

Introduction to Social Computing

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



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...

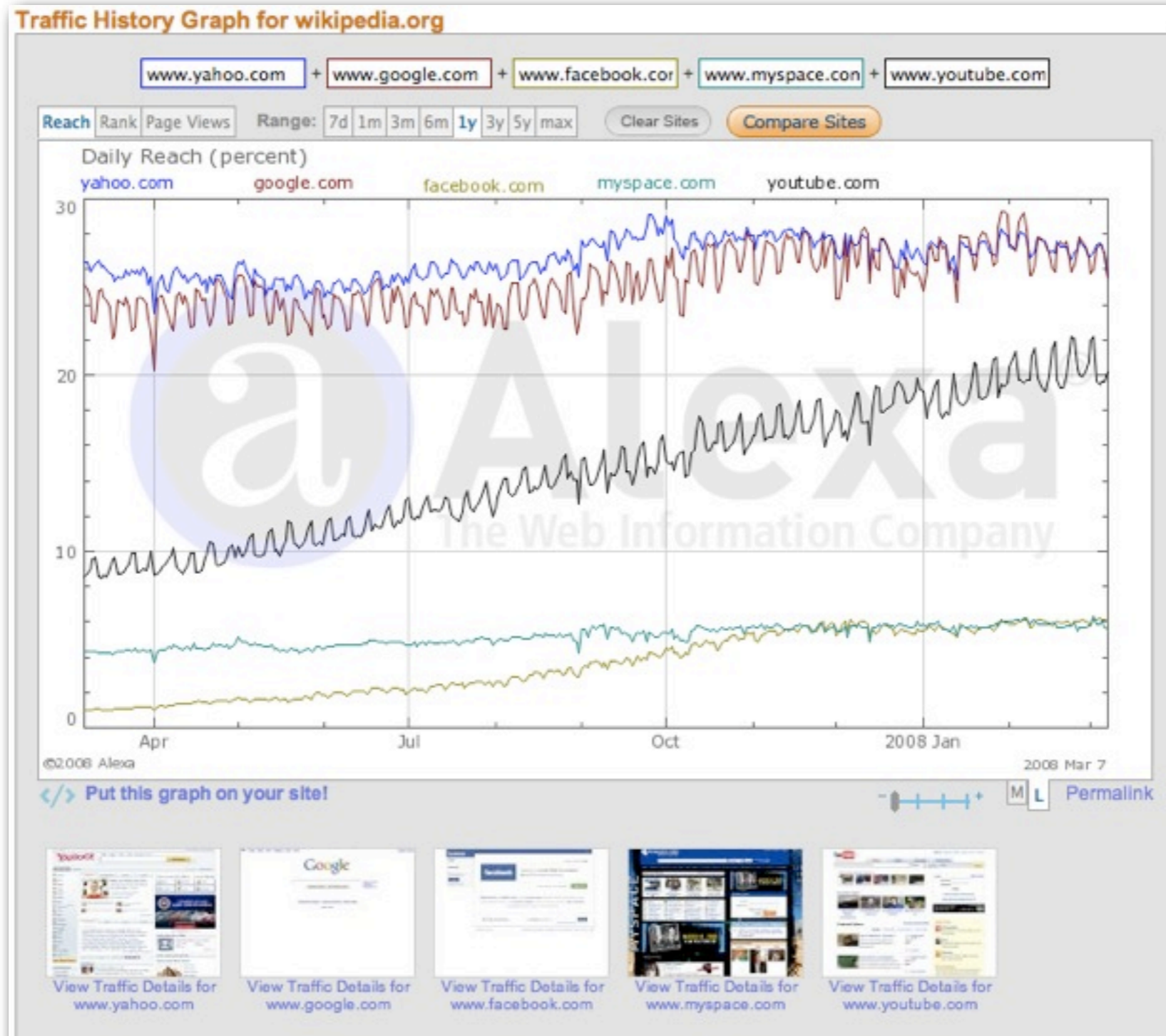


Global Traffic Rankings

Alexa as of Nov. 2008	USA	CHINA	Global
1	Google	Baidu	Yahoo
2	Yahoo	QQ	Google
3	Myspace	Sina	YouTUBE
4	YouTUBE	Google.cn	Windows Live
5	Facebook	Taobao	Facebook
6	Windows Live	163	MSN
7	MSN	Yahoo	Myspace
8	Wikipedia	Google	Wikipedia
9	EBay	Sohu	Blogger
10	AOL	Youku	Yahoo.jp



Internet Reach



Internet PageView



Web 2.0 Growth

Web 2.0 Two Year Growth



Where Are We Going?

- The Web 2.0 **Revolution**...
- Social **XXX**
- What's Cooking...
- Social Computing in Education
- Conclusion



Web 2.0 and Social Computing



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 Giudibus, 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**

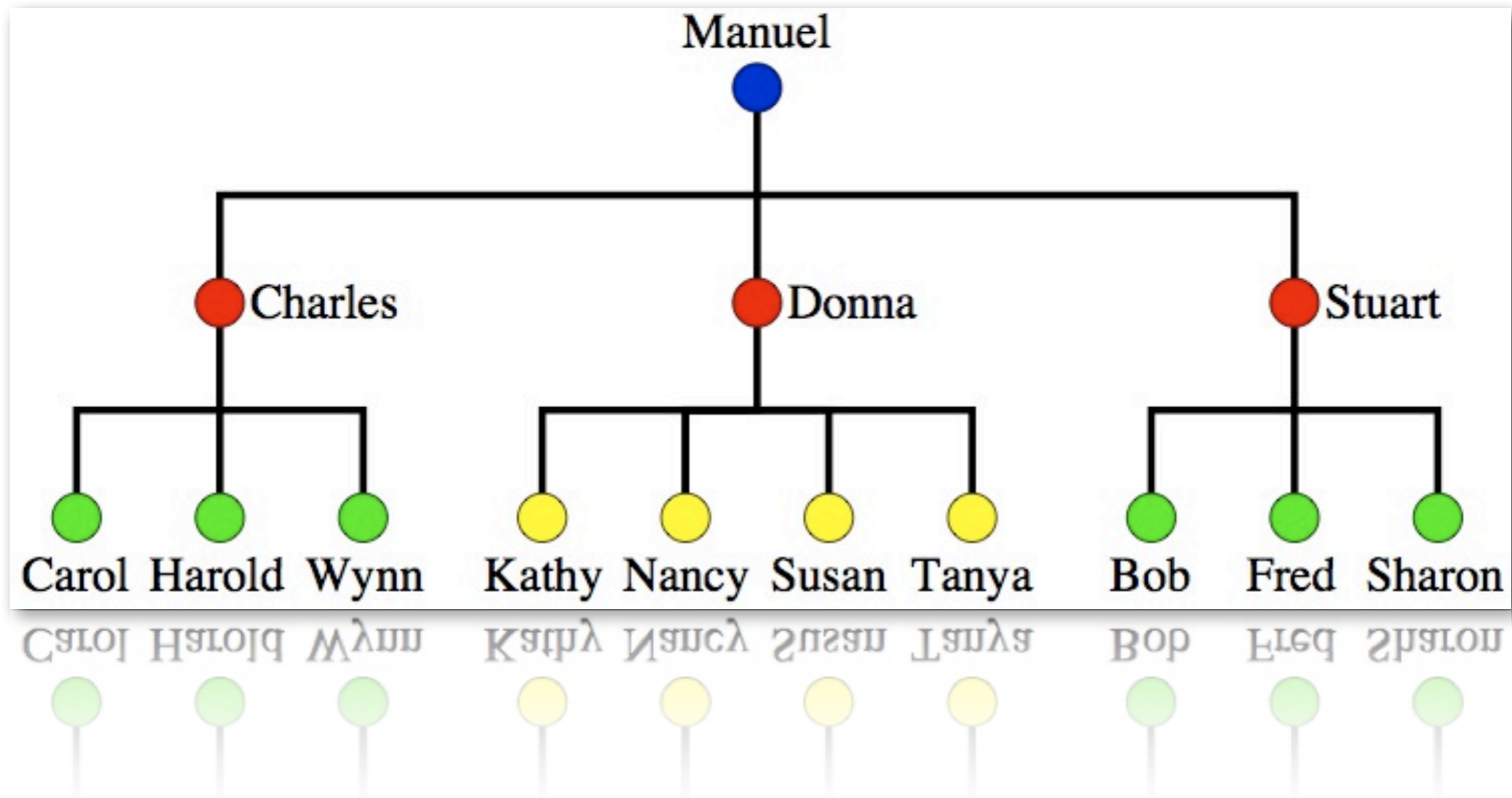
- **Connectivity**
- **Collaboration**
- **Communities**



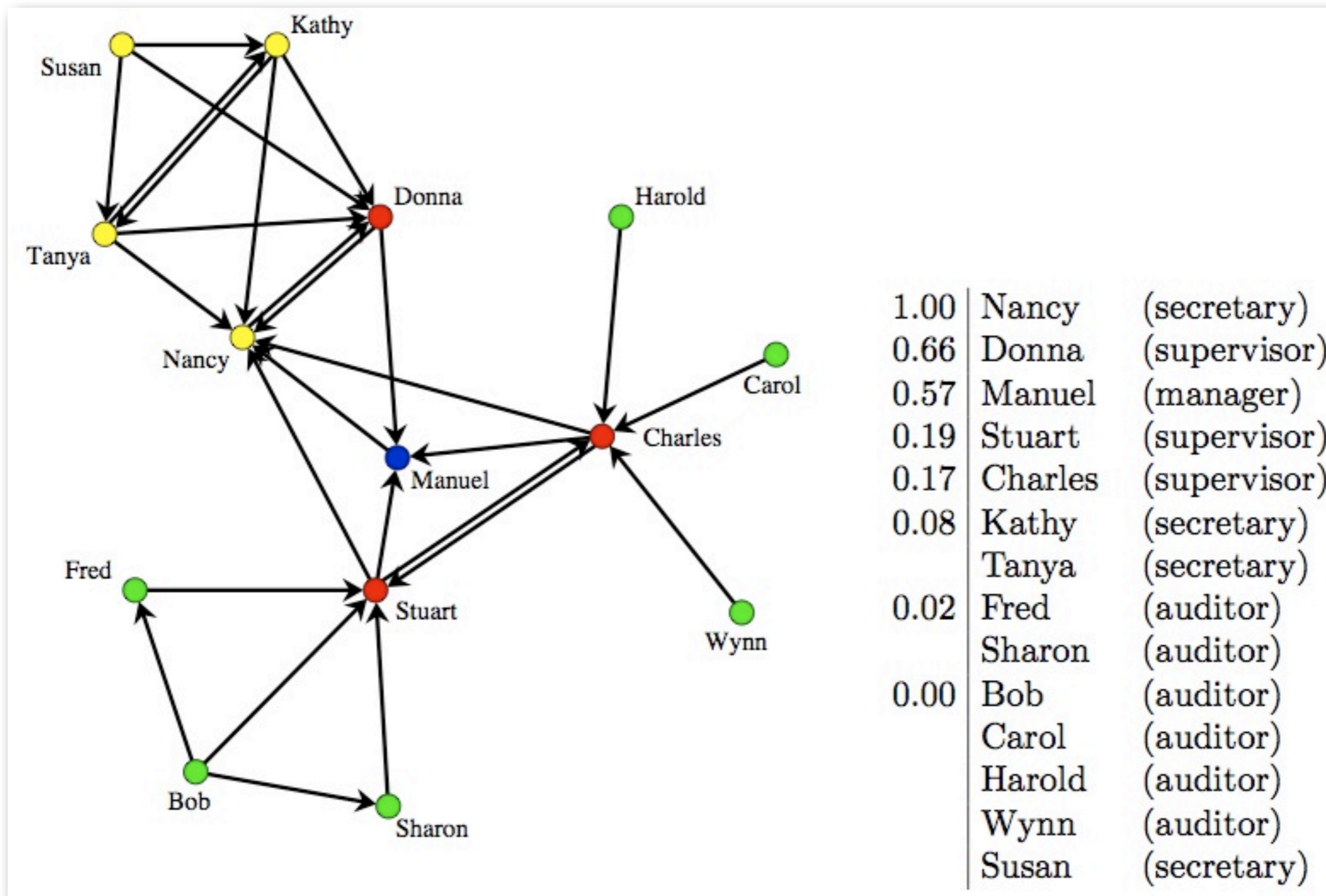
The Social Web



Organizational Chart



Social Network Chart



Social Platforms



Social Networking

The screenshot shows a Facebook profile for Irwin King. The profile includes a profile picture, a cover photo, and a bio. The bio states: "What are you doing right now?". The profile also lists networks, sex (Male), hometown (Taipei, Taiwan), and religious views (Christian). A mini-feed shows recent activity, including a new address, profile updates, and new friendships. The contact information includes an email address (king@cse.cuhk.edu.hk) and a website (http://www.cse.cuhk.edu.hk/~king). The education and work section lists the University of Southern California '88 M.Sc., Computer Science and the University of Southern California '03 Ph.D., Computer Science.

The screenshot shows the Myspace.com homepage. The page features a search bar, navigation links, and several content sections. The "Cool New Videos" section displays four video thumbnails. The "Member Login" section includes a login form with fields for E-Mail and Password, and a "Remember Me" checkbox. The "Find Your Friends on MySpace" section encourages users to check their contacts from other services. The "Cool New People" section shows three profile thumbnails. The "MySpace Music" section features a promotional banner for the band "drmanhattan". The "MySpace Specials" section highlights a "MySpace Secret Stand Up Presents... Aisha Tyler in Boston!" event. The "Sponsored Links" section includes a link for "Hong Kong Cupid".



Social Sharing

The image is a collage of three web pages. On the left is the Blogger homepage, featuring a blue header with the Blogger logo and a sign-in section for Google Accounts. The main content area has three bullet points: 'Your blog', 'Easy to use', and 'Flexible'. In the center is the Twitter homepage, with a light blue header and a 'What is Twitter?' section. It includes a sign-in form, a 'Watch a video!' button, and a 'Get Started—Join!' button. On the right is the WordPress.com homepage, with a white header and a yellow banner that says 'Express yourself. Start a blog.' with a 'Sign Up Now!' button. The footer of the Twitter page includes a copyright notice for 2009 and various navigation links.



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](#)

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

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.

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

- techrunch
- borr2ikes
- popular science
- readrteweb
- 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 adverti...
- 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/Mash Up

The image shows a screenshot of a social news/mashup website. On the left, there is a Digg news feed with several articles, including "Microsoft Demos 'ADD TO DIGG' Feature in IE8", "It was only a matter of time, The SIMS 3 Official", "Universe submerged in a sea of chilled neutrinos", "Unique locks on microchips could reduce hardware piracy", and "Warren Buffett Passes Gates To Become World's Richest Man".

On the right, there is a FoxyTunes artist profile for Björk. The profile includes a search bar, a "Go" button, and dropdown menus for "Albums" and "Tracks". Below these are several widget sections:

- Videos on YouTube:** A list of videos including "All is full of love" (4:09), "bjork-hunter" (3:38), and "Bjork - Human Behaviour" (4:17).
- Lyrics from Yahoo! Music:** A list of songs including "5 Years", "Alarm Call", "All Is Full of Love", "All Neon Like", "An Echo, A Stain", "Army of Me", "Aurora", "Bachelorette", "Big Time Sensuality", "Cetacea", "Cocoon", "Come to Me", "Crying", and "Desired Constellation".
- Flickr Photos:** A section titled "Selected Photos" with a "More on Flickr" link and a "next" button.
- Music on Hype Machine:** A section with a "Play All" button.

At the bottom of the FoxyTunes profile, there is a section for "Artist on Last.fm" featuring "The Sugarcubes" and "Goldfrapp".



Social Bookmarking

The screenshot shows the del.icio.us homepage. At the top left is the logo and tagline "social bookmarking". Navigation links include "login", "register", and "help". A search bar is located at the top right. The main content area features a "hotlist" section with a "HOT NOW" header and a "see also: popular | recent" link. The hotlist items include:

- Video: Twitter in Plain English | Common Craft - Explanations In Plain English** (130 people)
- Home | NotchUp Beta** (212 people)
- PrimeTimeRewind - The TV Cube** (145 people)
- The Simple Dollar » Planning a Kitchen Garden** (133 people)
- Office Live Workspace vs Google Docs: Feature-by-Feature Comparison - ReadWriteWeb** (135 people)

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 categories like "illustration", "family", "living", "cool", and "itunes", each with a list of related tags.



Social Media

The screenshot shows the YouTube homepage with the following elements:

- Header:** YouTube logo, "Broadcast Yourself™", navigation tabs (Home, Videos, Channels, Community), search bar, and "Upload" button.
- Videos being watched right now...:** A row of five video thumbnails.
- Promoted Videos:** Four video thumbnails with titles like "Think Again Awards" and "第14屆十大電視廣告頒獎典禮 - 飛出...".
- Featured Videos:** A list of featured videos with titles and view counts:
 - David Sedaris delivers a pizza:** From *weeknight*, Views: 11,313, 5 stars, 01:01.
 - Erbert and Gerbert's Candle Cannon:** From *candlecannon*, Views: 109,029, 5 stars, 02:34.
 - Girl's Night Out:** From *girlsnite*, Views: 169,435, 5 stars, 03:49.
 - Lionel Neykov - Freeze My Senses:** From *LionelNeykov*, Views: 150,758, 5 stars, 03:35.
- 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."

The screenshot shows the Flickr homepage with the following elements:

- Header:** Flickr logo, "Sign In", and "Create Your Account" button.
- Main Content:** A large photo of a small plant growing in a crack in the pavement. Text reads: "Share your photos. Watch the world." Below is a search bar and a "SEARCH" button.
- Footer:** Statistics: "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:** Four icons with labels: "Share & stay in touch", "Upload & organize", "Make stuff!", and "Explore...".
- Bottom:** "Take the Tour" button and a link to "Explore Flickr Blog, the World Map, Camera Finder or interesting photos from the last 7 days."

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


- Header:** "SECOND LIFE" logo, "Your World. Your Imagination.", and "Resident, Login | Join" link.
- Navigation:** "What is Second Life? | Showcase | Community | Blog | Support" and a search bar.
- Main Content:** A large image of a man and a woman flying in a virtual world. Text reads: "Get Started! Membership is FREE! Second Life is an online, 3D virtual world imagined and created entirely by its Residents." Below is a link: "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." Below are several small images of virtual environments and organizations.



Social Knowledge Sharing

WIKIPEDIA

<p>English <i>The Free Encyclopedia</i> 2 268 000+ articles</p>	<p>Deutsch <i>Die freie Enzyklopädie</i> 718 000+ Artikel</p>
<p>Français <i>L'encyclopédie libre</i> 631 000+ articles</p>	<p>Polski <i>Wolna encyklopedia</i> 477 000+ hasel</p>
<p>日本語 フリー百科事典 474 000+ 記事</p>	<p>Italiano <i>L'enciclopedia libera</i> 421 000+ voci</p>
<p>Nederlands <i>De vrije encyclopedie</i> 414 000+ artikelen</p>	<p>Português <i>A enciclopédia livre</i> 364 000+ artigos</p>
<p>Español <i>La enciclopedia libre</i> 339 000+ artículos</p>	<p>Svenska <i>Den fria encyklopedin</i> 277 000+ artiklar</p>



search · suche · rechercher · szukaj · 検索 · ricerca · zoeken · busca
 buscar · søk · 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

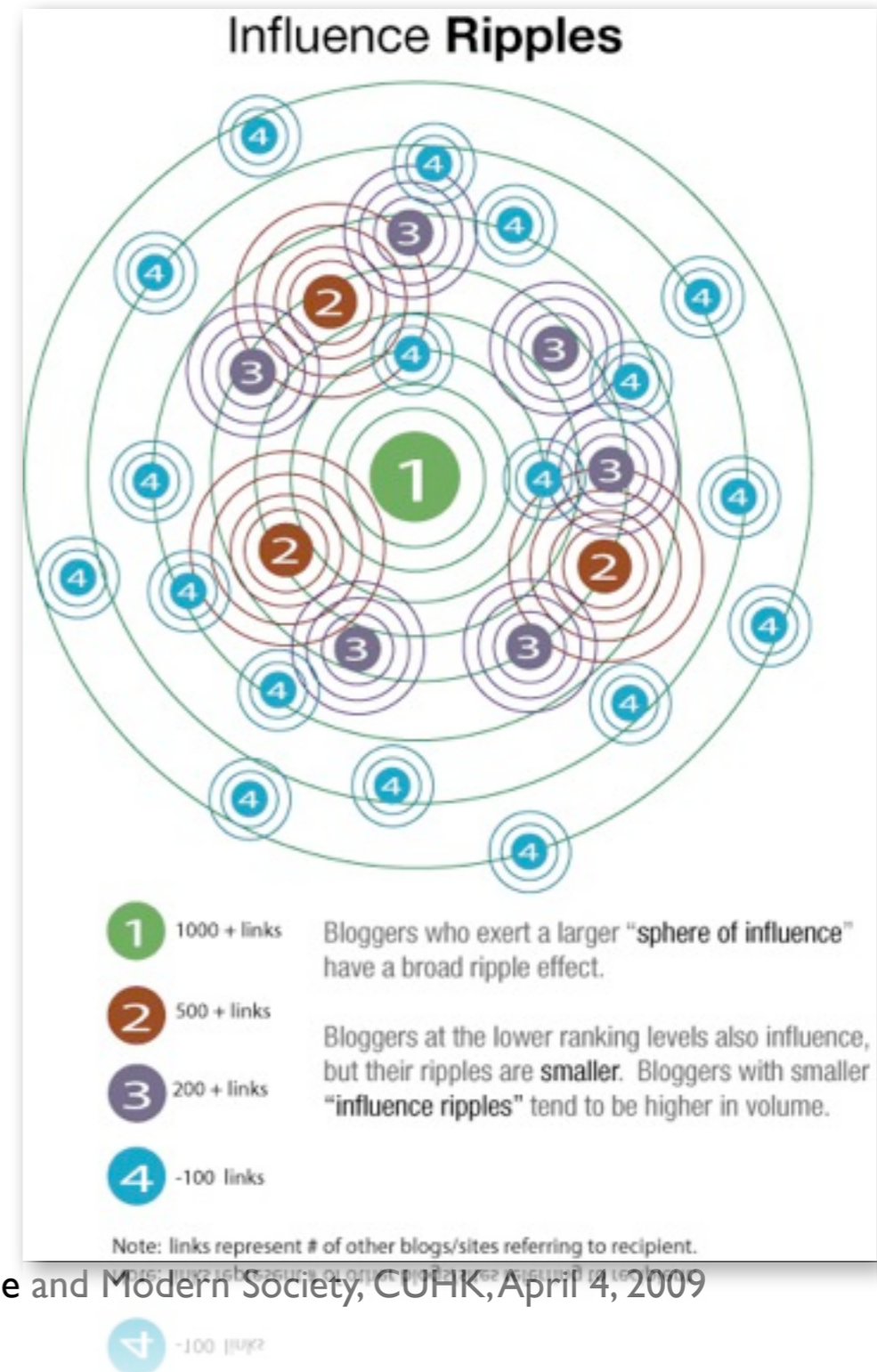
English ▼

русский · søk · поиск · 搜索 · søk · haku · suk · cerca · căutare · ara



Social Marketing

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

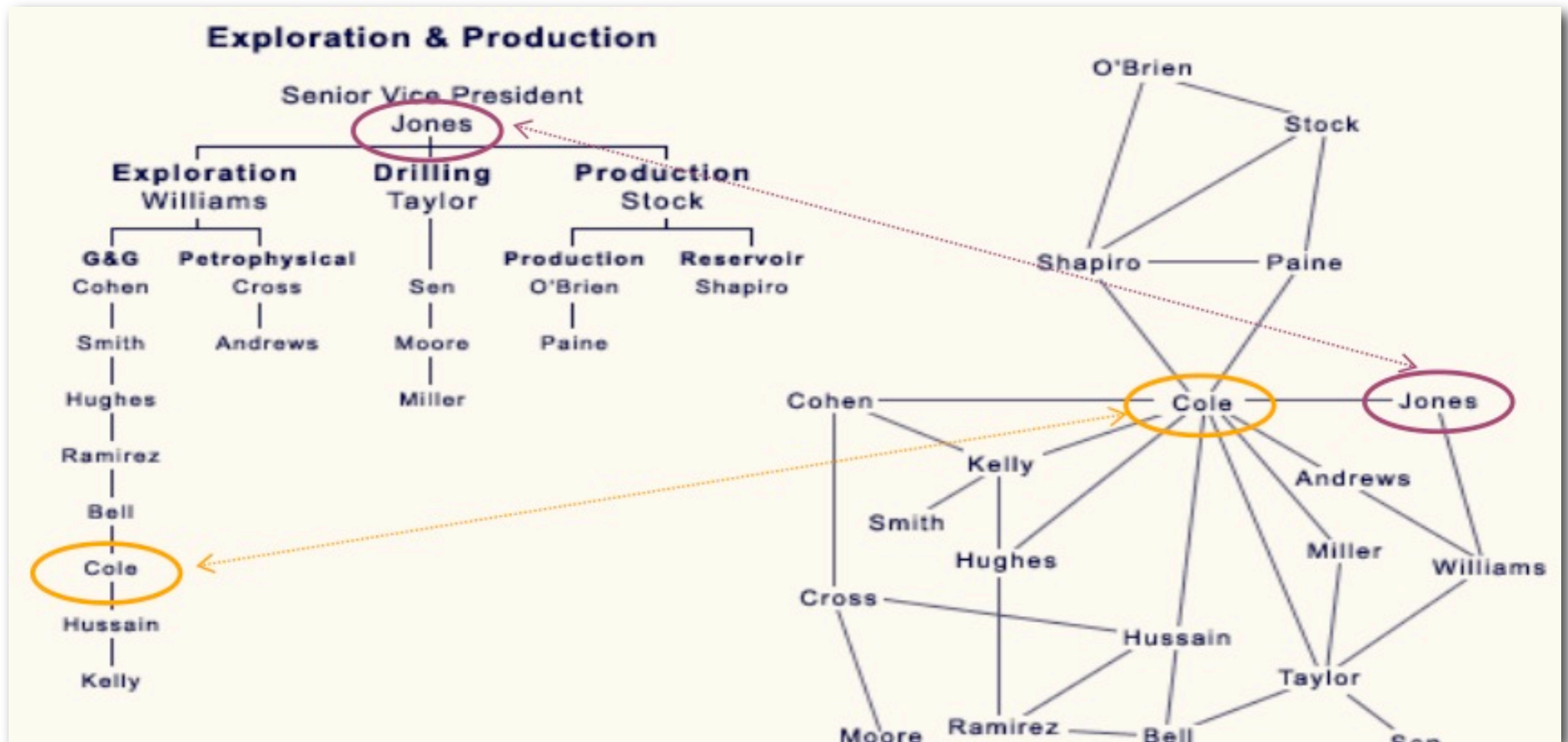


The Golden Rules

- 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**

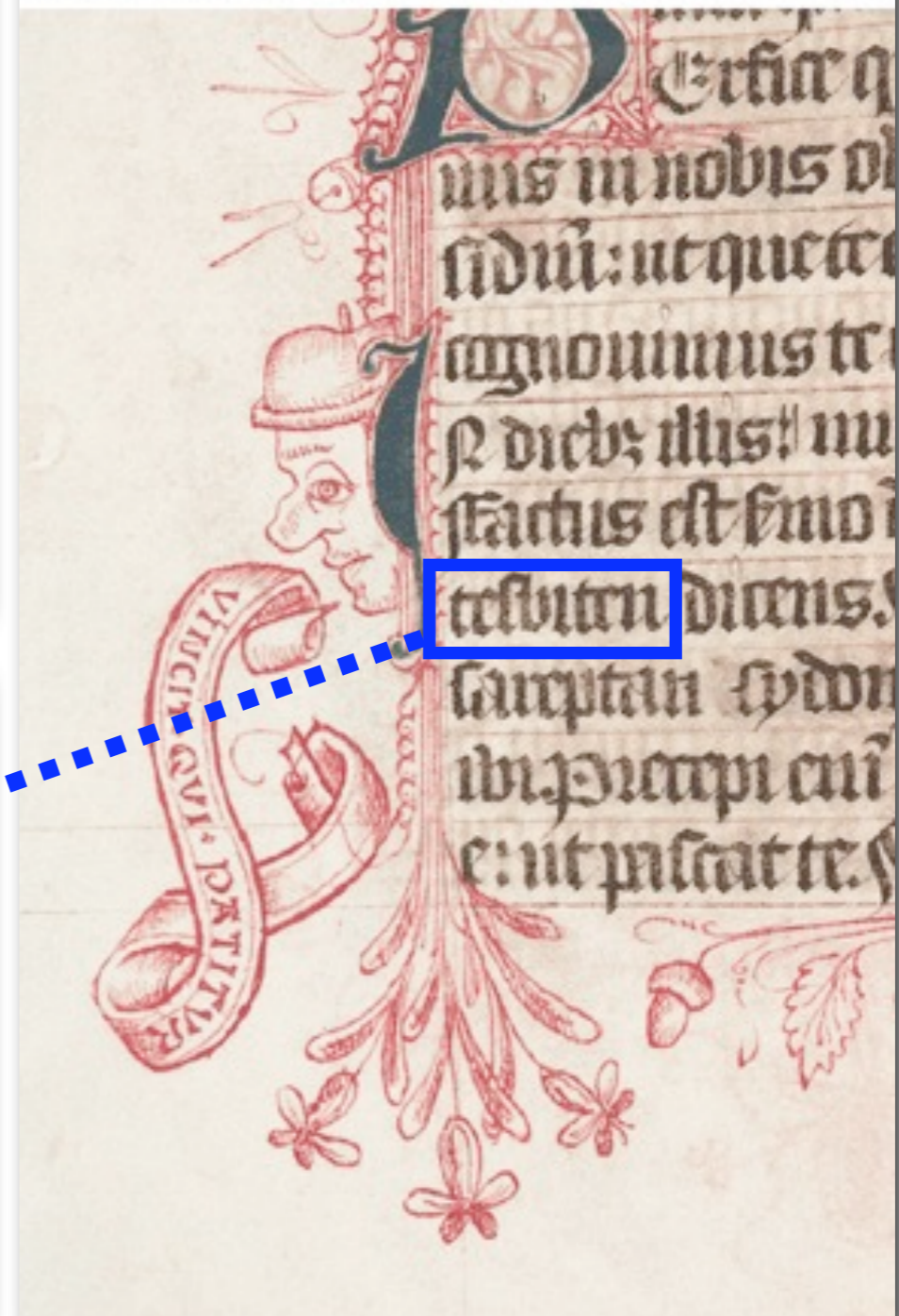
Text in the box:

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'. 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 list of labels.

© 2007 Google



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



Social Computing

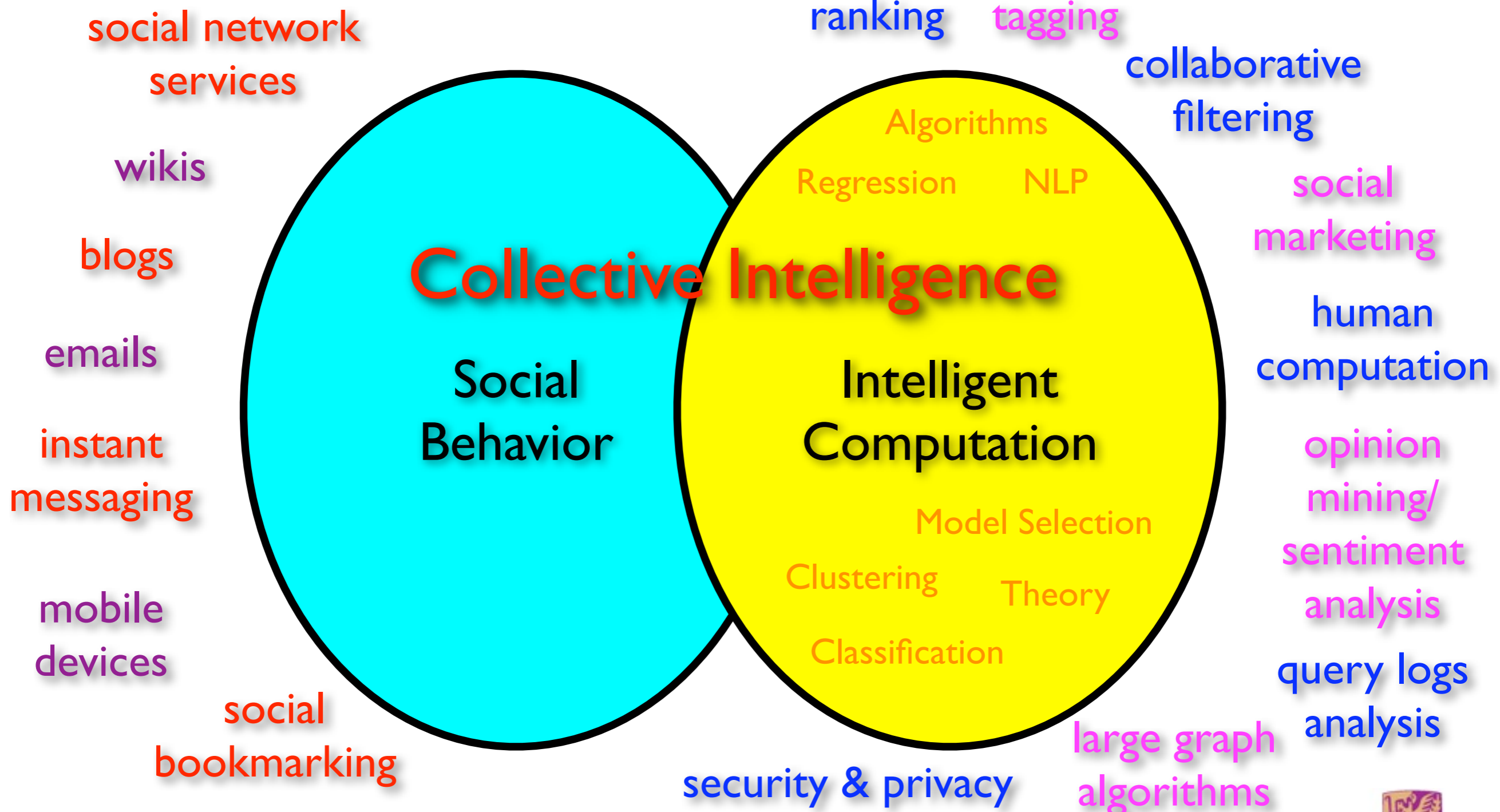


Social Relations

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



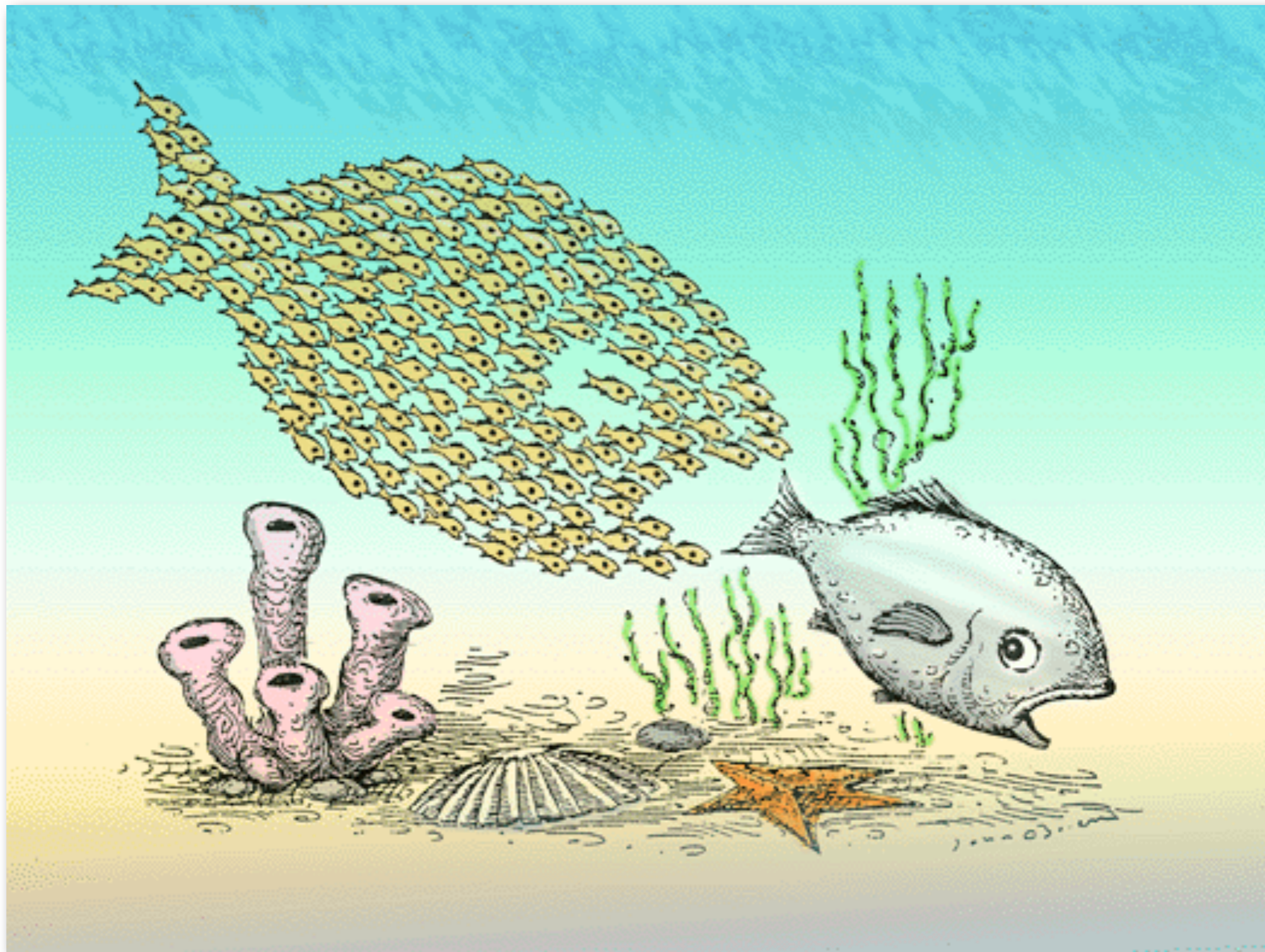
Social Computing



Social Computing (SC)

- Social computing is a general term for an area of computer science that is concerned with the intersection of *social behavior* and *computational systems*.
Wikipedia
- *A social structure in which technology puts power in communities, not institutions.*
Forrester
- *Forms of web services where the value is created by the collective contributions of a user population.*





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



Machine Learning in SC

- Classification, clustering, regression, etc.
- New insights on the data
 - Social relations are often **hidden** (latent)
 - Change data from (x, y) to $(x, c_1(x), c_2(x), \dots, y)$
- $c(x)$ = context in **tags, relations, ratings**, etc.
- data type = *binary, integer, real, cardinal*, etc.



Social Computing in Education



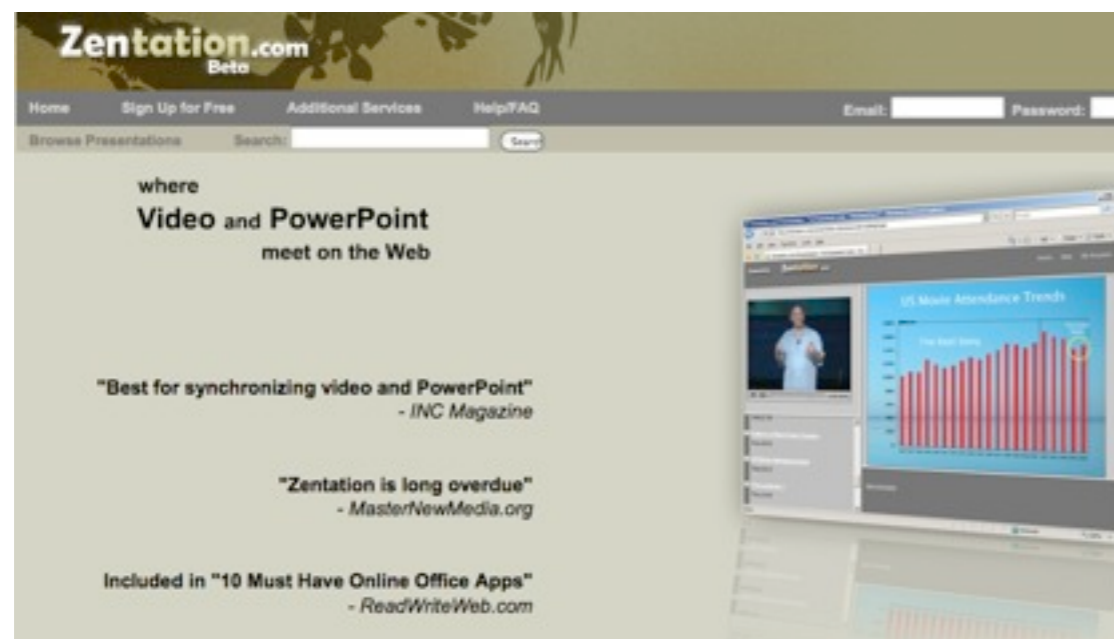
Categories of Educational Activities

- Media sharing
- Media manipulation
- Conversational arenas
- Online games and virtual worlds
- Social networking
- Blogging
- Social bookmarking
- Recommender systems
- Collaborative editing
- Wikis
- Syndication

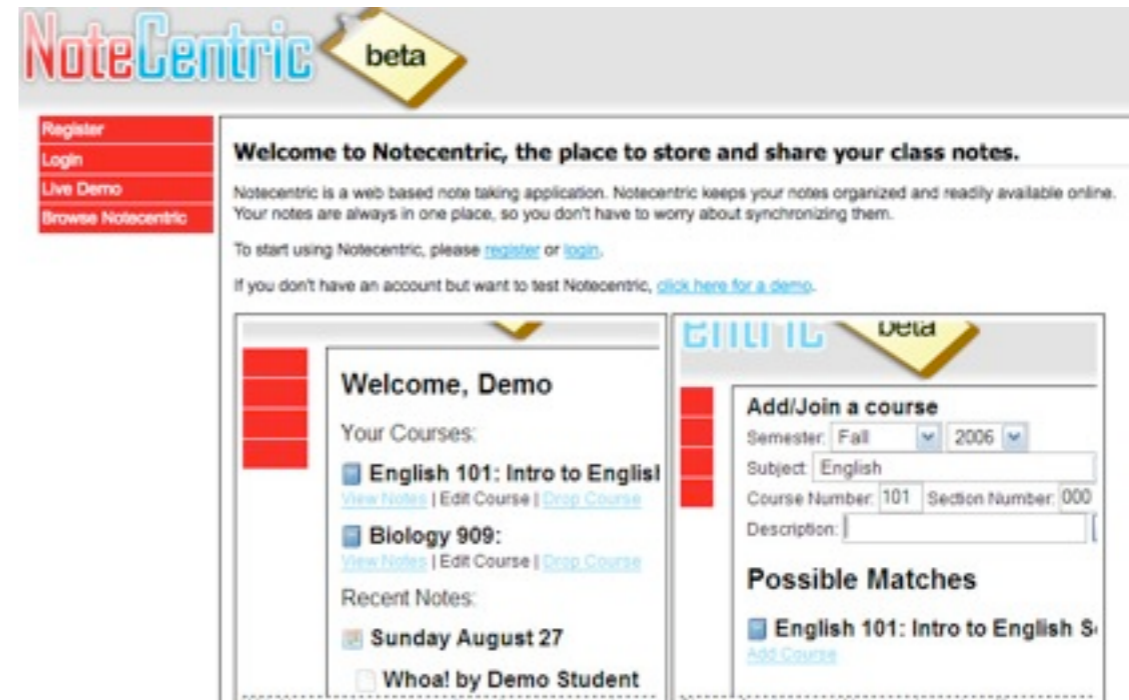


Media Sharing

General	Educational
Uploading and downloading media files for audience or exchange	Sites have emerged that welcome creative digital material organized by educators



Zentation: Share video and powerpoint



NoteCentric: Share university class notes



Media Manipulation

General	Educational
Use web-accessible tools to design and edit digital media files	Provide graphical representations education materials



The image shows a screenshot of a TechCrunch article. At the top left is the TechCrunch logo. To its right is a black box with the text 'Le MERIDIEN Discovery' in white. Further right is a small image of a hand holding a camera lens. Below these are navigation links: 'About Advertise Archives Company Index Contact Jobs MashLogic' and a 'Subsc' link. The main heading of the article is 'Thumbstacks – Ajax/Flash Web PowerPoint' in bold black text. Below the heading is the author 'by Michael Arrington on March 9, 2006' and '54 Comments' with a comment icon. The article text begins: 'New York-based Thumbstacks is a bare bones but functional application that allows users to build presentations online and present them via a permanent URL. It uses both Flash and Ajax – it uses Flash if its installed, and defaults to Ajax if not. Click here to see a sample presentation. Note: Zoho is preparing a web based power point application as well – I should get a demo in the next week.' To the right of the text is a link to 'Thumbstacks.com!'.



The image shows a screenshot of a 'Google Lit Trips' page. At the top, it says 'Welcome to Google Lit Trips!' in a red, cursive font. Below this is a portrait of Voltaire on the left and a map of Europe on the right. The map has a red line tracing a path across Europe, with a small inset map showing a zoomed-in view of a region. The text 'Candide by Voltaire' is written across the map. At the bottom, it says 'A Different Way to Read Great Literature!' in a red, cursive font.

Thumbstacks: Allow presentations to be built and played online

Googlelittrips: Link literature to places or maps



Conversational Arenas

General	Educational
One-to-one or one-to-many conversations between internet users	Support educational conversations by a variety of tools



Think: Teachers and students create learning projects, participate in a website

Introduction to Social Computing, GEN2182 Science and Modern Society, CUHK, April 4, 2009

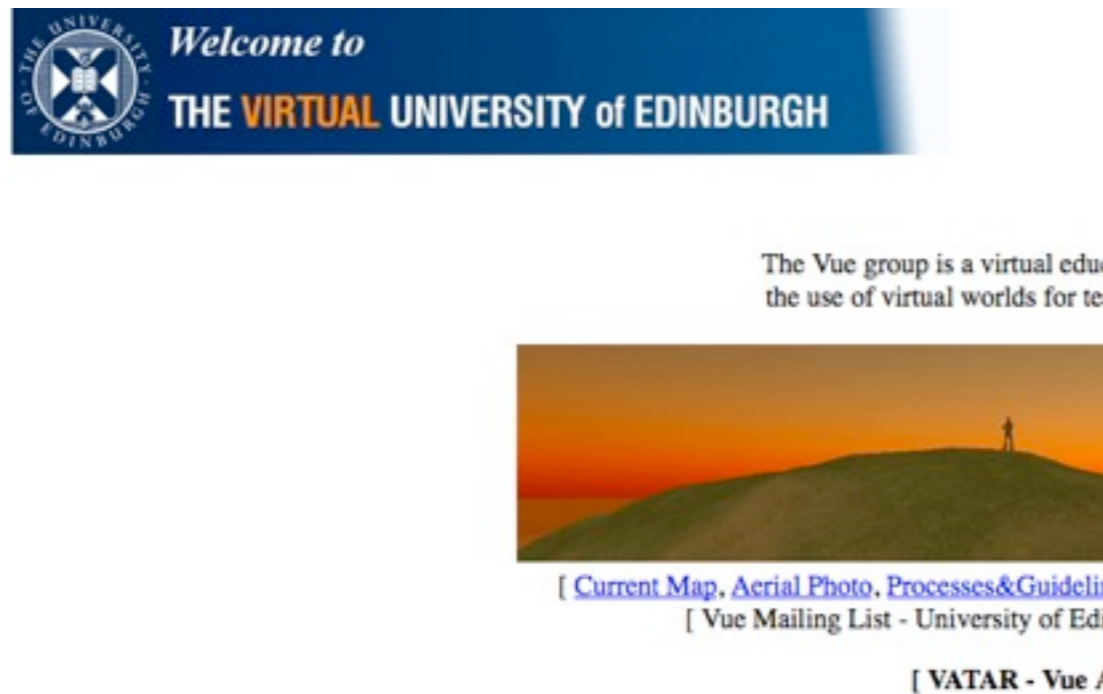


Chatmaker: Users can create chat rooms for personal websites, blogs, newsgroups...



Online Games and Virtual Worlds

General	Educational
Rule-governed games or themed environments that invite live interaction with other users	Develop multi-player online games for educational purpose



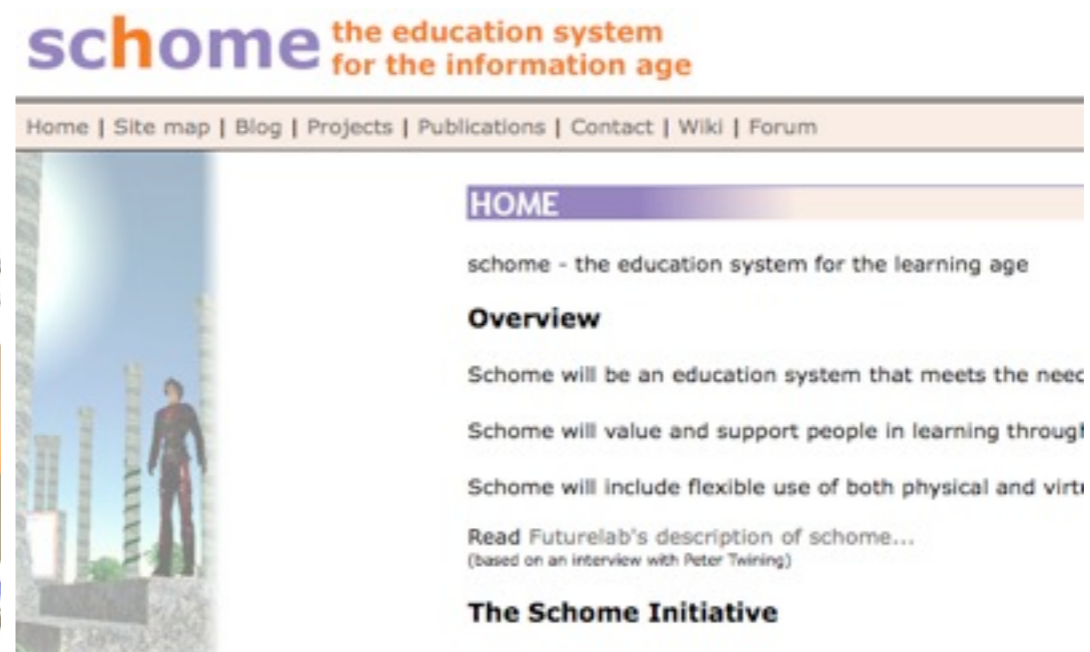
Welcome to
THE VIRTUAL UNIVERSITY of EDINBURGH

The Vue group is a virtual edu
the use of virtual worlds for te

[[Current Map](#), [Aerial Photo](#), [Processes&Guidelin](#)
[[Vue Mailing List - University of Edi](#)

[[VATAR - Vue /](#)

Vue: Provide a virtual educational and research institute



schome the education system
for the information age

Home | Site map | Blog | Projects | Publications | Contact | Wiki | Forum

HOME

schome - the education system for the learning age

Overview

Schome will be an education system that meets the need

Schome will value and support people in learning through

Schome will include flexible use of both physical and virtual

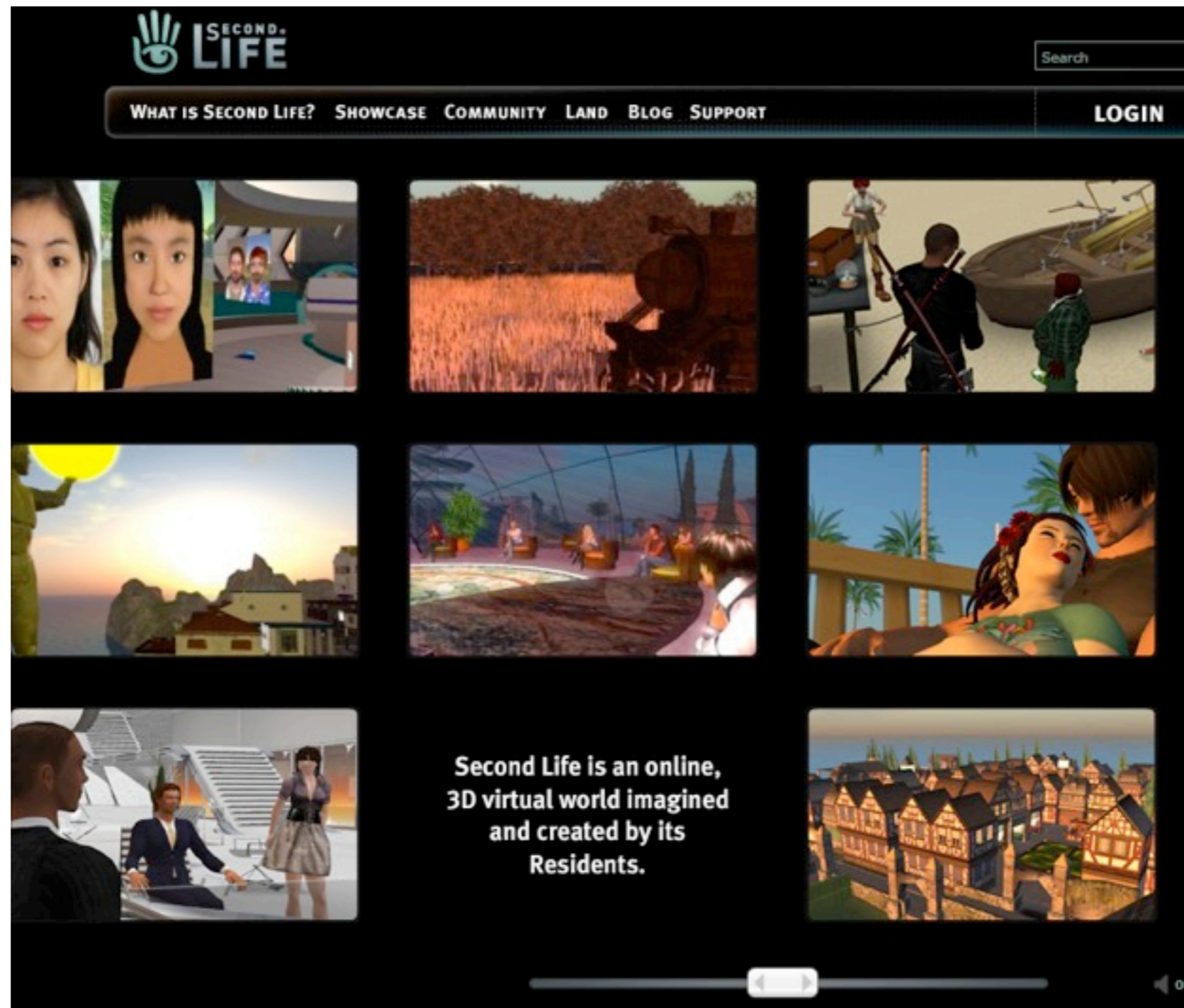
Read Futurelab's description of schome...
(based on an interview with Peter Twining)

The Schome Initiative

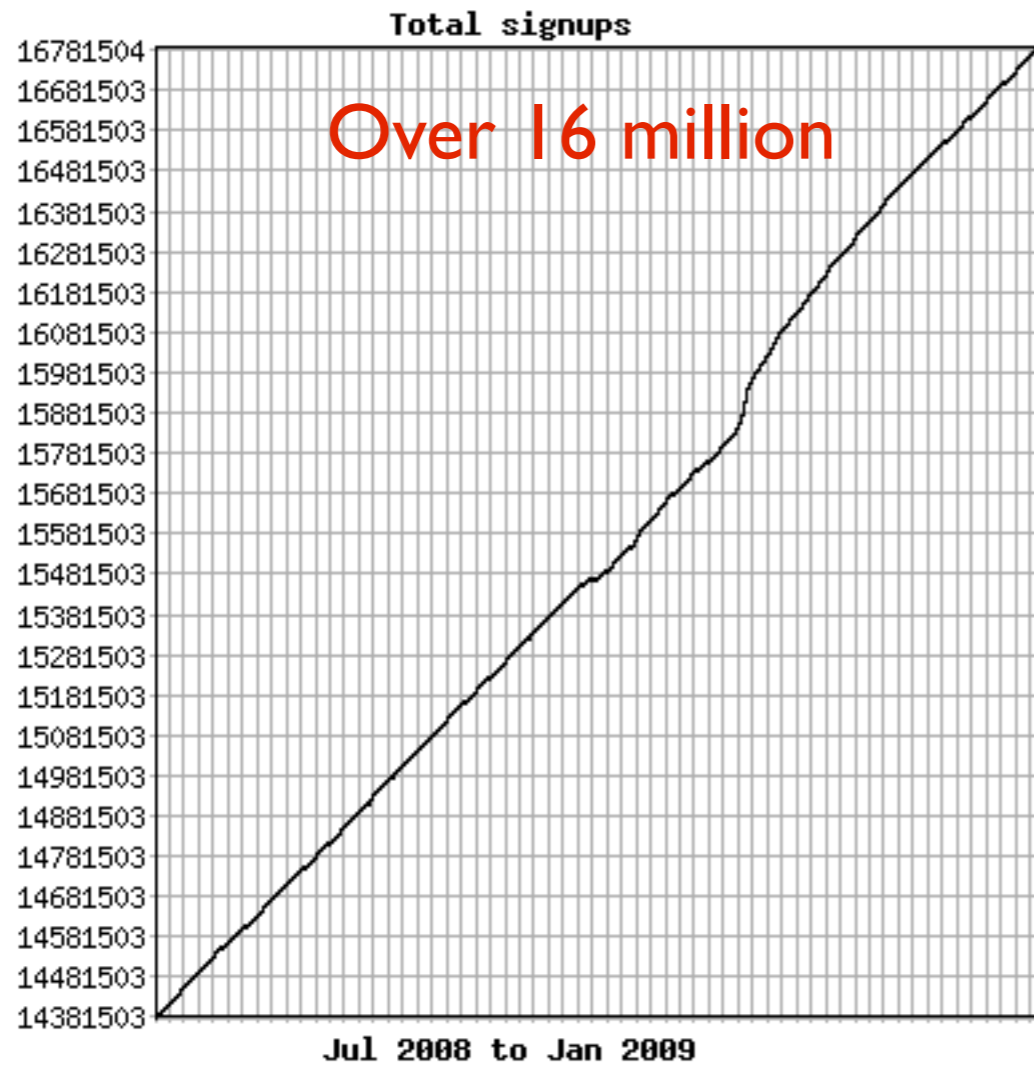
Schome: An education system to support people in learning throughout their lives



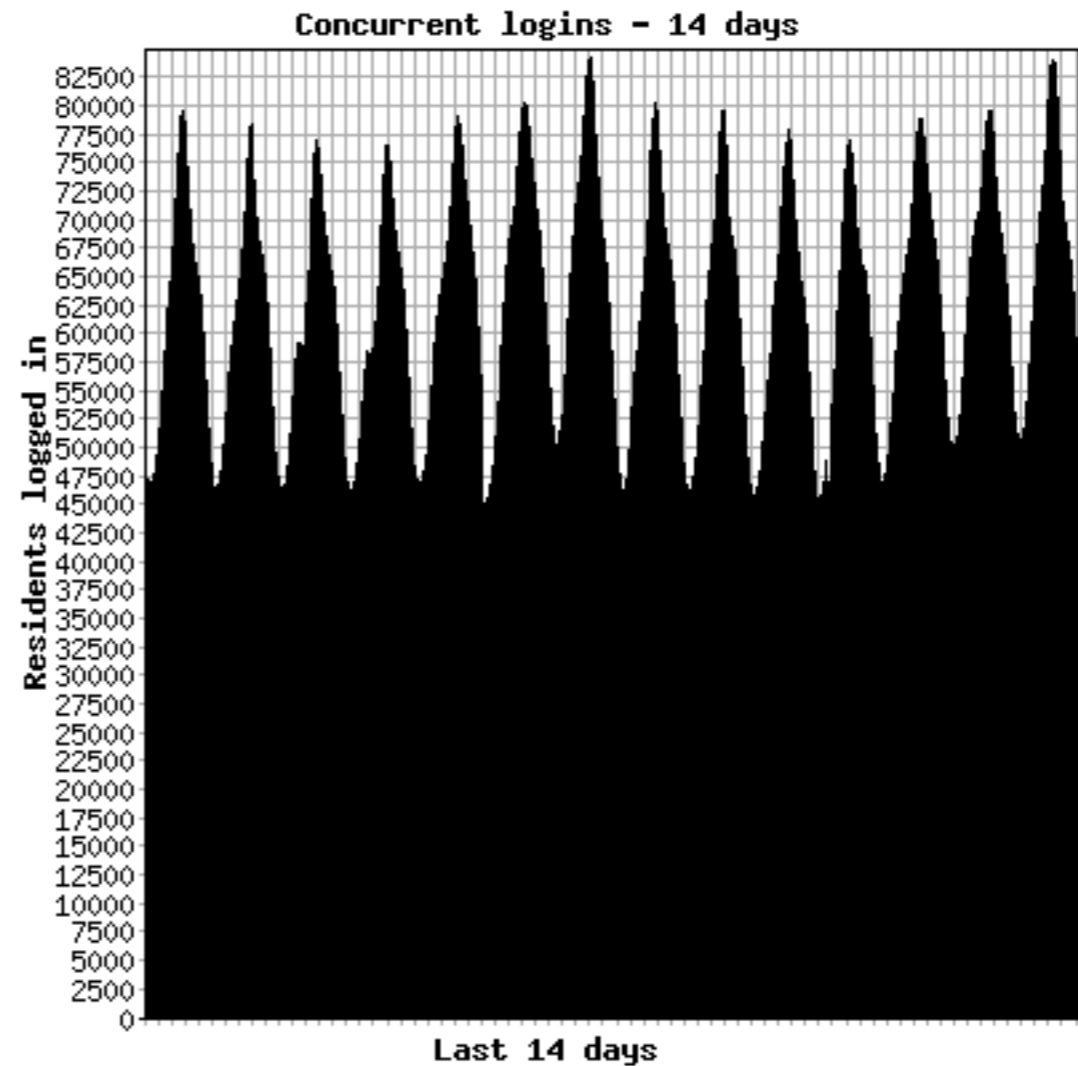
Online Games: Second Life



Online Games: Second Life



Total signups from July 2008
to Jan 2009

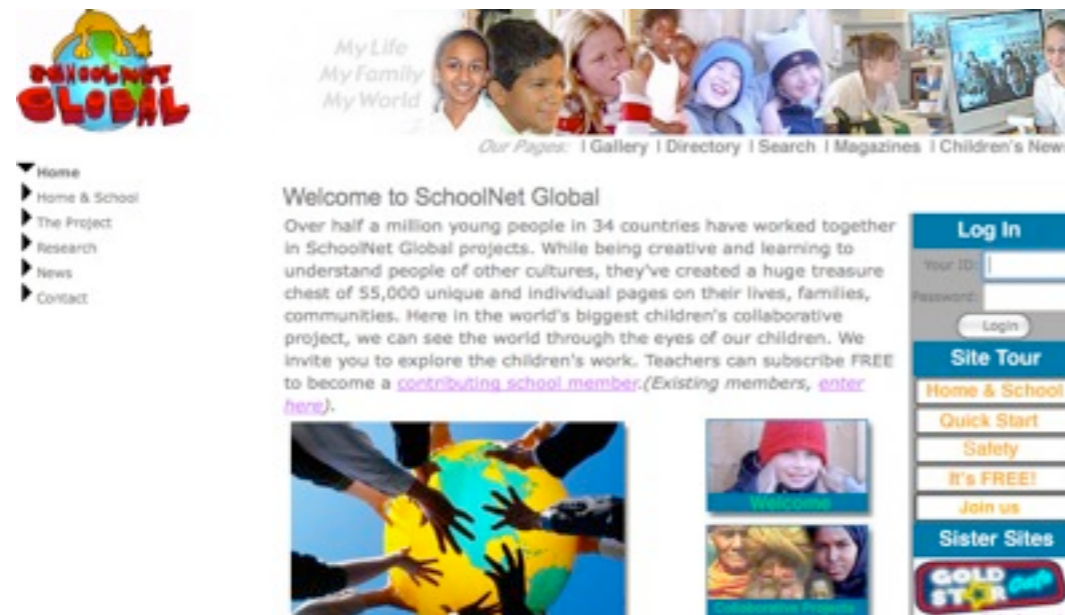


Concurrent online users in
the last 14 days

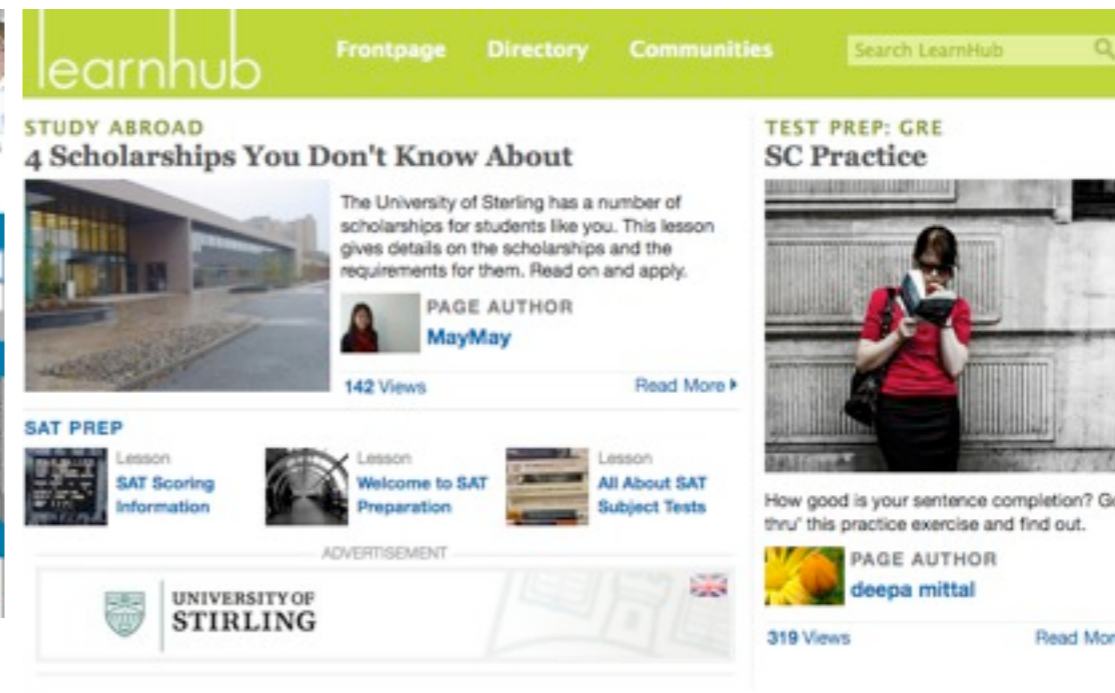


Social Networking

General	Educational
Websites that structure social interaction between members who form subgroups of 'friends'	Typically include education-oriented friendship groups



Schoolnetglobal: Provides a child-oriented design and security service for cross-site collaboration

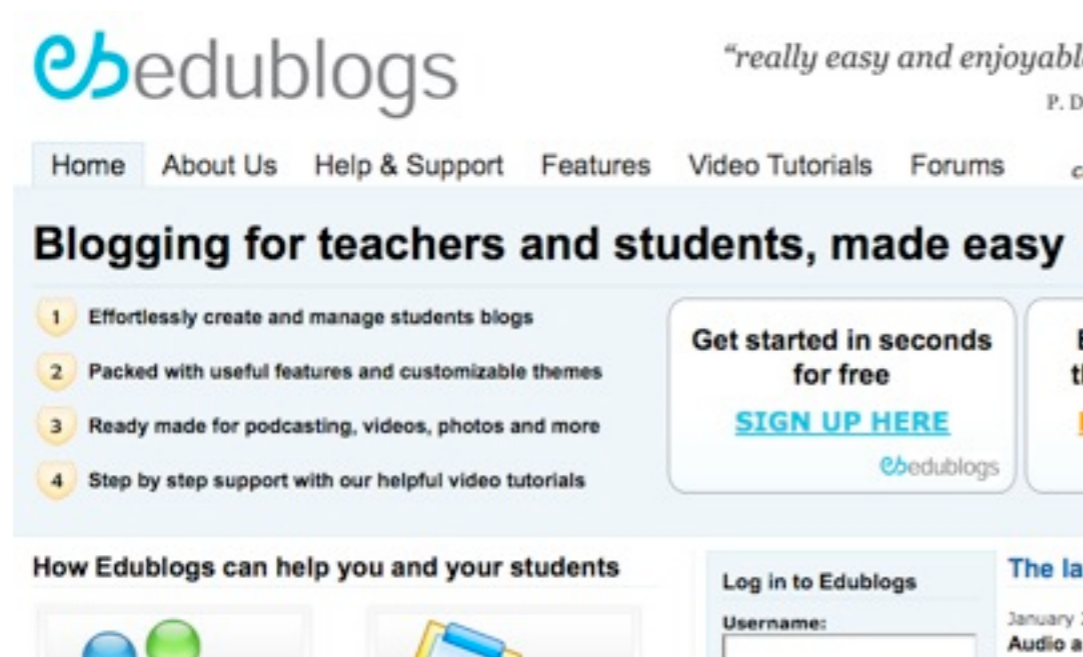


Learnhub: Teachers can create learning communities.



Blogging

General	Educational
An on-line journal or diary in which a user can post text and digital material while others can view and comment	Blog sites exist especially for students and teachers



Edublogs: Blogging for teachers and students



Nature: Encourages scientific authors to blog around their findings



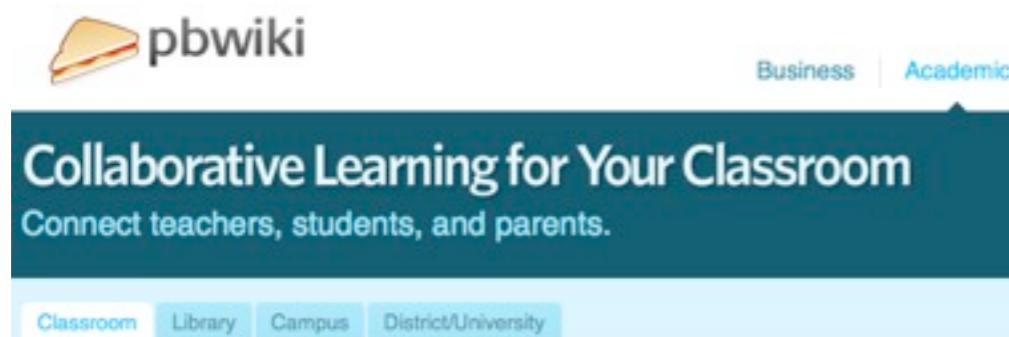
Blogs and Risk




- What's so great about blogs?
 - Tool for personal reflection
 - Citizen journalism
 - Forum for publishing your views or expertise
 - Reader feedback
- Blogging and risk avoidance
 - Services are advertising to high school and younger audiences who are not savvy about personal security: MySpace, AOL, Xanga, Facebook
 - Posting personal info: names, birthdays, towns, dorms, etc.
 - Harassment and bullying via blog postings; libel suits



Wikis

General	Educational
Web-based services allow users unrestricted access to create, edit and link pages	Sites that allow students and teachers to establish their own wiki with an educational slant



-  Share and collaborate on files
-  Built-in accountability: See changes, reverse them instantly.
-  Connect teachers, students, and parents

Pbwiki: students and teacher can create their own wiki

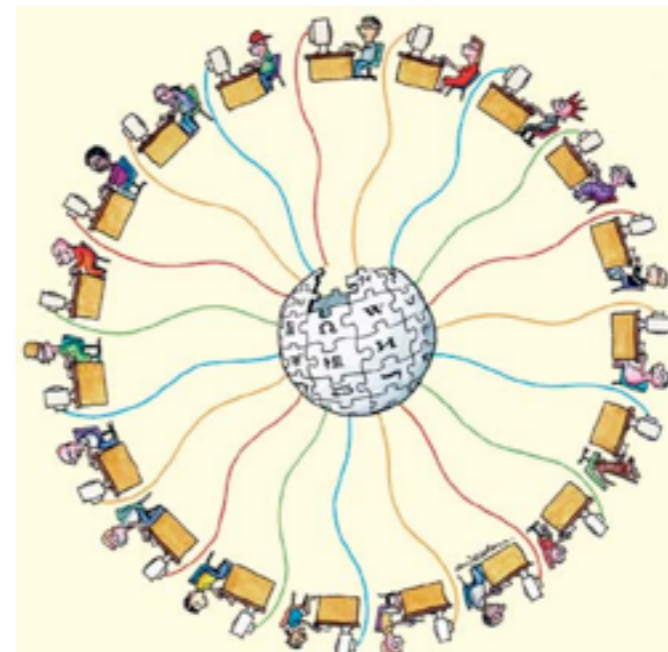
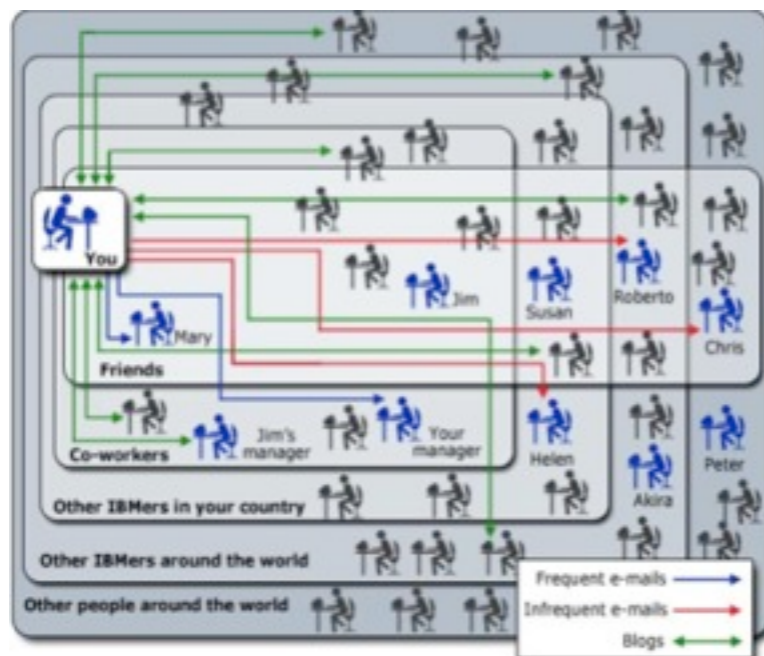


Wikiversity: devoted to learning resources, learning projects, and research for use in all levels, types, and styles of education



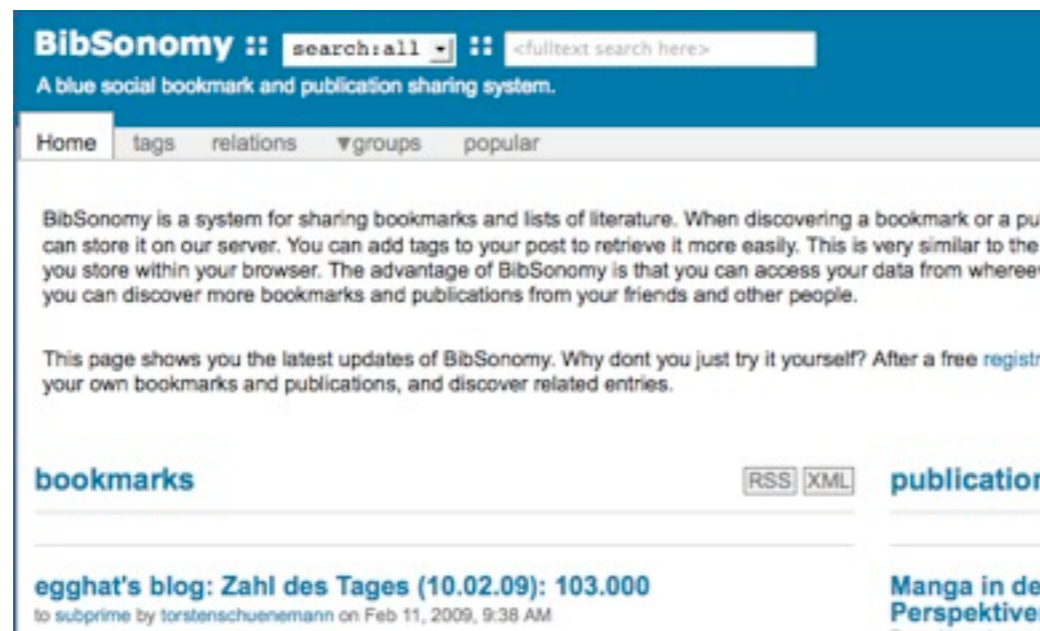
Blogs vs. Wikis

- Blogs generally have a topical element and a single author (but not always)
- Wikis are designed to be easy to use collaboration spaces for storage of shared material
- Blogs are more like journals; Wikis are shared reference sites



Social Bookmarking

General	Educational
Allow users to submit their bookmarked web pages to a central site where they can be tagged and found by others	Bookmarks sharing systems designed for research and education users



BibSonomy: A system for sharing bookmarks and list of literature

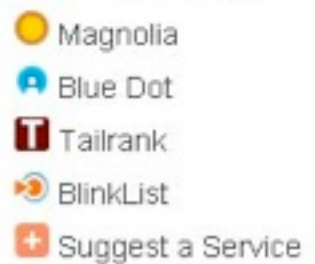
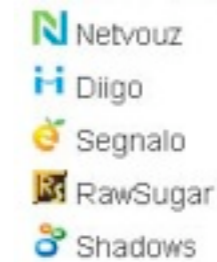


Citeulike: A website for the collecting and sharing research publications



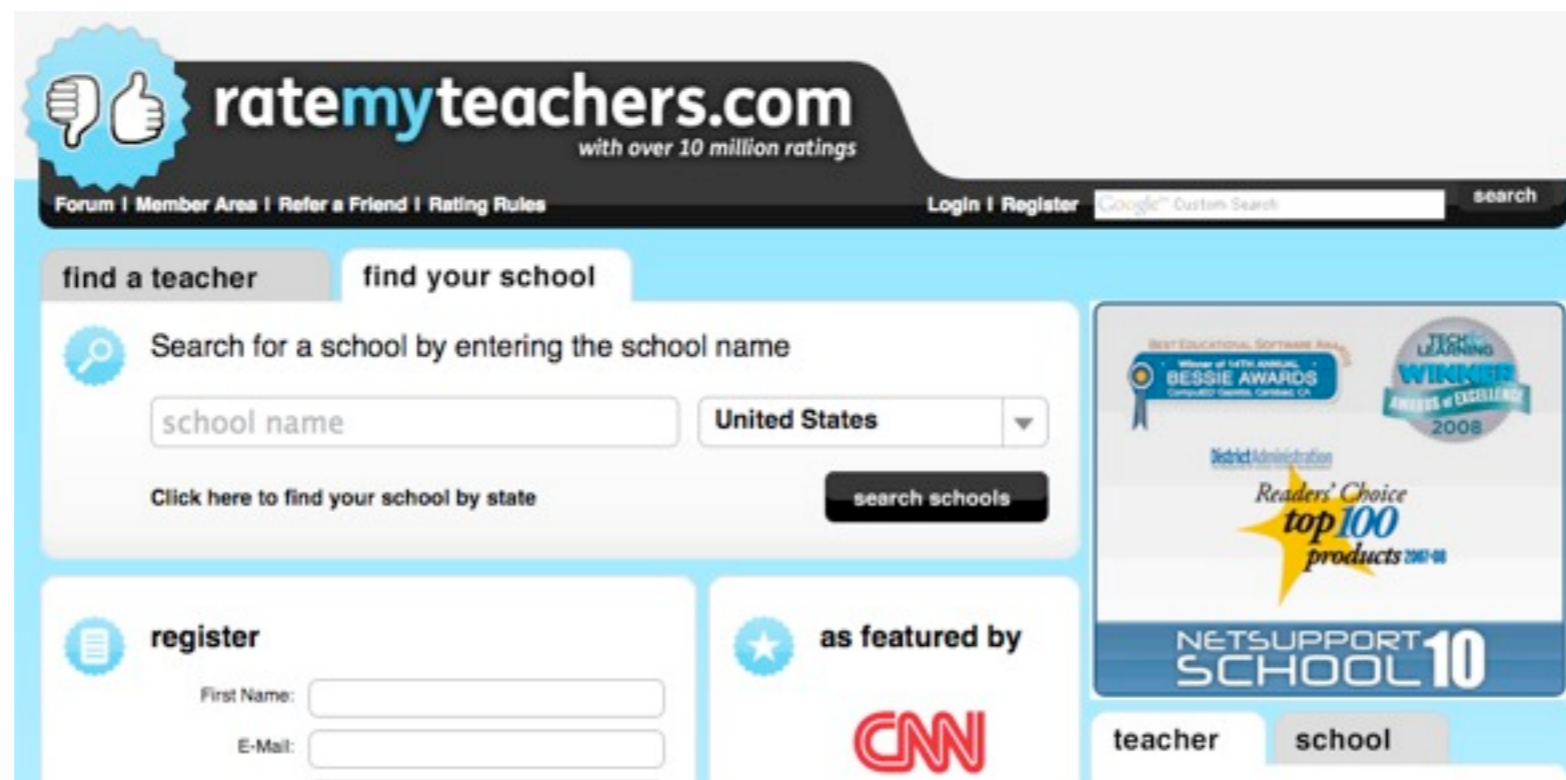
Social Bookmarking Enabling...

- **Save and tag** bookmarks and searches
- **Share** resources among peers and colleagues
- **Find** relevant, reliable resources more easily
- **Evaluate** the quality of the resources
- **Update** courses automatically with dynamic content feeds
- **Contribute** to course collections, both students and instructors



Recommender Systems

General	Educational
Websites aggregate and tag user preferences to make novel recommendations	Recommender systems designed for research and education users



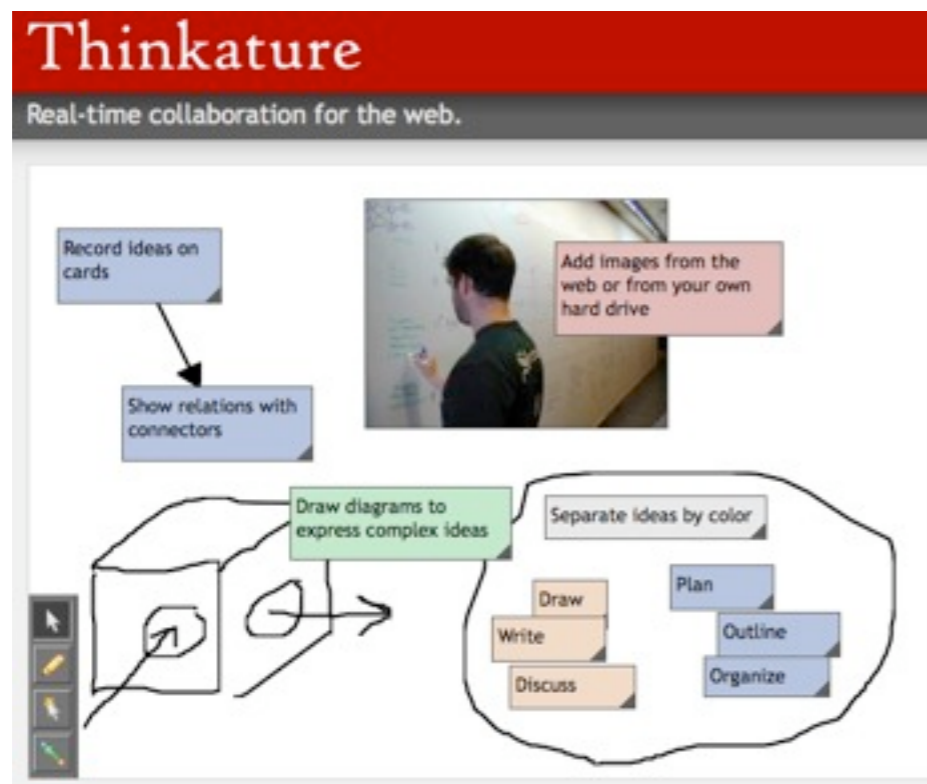
Ratemyteachers: An (infamous) example of recommendation technology in education involves user evaluation of teachers.

Introduction to Social Computing, GEN2182 Science and Modern Society, CUHK, April 4, 2009



Collaborative Editing

General	Educational
Web tools used collaboratively to design, construct and distribute digital product	Text, spreadsheets and other documents can be stored centrally and permit collaborative editing



Thinknature: Websites incorporate more visual tools for collaborative pages



Bubbl.us: Some emphasizing mind-maps for brainstorming



Syndication

General	Educational
Users can 'subscribe' to RSS feed enable websites so that they are automatically notified of any changes or updates in content via aggregator	Websites from which students can take advantage of syndicated content



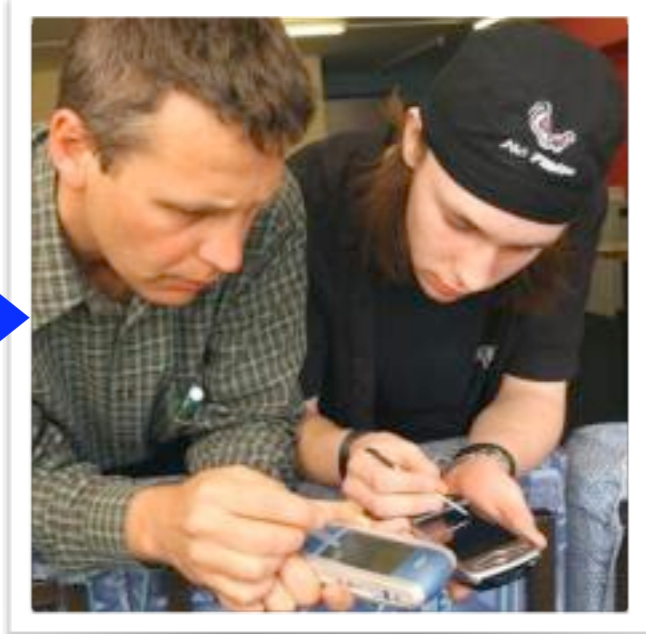
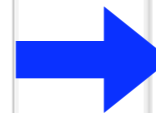
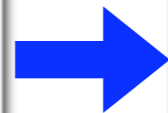
Podcastschool: A website contains podcasts for school students



Stanford: A website contains syndicated material sponsored by Stanford



Evolution of Learning and Training



distance learning
d-Learning



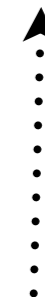
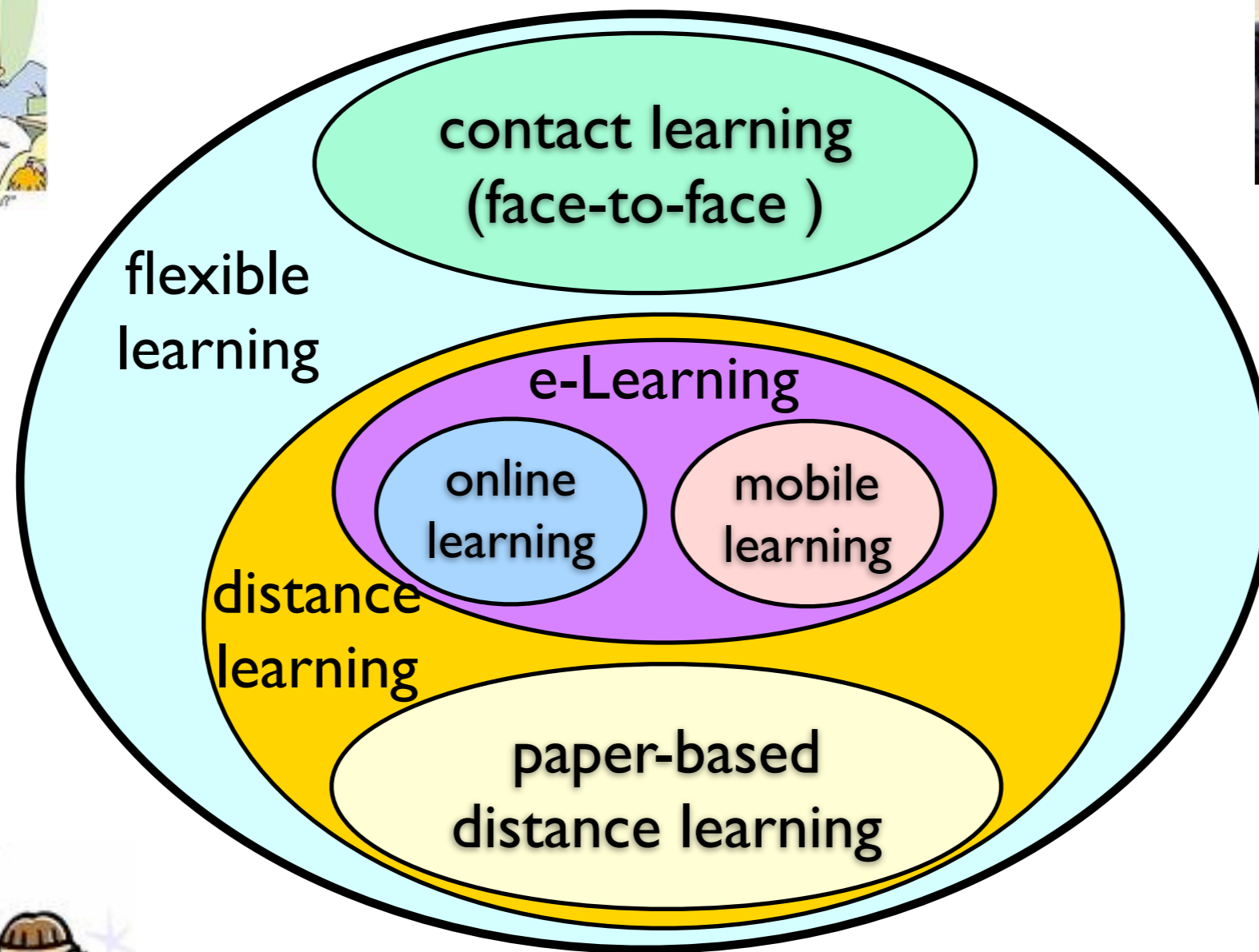
electronic learning
e-Learning



mobile learning
m-Learning



Categories of Learning



e-Learning

- A subset of technology-based training and encompasses all learning activities conducted on the internet
- Can be “live” (also known as “**synchronous**”) learning, meaning students communicate with peers and instructors in real-time, or it can be completely self-paced, which is known as “**asynchronous**” learning
- Covers a set of applications and processes, including
 - Computer-based training
 - Web-based learning
 - Virtual classroom
 - Digital collaboration



The screenshot shows a web browser window with the URL <http://www.universities.com/>. The page title is "Universities.com Distance Learning and On-Campus Colleges and Universities". The main navigation bar includes "Most Visited", "Getting Started", and "Latest Headlines". The site logo "UNIVERSITIES.COM" is prominently displayed, along with a "Google Custom Search" box and a "Search" button. A photograph of three students is visible on the right side of the header.

The main content area is divided into two primary sections:

- DISTANCE LEARNING**: This section includes a list of degree levels: [Associate Degree](#), [Bachelor Degree](#), [Masters Degree](#), and [Doctorate Programs](#). It also lists other educational options: [Certificates](#), [Continuing Education Degree](#), [Online Degree Majors](#), and [Online Degree Schools](#). There is also a link to [Articles](#).
- ON CAMPUS**: This section features a link to [On Campus colleges and universities](#).







The central text area provides an overview of the site's mission: "Universities.com has organized the most extensive collection of Post-Secondary distance learning and on-campus colleges and universities." It highlights "Distance Learning & Online Education" with 1164 degrees available for browsing. A detailed list of popular degrees is provided, including [Masters in Education](#), [PhD in Education - Doctor of Education](#), [PhD in Psychology](#), [Bachelor of Business Administration](#), [Masters in Healthcare Administration](#), [Masters in Psychology](#), [Masters in Nursing](#), [MBA Programs Business Administration](#), [Masters in Human Resources](#), [Doctor of Business Administration](#), [PhD in Healthcare Administration](#), [Bachelor in Engineering](#), [Bachelor in Criminal Justice](#), [PhD in Organization and Management -Doctor of Management](#), [Bachelor in Accounting](#), [Bachelor in Information Technology](#), [Bachelor in Healthcare Administration](#), [Masters in Information Technology](#), [PhD in Information Technology](#), and [Masters in Criminal Justice](#).

The "On-Campus" section notes: "For On-Campus degrees make sure to visit our on-Campus section by clicking on the links on your left under [On-Campus]."

UNIVERSITIES.COM: The most extensive collection of distance learning



What is m-Learning?

New Learning Paradigms		Mobile Technologies
Individual/Learner centered		Personalized Services
Collaborative learning		Networked/Wireless
Situated learning		Mobile awareness
Contextual learning		Context awareness
Ubiquitous learning		Ubiquitous
Life long		Durable



What is m-Learning?

- Refers to the use of **mobile** and **handheld** devices in teaching and learning
- Mobile implies movement and **mobility**--to learn “**on the go**”



Why m-Learning?

- Enhance learner's success
 - Real world skills
 - Access learning materials from anywhere and anytime
 - Just-in-time learning--reference tool for quick access to data in the field
 - Interact with others
 - Collaborate learning

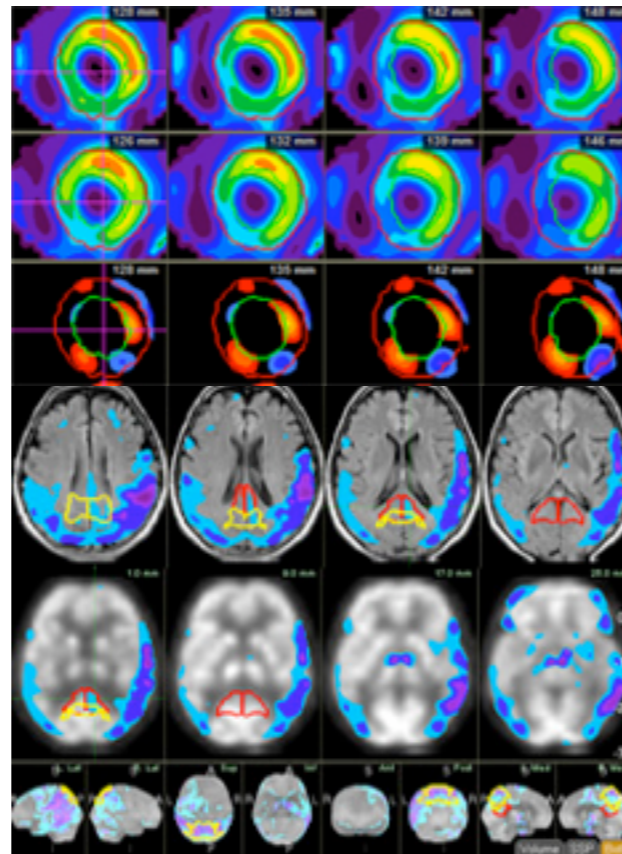


m-Learning Devices

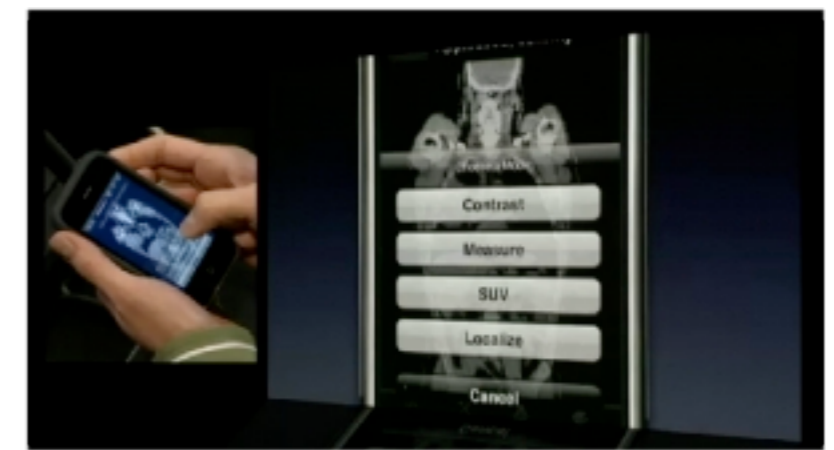
- PDAs
- Tablet PCs
- Mobile phones
- Wearable computers
- Laptop computers
- E-book readers
- Hybrid devices



iPhone in Medicine



Multi-planar
reconstruction data sets



Images



online version

Medical resources developed for the iPhone can be used by students and practitioners

<http://jeffreyleow.wordpress.com/2008/06/10/iphone-in-medical-education/>

Introduction to Social Computing, GEN2182 Science and Modern Society, CUHK, April 4, 2009



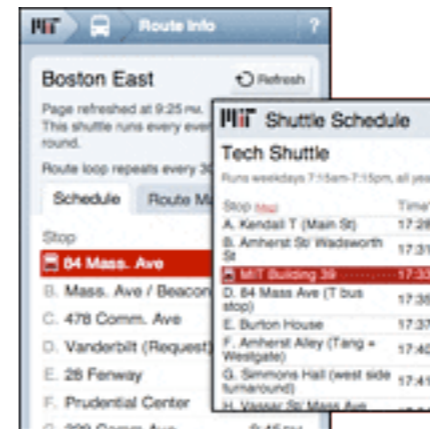
MIT Mobile Project



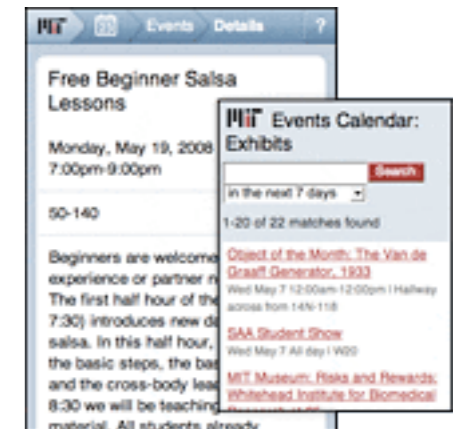
People Directory



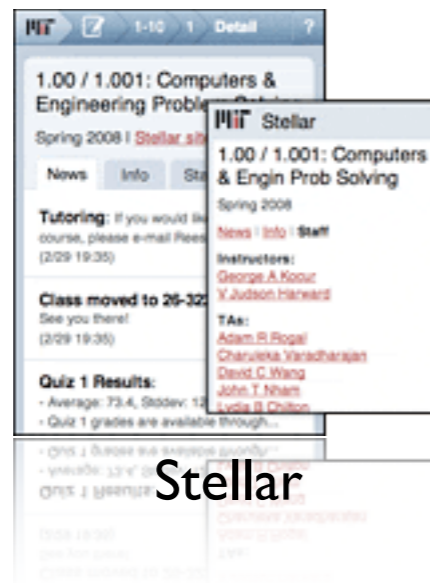
Campus Map



Shuttle Schedule



Events Calendar



Stellar



Emergency Information



3DOWN

<http://mobi.mit.edu/>



Limitation of m-Learning Devices

- Small screen size and limited storage capabilities
- Batteries require regular charging
- Lack of common platform
- More easily lost or stolen
- Much less robust than desktops
- Get outdated very quickly
- Security and privacy issues
- Limited bandwidth problems
- Difficulties to upgrade



Tensions and Areas for Further Research

- Teaching **vs.** learning
- Walled garden **vs.** open arena
- Private learning **vs.** collaborative learning
- Digital native **vs.** digital immigrant
- Social networking **vs.** anti-social networking
- Rip-mix-burn **vs.** cut-tweak-paste

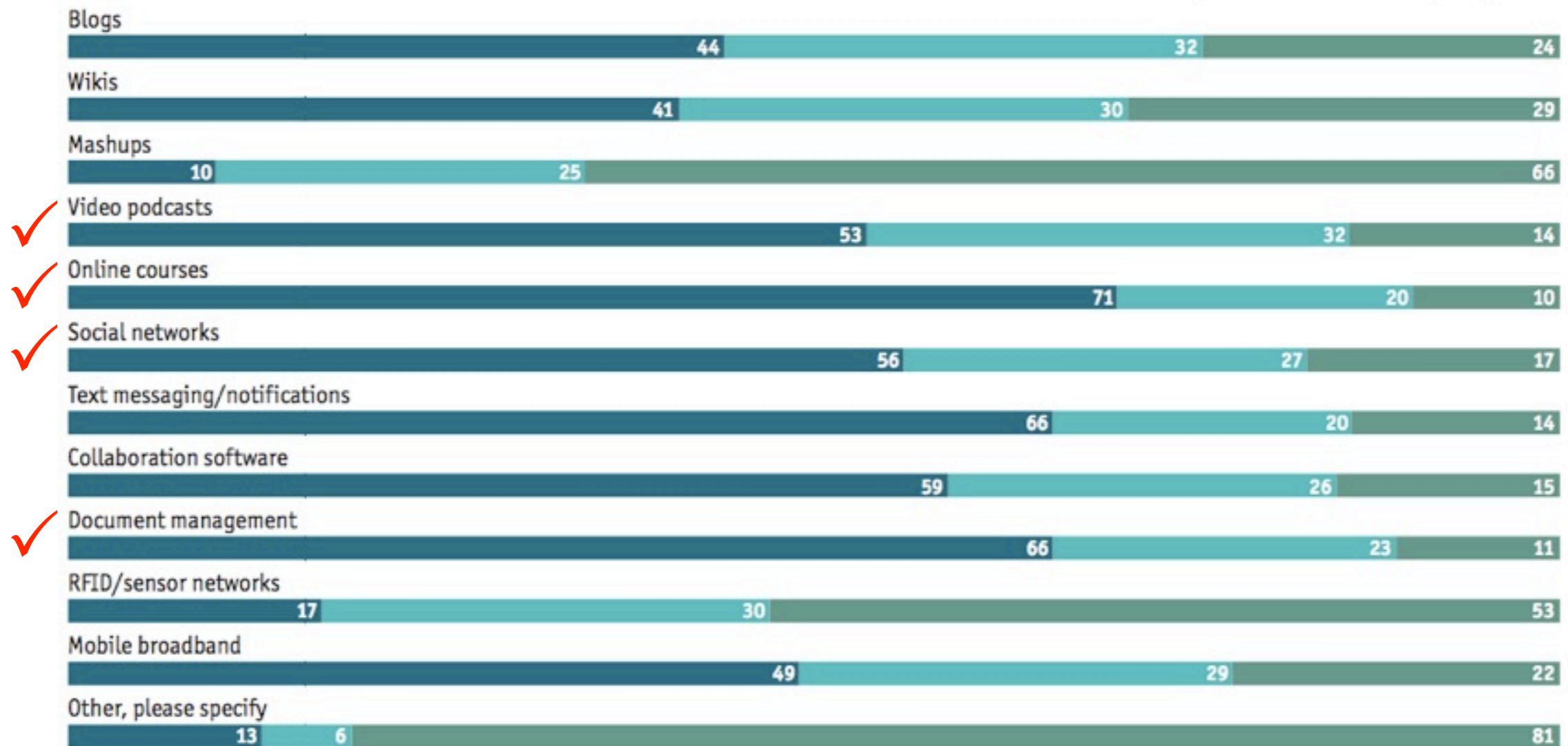


Economist Intelligent Unit 2008

Which tools does your institution currently use, and which do you think will be used within five years?

(% respondents)

■ Use now ■ Within five years ■ Don't know/Not applicable



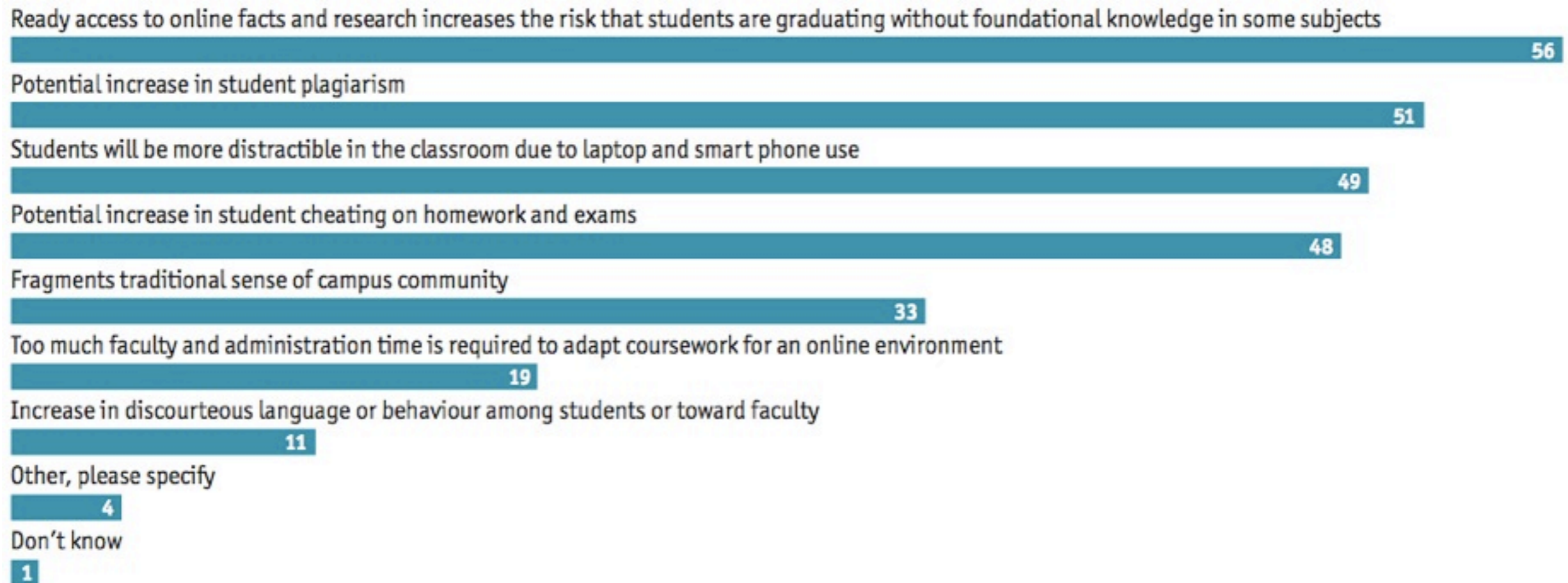
New Challenges

- **Quality** and **reliability** of information and resources
- Responsibility and awareness of **security** and **privacy** issues
- **Ethical** questions, e.g. <http://www.ratemyprofessors.com/>, and cyberbullying
- Need for **new skills** both for learners and teachers



Economist Intelligent Unit 2008

In what ways do new technologies pose the greatest challenges and risks to colleges and universities? Select up to three.
(% of respondents)



Conclusions

- Social Computing is a **paradigm shift!**
- Novel views on the **spatial** and **temporal** relationship among **social entities!**
- Great **opportunities** in a new research direction!



Conclusions

- New availability of resources for learning
- New learner empowerment and networks
- New participation in learning processes



Conclusions

- New availability of resources for learning
 - Easy access to **free** information resources (dictionaries, encyclopaedia)
 - New **variety** of sources and resources
 - Education providers pressured to open up their resources to show their **quality**



Conclusions

- New learner empowerment and networks
 - New empowerment in **choosing** the learning provider
 - New means to **express** and show one's skills
 - Collaborative communities, new support for **informal learning**



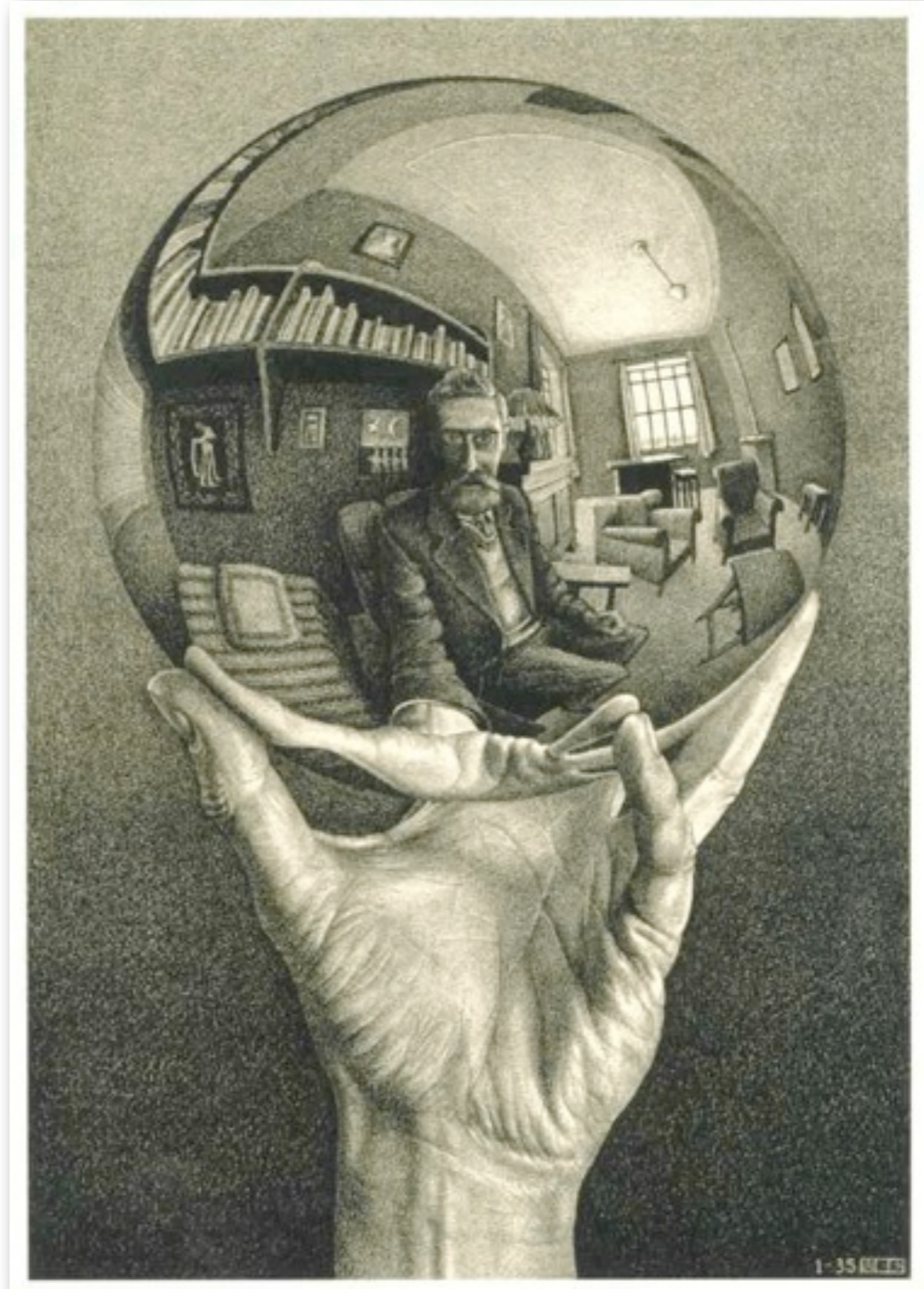
Conclusion

- New participation in learning processes
 - Digital natives expect to use **participative** approaches
 - Learning tool developers are already **integrating** and **developing** participative tools to their products



On the Horizon...

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



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- Prof. Michael R. Lyu
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- Hao Ma (Ph.D.)
- Xin Xin (Ph.D.)
- Haiqin Yang (Ph.D.)
- Jessie Li (R.A.)





"On the Internet, nobody knows you're a dog."

