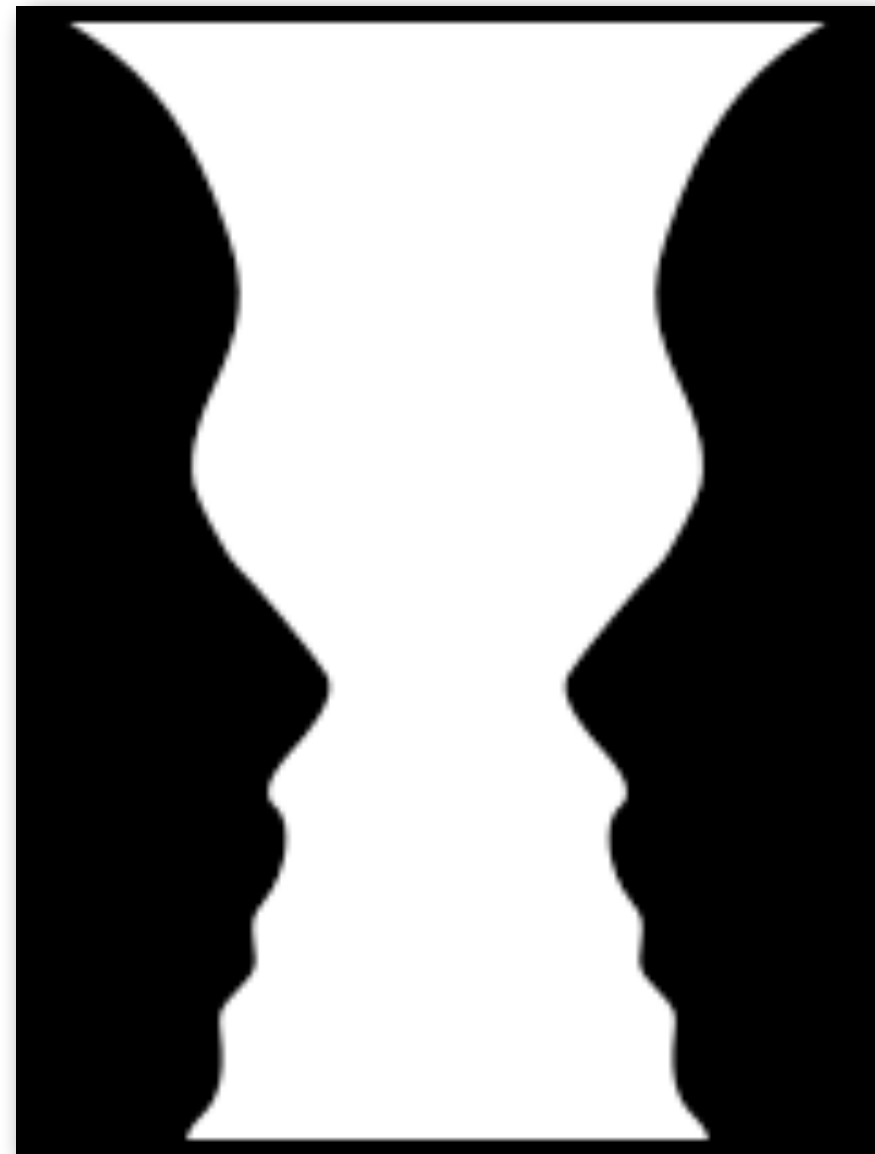
Web 2.0 Revolution

- **Glocalization**-think globally and act locally!
- **Weblication**-Web is the application!
- Three C's

Connectivity

Collaboration

Communities

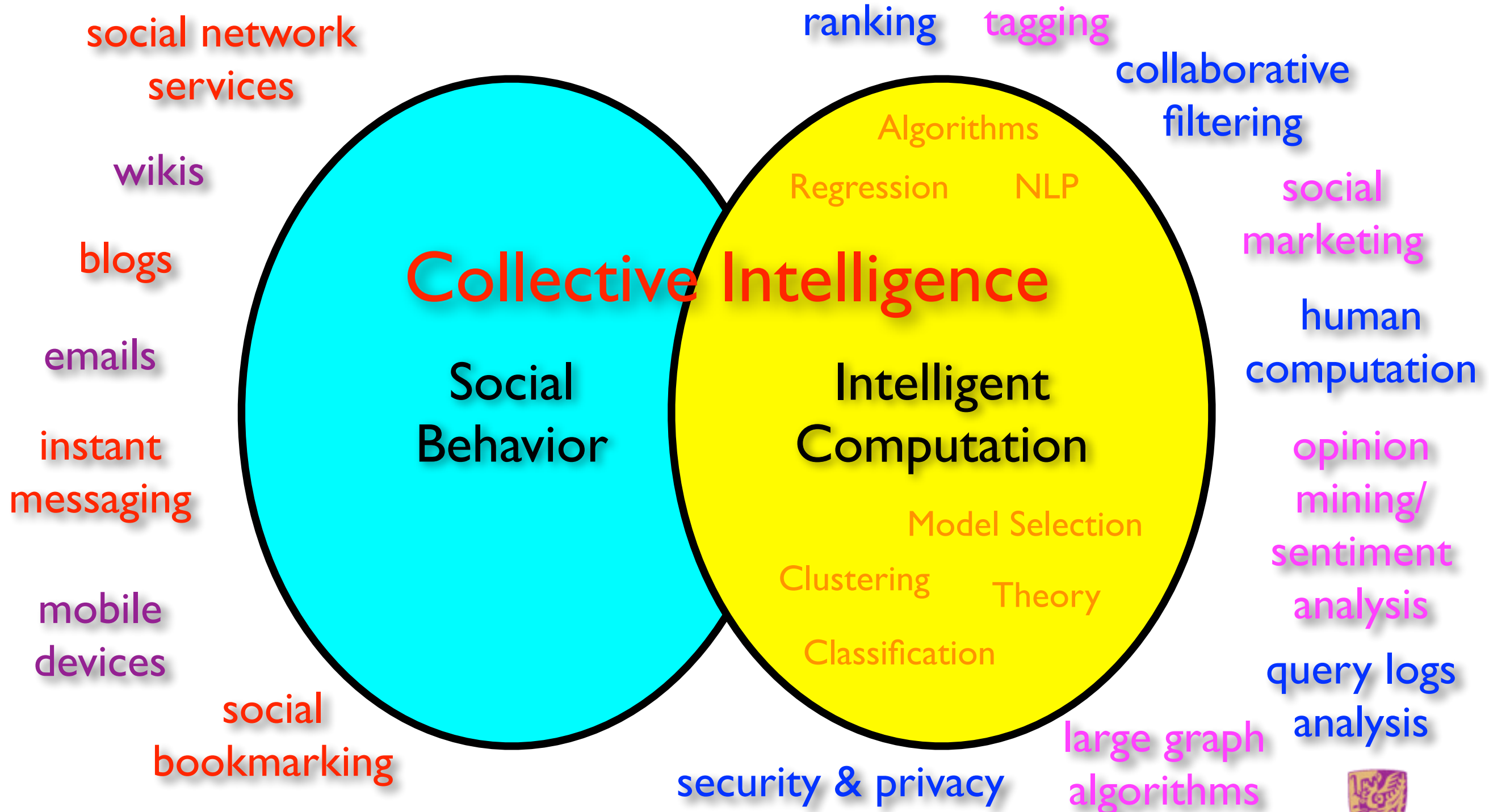


Social Relations

presence
identity
social role
reputation
expertise
trust
ownership
accountability
knowledge
crew
teams
populations
binary
cardinal
integer
real
squad
organizations
cohort
markets
communities
partners
groups



Social Computing



Definition of Social Computing [wiki]

- Any Computer-mediated communication and interaction
- In the weaker sense: **supporting any sort of social behavior**
 - blogs, email, instant messaging, wiki, social network services, social bookmarking
- In the stronger sense: **supporting “computations” that are carried out by a group of people**
 - collaborative filtering, online auctions, prediction markets, reputation systems, tagging, verification games



Emerging Issues

- **Theory** and models
- **Search, mining, and ranking** of existing information, e.g., spatial (relations) and temporal (time) domains
- Dealing with **partial** and **incomplete** information, e.g., collaborative filtering, ranking, tagging, etc.
- **Scalability** and algorithmic issues
- **Security** and **privacy** issues
- **Monetization** of social interactions



