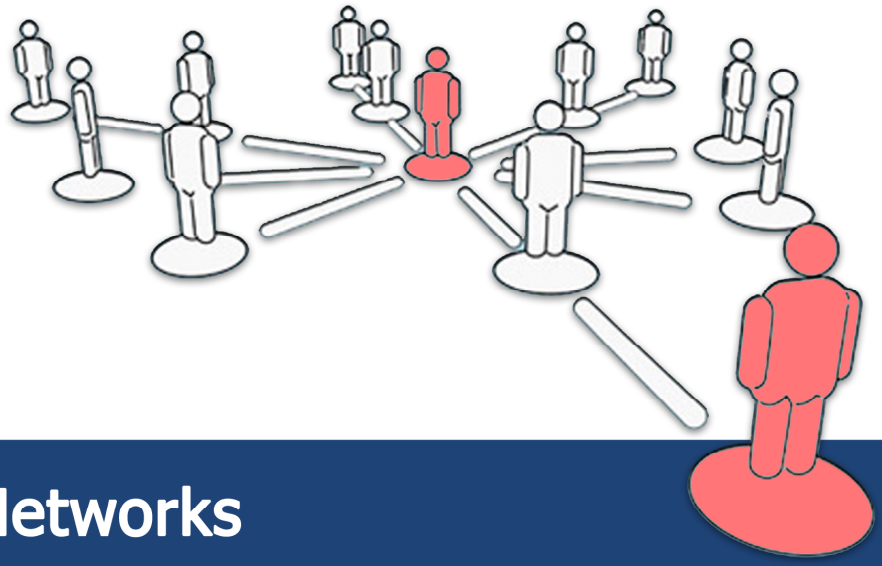
Belonging Networks

Belonging

Networks



Belonging Networks

The Key to developing your corporate Social Network:

This is a C-Level research manual that will help you learn about social networking in order to develop your own corporate "**Belonging Network**".

Bill Ganz 2008

www.BelongingNetworks.com

"A Belonging Network is a presumer driven online social network focused on a liked minded or lifestyle based online community."

- Bill Ganz

Belonging Networks

www.BelongingNetworks.com

Research Provided By:
Bill Ganz / Brad Johnson

more media group

www.MoreMediaGroup.com

Creative Production Design

www.PromotionalEvents.Tv

TPi

www.TradeShowProductions.com

5mm

www.5MinuteMedia.com

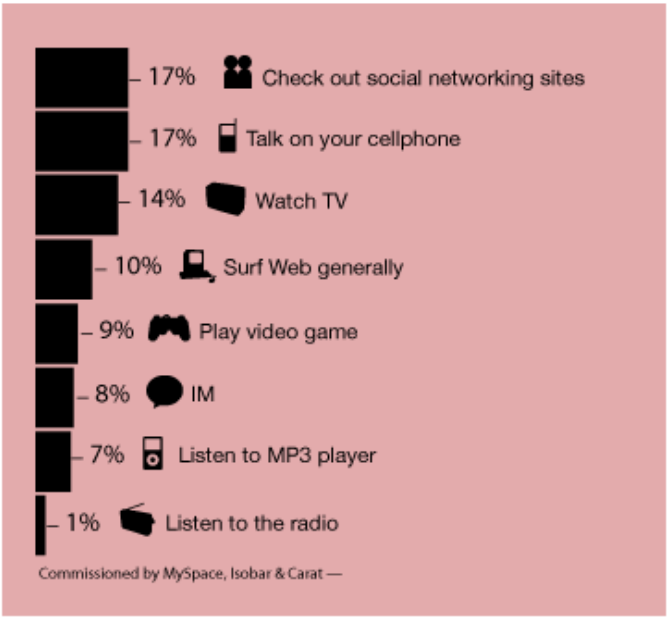
Introduction

In the last 3 years, countless websites have evolved their technologies into platforms that organize content and communications among individuals for the purpose of Social Networking. Sites like Myspace, Facebook, and YouTube have demonstrated the power of empowering the user with tools that allow people to collaborate, interact, and personalize verses the traditional “browsing” experience. Myspace boasts over 100 million accounts, YouTube serves an average of 100 million video streams per day and FaceBook holds 25 million users (and is growing at an average of 100,000 new users per day). Now, more then ever, back end analytic data is being meticulously gathered and used to refine effective online advertisement programs and distribute products *globally.*

As a result, the creative process of developing successful online programs has transformed. The previous generation of building dynamic pages loaded with hyperlinks will be replaced with purposefully developed, engaging applications that the user

identifies with.
In a survey commissioned by Myspace on Social Networking, you can see by the percentages that these concepts are in place and already working.

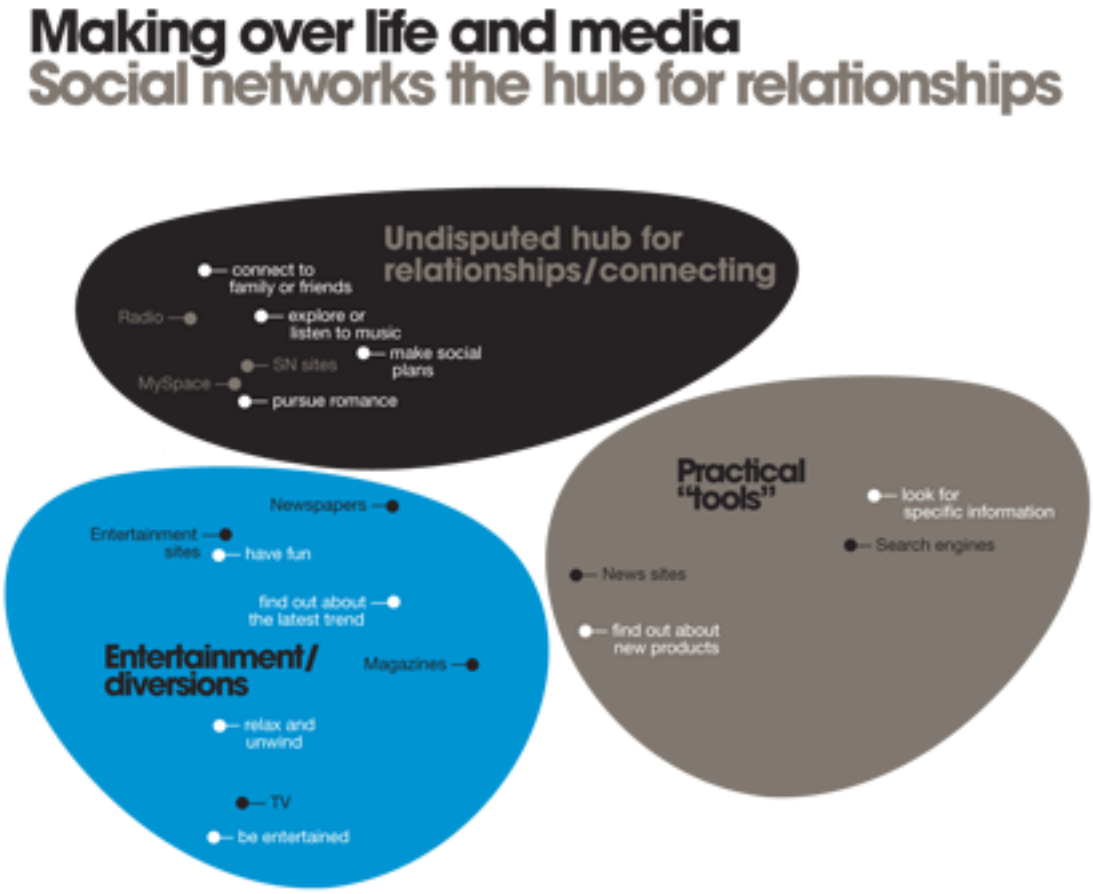
So, how do consumers and businesses keep up with these changes? And, more importantly, how can we make it usable to the ever growing population of online presumers?



The answer to developing a beneficial social network is to develop user-beneficial **Belonging Networks**.

Social Networking Industry

Social networking is the fastest growing sector of the Internet. Currently, the popular, MySpace, draws over 28 million unique users daily. Social networking has taken off globally as well. Literally hundreds of millions of people around the world are visiting social networking sites each month and several sites command high numbers of daily visitors. This phenomenon began flourishing as a component of an overall business Internet strategy around March 2005 when Yahoo launched Yahoo 360°. This social trend is changing the human fabric of the Internet paving the way for exceptional pay-offs for investors. A case in point, takes us back again to MySpace, which recently commanded a purchase price of $580 million by News Corporation in July 2005. Still another Rapidly rising Internet star, Facebook Inc., recently sold a 1.6 % stake to Microsoft Corp. for $240 million which has valued this 4 year old company at $15 Billion.
1111



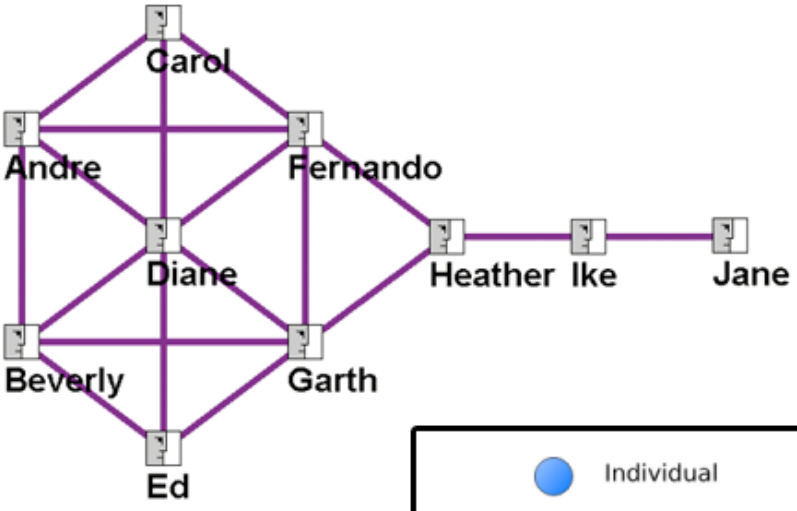
Section 1 - Belonging Networks

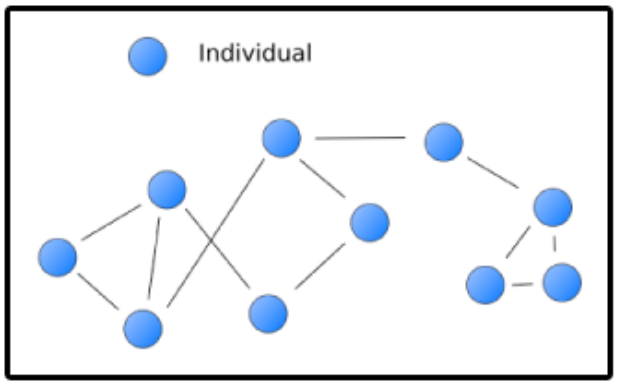
Social Networking - The Vast Breakdown

A **social network** is a social structure made of nodes (which are generally individuals or organizations) that are tied by one or more specific types of interdependency, such as values, visions, idea, financial exchange, friends, kinship, dislike, conflict, trade, web links, sexual relations, disease transmission (epidemiology), or airline routes.

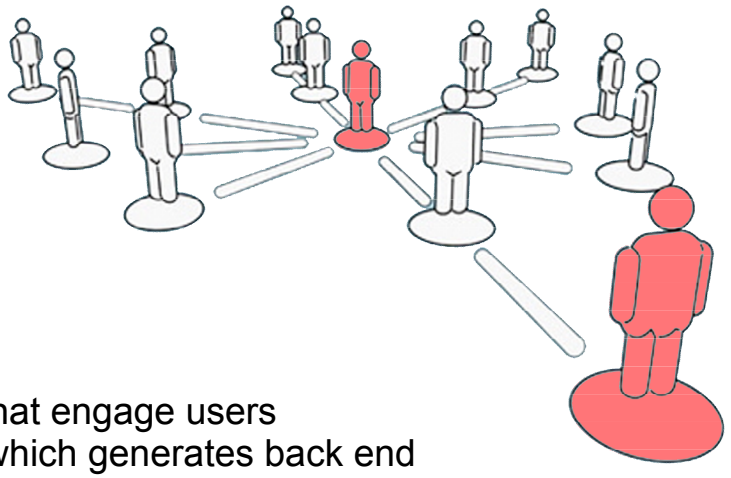
Social network analysis views social relationships in terms of nodes and ties. Nodes are the individual actors within the networks, and ties are the relationships between the actors. There can be many kinds of ties between the nodes. Research in a number of academic fields has shown that social networks operate on many levels, from families up to the level of nations, and play a critical role in determining the way problems are solved, organizations are run, and the degree to which individuals succeed in achieving their goals.

In its simplest form, a social network is a map of all of the relevant ties between the nodes being studied





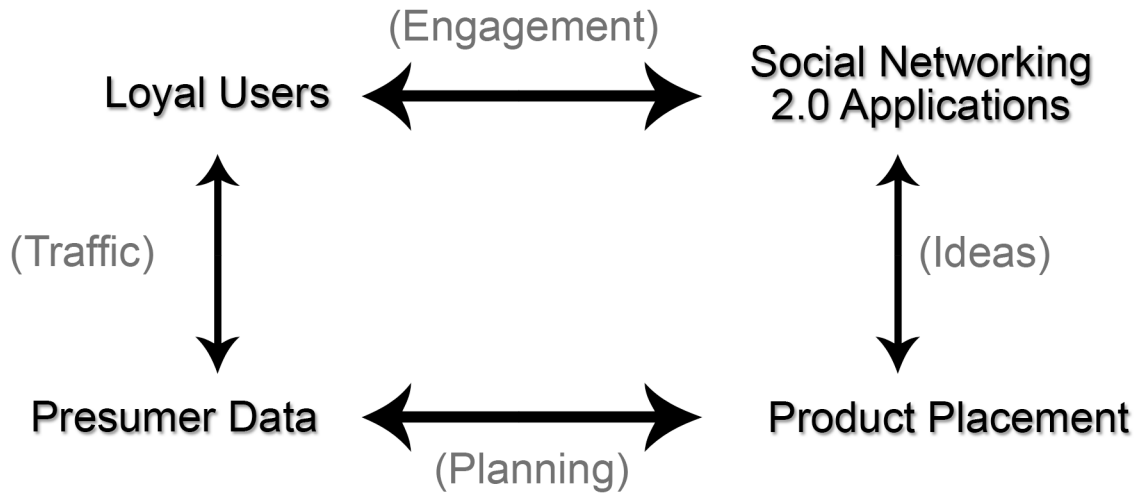
Belonging Networks



A **Belonging Network (BN)** is a presumer driven online social network focused on a liked minded or lifestyle based online community.

The core goals of BN's are to:

- Develop Social Networking platforms that engage users
- Establish a loyal presumer user-base which generates back end analytic data
- Make effective product placement decisions based off your customers biographic profiles



The elements that make up the core goals of a Belonging Network are **Engagement**, **Traffic**, **Planning**, and **Ideas**.

Engagement, Traffic, Planning and Ideas

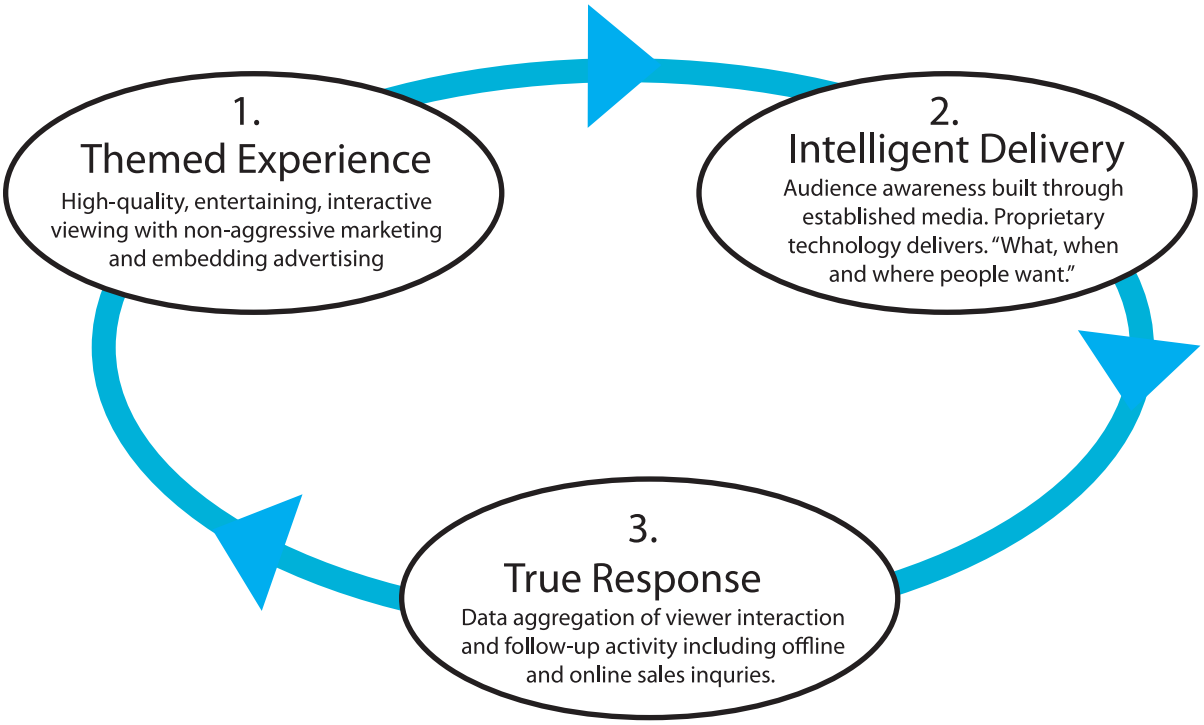
Developing a Belonging Network program that is engaging, and has massive loyal user bases that give clients the data they need for product placement can is not as difficult a task as you may think. But by paying close attention to the clients marketing and branding goals and sticking to the key principals of Belonging Networks, Social Networking will be a successful channel in the promotion of your company.

Belonging Network's embody three key principles when developing engaging elements of a Social Network:

1. Themed Experience – seamless integration of various sources, styles, and formats of content, all directly aligned with each program's specific creative and marketing goals.

2. Intelligent Delivery – smart new ways to help audiences find and use information that they want and need

3. True Response – accurate tracking and meaningful cross-platform reporting that brings
true relevance and accountability to new media initiatives.



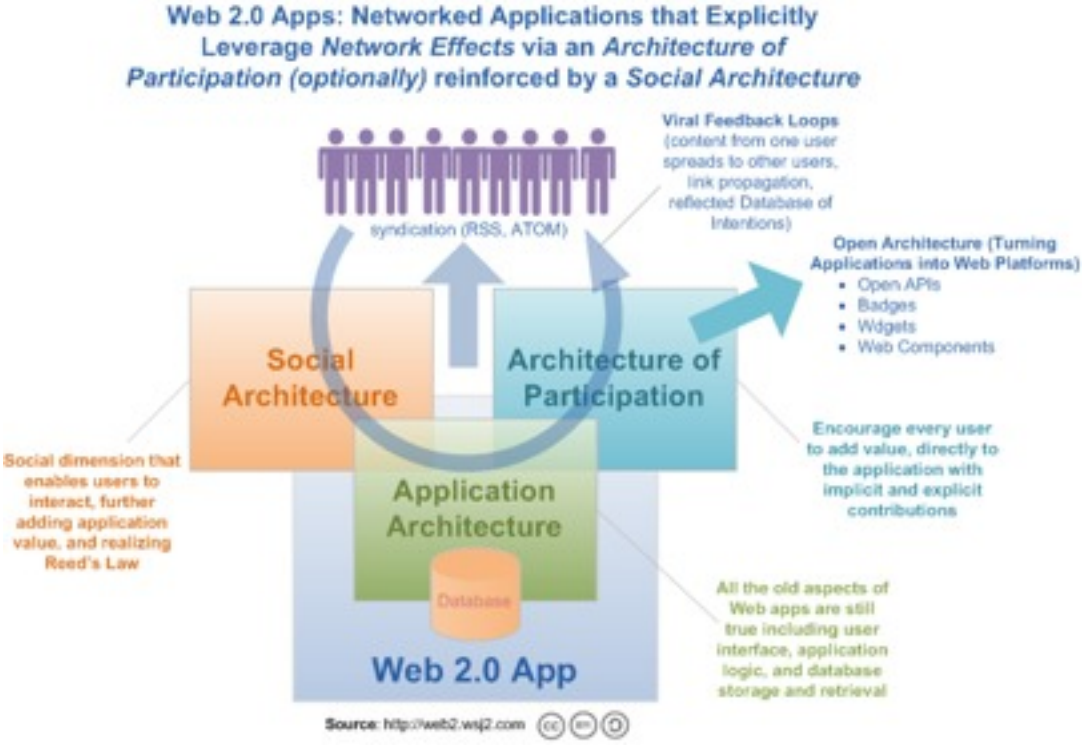
Belonging Networks Themed Experiences

Bill Ganz and his executives have extensive backgrounds in creating themed web experiences of many kinds from wide acceptance to niche markets, family fun to nightclub mystique, full immersion to internationally geared websites. The style, tone, and delivery schedule of Belonging Networks interactive format is custom-developed for each client's messaging needs, brand character and audience demographic within each vertical network.

• **Entertainment Networks:** Entertainment geared Belonging Network programs have mass-audience appeal, but are targeted to the interests of specific demographics. Star power and top-notch creative attracts audiences and builds loyalty.

• **Channel-Direct Marketing Networks**: highly targeted advertising, marketing, or communications content made easy to pull and enjoyable to experience via integrated media campaign approaches. Channel Direct content completes the user experience of a brand or product, connecting traditional branding ads in mass media
to detailed product collateral and point-of-purchase promotions.

• **Subscription Networks:** Subscription programs in Belonging Networks are custom-crafted to fill a targeted audience's need for specific information or entertainment. Audiences value the content for its featured experts, personalities, convenience and depth.



Intelligent Delivery

Exposure and promotion are vitally important for the success of Belonging Network programs, so a large focus is put on its efforts on Intelligent Delivery developments.

Exposure

It's essential to develops strategic partnerships with both traditional media, and online advertising professionals to build complementary advertising campaigns that promote Belonging Network programs and increase the loyal user base to online websites, and more importantly the target product.

Offline Advertising	Online Advertising
- Broadcast TV - Cable TV - Radio - Print - Billboards - Direct mail	- Websites - Blogs - Social networks - Search terms PPC - Contextual terms PPC - Banners, Skyscrapers, Columns, etc.

Web Advertising Creates Online Pre-Shopping

- There are 1.2 billion Internet users
- 95% of all college freshmen use the Internet to shop
- 47% of Americans' web time is now dedicated to visiting content, a 37% jump from 2003, a trend expected to continue
- Consumers are spending 88% more time online pre-shopping than they did four years ago
- Online pre-shoppers educate themselves and spend 41% more even if they eventually buy offline at a brick and mortar

According to the Neilsen worldwide ratings 2007

Online Vs. Offline Business Architecture

Consumer to Consumer (C2C)

This is where consumers in an online world are able to collaborate with other like minded people with the same interests. Social networking allows people to poll other like minded and/or industry professionals for common consensus.

Consumer to Business (C2B)

This is the power of online marketing in that marketing can get pre-data and post-data from consumers directly to manufacturers and distributors. Consumers now have a direct conduit for positive and negative feedback to the manufacturer.

Business to Business (B2B)

This is where business to business can support the power of joint ventures and partnerships when collaborating with and for an industry.

Business to Business to Consumer (B2B2C)

This is a traditional channel where the responsibility lies on the manufacturer to empower the consumer to buy the products from the distributor. The distributor benefits from the brand equity of the manufacturer.

Belonging Network True Response

A component of all programs, Belonging Network True Response draws a direct link between a client's marketing activity and its quantifiable results, shifting Social Networking projects out of the realm of traditional marketing "overhead" categories and into "revenue contribution" categories that increasingly enjoy protected budgets and internal influence. IPTVNow! offers marketers the audience appeal of television with the profiling capabilities of the Internet. Current Internet advertising models (banner ads, interstitials, pop-ups and keyword search) require interruption of a user's consumption flow to visit an advertiser's site. Belonging Networks embedded advertising connects users to relevant content in a manner that does not interrupt or detract from the user's experience. In turn, marketers motivate consumer results and get direct feedback on content consumption patterns, sell-through rates, trial messaging effectiveness, and promotion results. In addition, media partners can enhance their audience profiling knowledge with Belonging Network True Response data. In productizing a new relationship between marketers and consumers online, it is critical to re-define how marketers look at their branding and direct response online marketing. Bill Ganz has developed a strategic partnership with BlackFoot, Inc., a leading provider of robust, cross-platform marketing analytics and reporting technologies, to give clients using Belonging Networks a quantifiable view of the increased benefit of Social Networking.

Marketeers! RSS & You

Really Simple Syndication (RSS) is a simple XML-based system that allows users to subscribe to content published on your website and be notified instantaneously of updates.

In 2005, RSS was just in it's beginning stages of when only 12% of internet users knew what RSS was, and only 4% knowingly used it. 27% of Internet users consumed RSS

syndicated content on personalized start pages (e.g., iGoogle, My Yahoo!, My MSN) without knowing that RSS is the enabling technology.

Today, “without knowing” is the continuing trend. The most popular operating systems on the market are building RSS subscription programs into their software suites (Internet Explorer, Safari). Now, users click on buttons that say “Subscribe - click here” and they’re instantly added to their favorite reader.

According to respondents, search engines and news sites are powerful, practical tools. Magazines and television provide excellent passive entertainment. But when it comes to connection and interaction, respondents resoundingly prefer social networking sites in general. Whether for kindling a new romance, reconnecting with a former classmate, or making social plans with best friends, users recognize social networks as the best venue for the dance of attraction, connection, and retention that’s better known as “relationships”.

Section 2 - Social Networking Reference Manual

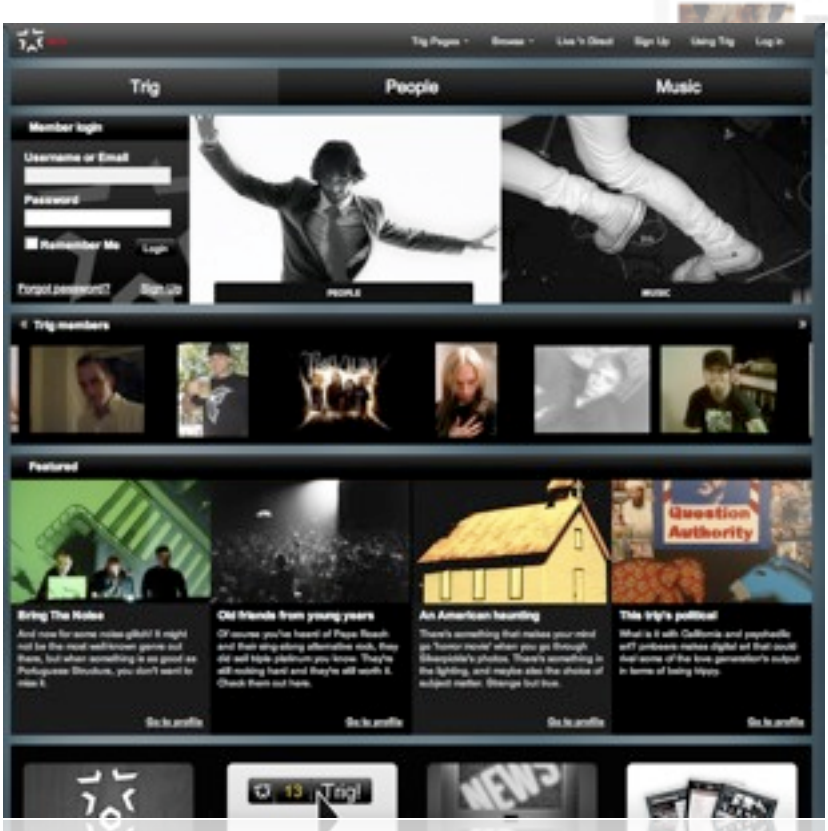
This section is packed with some of the most vital need to know info on social networking.

10 Most Beautiful Social Networks

July 9, 2007 — 01:17 PM PDT — by Stan Schroeder — Share This

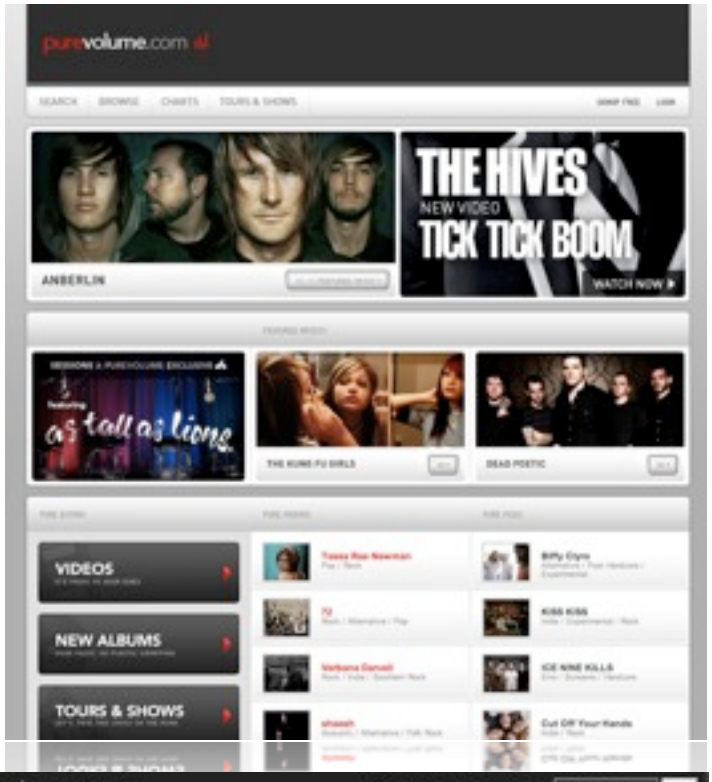
If you asked most MySpace-haters what’s their problem with the service, they’d probably say: it’s ugly. Meanwhile, people tell us they are switching from Twitter to Pownce because it’s prettier and easier to use. For those who prize beauty above all else, we brought together 10 of the prettiest social networks.

Virb - generally known as the designer's MySpace, Virb lives up to the hype by offering sleek and easy-to-customize profile design. The details on various features, for example music and video player, are quite polished - even the ads look nice. If blinking images, huge sigs that mess up the formatting and colorful backgrounds make you insane, Virb is the right place for you.

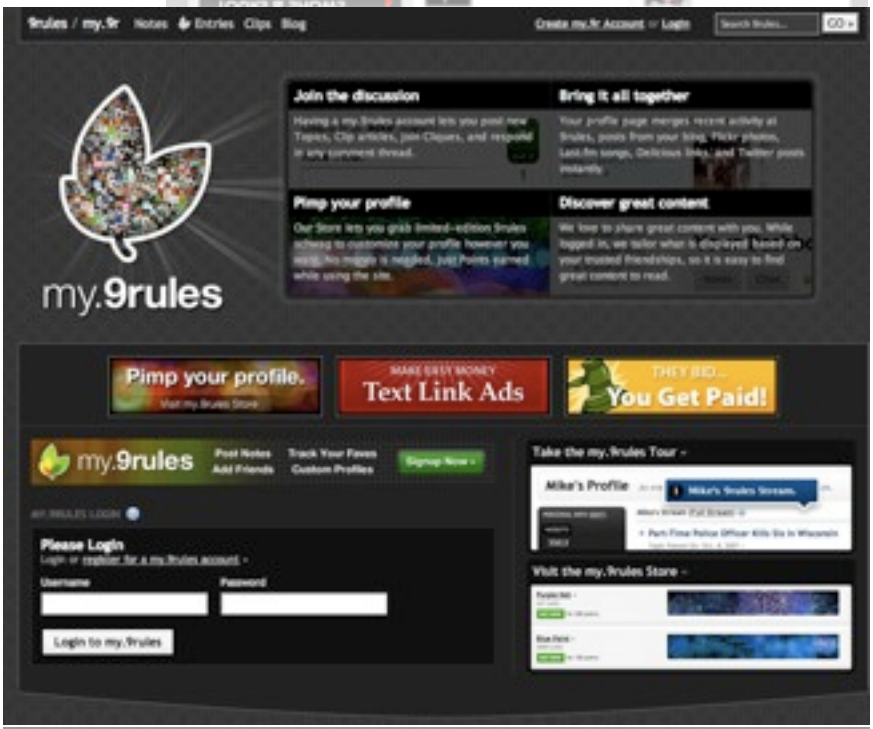


Trig - Trig is a sweet sight for the sore eyes of a web designer/hipster who spent too many days wailing about horrid MySpace profiles. It's quite similar to Virb but in our opinion looks even nicer, with black and 20 shades of gray being the dominant colors. Trig is mostly music-oriented, so if you have a band that's simply too artsy to have a MySpace profile, you know what to do.

Purevolume - neat and tidy are the words that first come to mind when you first look at Purevolume. The site is purely music-oriented and the profiles are divided between artists and listeners. The actual profiles, while beautiful, have the problem of looking all pretty much the same; we like the black/white/gray look, but more customization options wouldn't hurt.

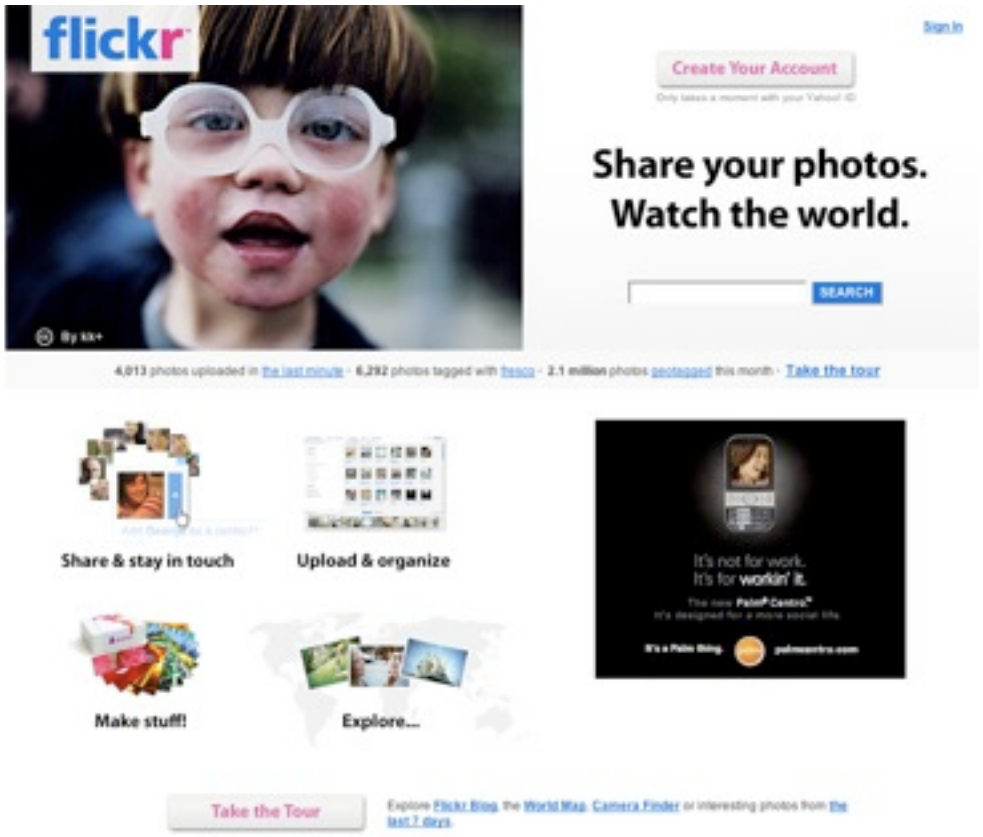


my.9rules - 9rules is a blogging community which always put a lot of emphasis on quality design, so it's no wonder that their social network, my.9rules, looks very neat, too. Just like on Purevolume, though, the profiles on 9rules are visually very similar, which keeps the look of the site consistent but it also makes the whole experience slightly dull.



Pownce - Pownce has been categorized as everything: from web-based IM to a forum, so we guess that simply calling it a social network isn't that far off. Taking the Twitter recipe and perfecting it, Pownce added some of its own flavor to the mix, and one of the features we really like about it are skins. Don't get us wrong, Pownce looks nice to begin with, but having the option to change the skins is a big plus. Currently, the only beef we have with this feature is the fact that the available amount of skins is so small: only four. Give us more!

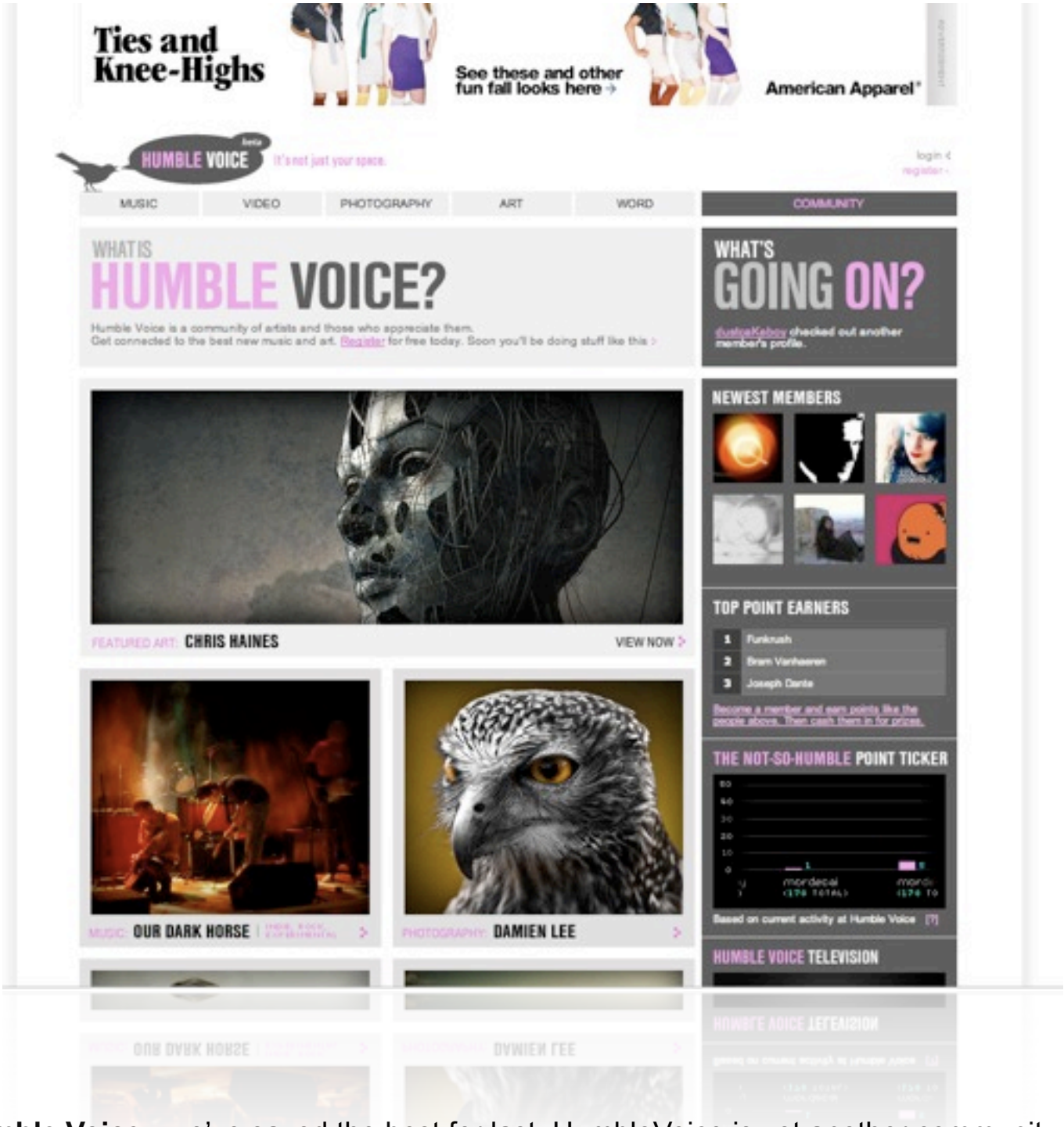
Flickr - yes, we like the Flickr look. It probably has to do with the fact that the site is full of beautiful photos, but Flickr's easy-on-the-eyes aesthetics are carefully thought out and make the site really enjoyable to use.



Threadless - one of the first really successful sites that harness the power of community for commercial purposes, Threadless enables users to submit their own T-Shirt designs; the community votes for the very best, which then become a part of Threadless' official catalog. The designs are really great, and Threadless has been the favorite place to buy t-shirts for many a design student for quite some time. The site itself has a laid-back design that might not appeal to everyone, but you have to give it credit for originality.

Shelfari - Shelfari is a community of book lovers which you can browse by user, by interest groups or by books themselves. It's all packed in a neat visual package which might not stand out with extraordinary design, but it will make it really easy to find your way around the site. The inclusion of actual front pages of individual books is a nice touch, too.

Beautiful Society - ok, this one was a no-brainer. With a name like that, one would expect beautiful design and Beautiful Society delivers. The site revolves around the concept of "favorite things" - users get to pick things they like, which become separate entities that get more votes and rise the rank of popularity as more and more users add them to the list. All this is wrapped in a nice orange/blue design with a lot of rounded corners and nothing to upset our sensitive eyes.



Humble Voice - we've saved the best for last. HumbleVoice is yet another community for designers, artists and musicians, and it looks gorgeous. Page real estate is used generously, with most images on the site being really large, and all of the content is wrapped up in neat little boxes. As sometimes happens with art-related sites, some of the fonts are too tiny to read if you don't have 20/20 vision, but we're ready to forgive Humble Space this small blunder. After all, it's artists we're talking about here.

Web 2.0

In studying and/or promoting web-technology, the phrase Web 2.0 can refer to a perceived second generation of web-based communities and hosted services — such as social-networking sites, wikis, and folksonomies — which aim to facilitate creativity, collaboration, and sharing between users. The term gained currency following the first O'Reilly Media Web 2.0 conference in 2004.[2][3] Although the term suggests a new version of the World Wide Web, it does not refer to an update to any technical specifications, but to changes in the ways software developers and end-users use webs. According to Tim O'Reilly,

"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." [4]

Some technology experts, notably Tim Berners-Lee, have questioned whether one can use the term in a meaningful way, since many of the technology components of "Web 2.0" have existed since the early days of the Web.[5][6]

Defining "Web 2.0"

In alluding to the version-numbers that commonly designate software upgrades, the phrase "Web 2.0" hints at an improved form of the World Wide Web. Technologies such as weblogs (blogs), social bookmarking, wikis, podcasts, RSS feeds (and other forms of many-to-many publishing), social software, web application programming interfaces (APIs), and online web services such as eBay and Gmail provide enhancements over read-only websites. Stephen Fry (actor, author, and broadcaster) describes Web 2.0 as

"an idea in people's heads rather than a reality. It’s actually an idea that the reciprocity between the user and the provider is what's emphasized. In other words, genuine interactivity, if you like, simply because people can upload as well as download". [7]

The idea of "Web 2.0" can also relate to a transition of some websites from isolated information silos to interlinked computing platforms that function like locally-available software in the perception of the user. Web 2.0 also includes a social element where users generate and distribute content, often with freedom to share and re-use. This can allegedly result in a rise in the economic value of the web as users can do more online. [citation needed]

Tim O'Reilly regards Web 2.0 as business embracing the web as a platform and using its strengths (global audiences, for example).[citation needed] O'Reilly considers that Eric Schmidt's abridged slogan, don't fight the Internet, encompasses the essence of Web 2.0 — building applications and services around the unique features of the Internet, as opposed to building applications and expecting the Internet to suit as a platform (effectively "fighting the Internet").

In the opening talk of the first Web 2.0 conference, O'Reilly and John Battelle summarized what they saw as the themes of Web 2.0. They argued that the web had become a platform, with software above the level of a single device, leveraging the power of the "Long Tail", and with data as a driving force. According to O'reilly and Battelle, an architecture of participation where users can contribute website content creates network effects. Web 2.0 technologies tend to foster innovation in the assembly of systems and sites composed by pulling together features from distributed, independent developers (a kind of "open source" development and an end to the software-adoption cycle (the so-called "perpetual beta"). Web 2.0 technology allegedly encourages lightweight business models enabled by syndication of content and of service and by ease of picking-up by early adopters.[8]

Tim O'Reilly provided examples of companies or products that embody these principles in his description of his four levels in the hierarchy of Web 2.0-ness. Level-3 applications, the most "Web 2.0"-oriented, only exist on the Internet, deriving their effectiveness from the inter-human connections and from the network effects that Web 2.0 makes possible, and growing in effectiveness in proportion as people make more use of them. O'Reilly gave as examples eBay, Craigslist, Wikipedia, del.icio.us, Skype, dodgeball and AdSense. Level-2 applications can operate offline but gain advantages from going online. O'Reilly cited Flickr, which benefits from its shared photo-database and from its community-generated tag database. Level-1 applications operate offline but gain features online. O'Reilly pointed to Writely (now Google Docs & Spreadsheets) and iTunes (because of its music-store portion). Level-0 applications work as well offline as online. O'Reilly gave the examples of MapQuest, Yahoo! Local and Google Maps (mapping-applications using contributions from users to advantage can rank as "level 2"). Non-web applications like email, instant-messaging clients and the telephone fall outside the above hierarchy.[9]

Characteristics of "Web 2.0"

Web 2.0 websites allow users to do more than just retrieve information. They can build on the interactive facilities of "Web 1.0" to provide "Network as platform" computing, allowing users to run software-applications entirely through a browser.[10] Users can own the data on a Web 2.0 site and exercise control over that data.[11][10] These sites may have an "Architecture of participation" that encourages users to add value to the application as they use it.[10][2] This stands in contrast to very old traditional websites, the sort which limited visitors to viewing and whose content only the site's owner could modify. Web 2.0 sites often feature a rich, user-friendly interface based on Ajax[10][2], Flex or similar rich media. The sites may also have social-networking aspects.[11][10]

The concept of Web-as-participation-platform captures many of these characteristics. Bart Decrem, a founder and former CEO of Flock, calls Web 2.0 the "participatory Web"[12] and regards the Web-as-information-source as Web 1.0.

The impossibility of excluding group-members who don't contribute to the provision of goods from sharing profits gives rise to the possibility that rational members will prefer to withhold their contribution of effort and free-ride on the contribution of others.[13]

Technology overview

The sometimes complex and continually evolving technology infrastructure of Web 2.0 includes server-software, content-syndication, messaging-protocols, standards-oriented browsers with plugins and extensions, and various client-applications. The differing, yet complementary approaches of such elements provide Web 2.0 sites with information-storage, creation, and dissemination challenges and capabilities that go beyond what the public formerly expected in the environment of the so-called "Web 1.0".

Web 2.0 websites typically include some of the following features/techniques:

* rich Internet application techniques, often Ajax-based
* semantically valid XHTML and HTML markup
* microformats extending pages with additional semantics
* folksonomies (in the form of tags or tagclouds, for example)
* Cascading Style Sheets to aid in the separation of presentation and content
* REST and/or XML- and/or JSON-based APIs
* syndication, aggregation and notification of data in RSS or Atom feeds

* mashups, merging content from different sources, client- and server-side
* weblog-publishing tools
* wiki or forum software, etc., to support user-generated content

Innovations sometimes associated with "Web 2.0"

Web-based applications and desktops

The richer user-experience afforded by Ajax has prompted the development of websites that mimic personal computer applications, such as word processing, the spreadsheet, and slide-show presentation. WYSIWYG wiki sites replicate many features of PC authoring applications. Still other sites perform collaboration and project management functions. In 2006 Google, Inc. acquired one of the best-known sites of this broad class, Writely.

Several browser-based "operating systems" have also appeared. They essentially function as application platforms, not as operating systems per se. These services mimic the user experience of desktop operating-systems, offering features and applications similar to a PC environment. They have as their distinguishing characteristic the ability to run within any modern browser.

Numerous web-based application services appeared during the dot-com bubble of 1997–2001 and then vanished, having failed to gain a critical mass of customers. In 2005, WebEx acquired one of the better-known of these, Intranets.com, for slightly more than the total it had raised in venture capital after six years of trading.

Rich Internet applications

Main article: Rich Internet application

Recently, rich-Internet application techniques such as Ajax, Adobe Flash, Flex, Nexaweb, OpenLaszlo and Silverlight have evolved that have the potential to improve the user-experience in browser-based applications. These technologies allow a web-page to request an update for some part of its content, and to alter that part in the browser, without needing to refresh the whole page at the same time.

Server-side software

Functionally, Web 2.0 applications build on the existing Web server architecture, but rely much more heavily on back-end software. Syndication differs only nominally from the methods of publishing using dynamic content management, but web services typically require much more robust database and workflow support, and become very similar to the traditional intranet functionality of an application server. Vendor approaches to date fall either under a universal server approach (which bundles most of the necessary functionality in a single server platform) or under a web-server plugin approach (which uses standard publishing tools enhanced with API interfaces and other tools).

Client-side software

The extra functionality provided by Web 2.0 depends on the ability of users to work with the data stored on servers. This can come about through forms in an HTML page, through a scripting language such as Javascript, or through Flash, Silverlight or Java. These methods all make use of the client computer to reduce server workloads and to increase the responsiveness of the application.

XML and RSS

Advocates of "Web 2.0" may regard syndication of site content as a Web 2.0 feature, involving as it does standardized protocols, which permit end-users to make use of a site's data in another context (such as another website, a browser plugin, or a separate desktop application). Protocols which permit syndication include RSS (Really Simple Syndication — also known as "web syndication"), RDF (as in RSS 1.1), and Atom, all of them XML-based formats. Observers have started to refer to these technologies as "Web feed" as the usability of Web 2.0 evolves and the more user-friendly Feeds icon supplants the RSS icon.

Specialized protocols

Specialized protocols such as FOAF and XFN (both for social networking) extend the functionality of sites or permit end-users to interact without centralized websites.

Web APIs

Machine-based interaction, a common feature of Web 2.0 sites, uses two main approaches to Web APIs, which allow web-based access to data and functions: REST and SOAP.

1. REST (Representational State Transfer) Web APIs use HTTP alone to interact, with XML or JSON payloads;
2. SOAP involves POSTing more elaborate XML messages and requests to a server that may contain quite complex, but pre-defined, instructions for the server to follow.

Often servers use proprietary APIs, but standard APIs (for example, for posting to a blog or notifying a blog update) have also come into wide use. Most communications through APIs involve XML (eXtensible Markup Language) or JSON payloads.

See also Web Services Description Language (WSDL) (the standard way of publishing a SOAP API) and this list of Web Service specifications.

Economics and "Web 2.0"

The analysis of the economic implications of "Web 2.0" applications and loosely-associated technologies such as wikis, blogs, social-networking, open-source, open-content, file-sharing, peer-production, etc. has also gained scientific attention. This area of research investigates the implications Web 2.0 has for an economy and the principles underlying the economy of Web 2.0.

Don Tapscott and Anthony D. Williams argue in their book Wikinomics: How Mass Collaboration Changes Everything (2006) that the economy of "the new web" depends on mass collaboration. Tapscott and Williams regard it as important for new media companies to find ways of how to make profit with the help of Web 2.0.[citation needed] The prospective Internet-based economy that they term "Wikinomics" would depend on the principles of openness, peering, sharing, and acting globally. They identify seven Web 2.0 business-models (peer pioneers, ideagoras, prosumers, new Alexandrians, platforms for participation, global plantfloor, wiki workplace).[citation needed]

Organizations could make use of these principles and models in order to prosper with the help of Web 2.0-like applications: “Companies can design and assemble products with their customers, and in some cases customers can do the majority of the value creation”.[14] “In each instance the traditionally passive buyers of editorial and advertising take active, participatory roles in value creation.“[15] Tapscott and Williams suggest business strategies as “models where masses of consumers, employees, suppliers, business partners, and even competitors cocreate value in the absence of direct managerial control“.[16].

Tapscott and Williams see the outcome as an economic democracy.

Some other views in the scientific debate agree with Tapscott and Williams that value-creation increasingly depends on harnessing open source/content, networking, sharing, and peering, but disagree that this will result in an economic democracy, predicting a subtle form and deepening of exploitation, in which Internet-based global outsourcing reduces labour-costs. In such a view, the economic implications of a new web might include on the one hand the emergence of new business-models based on global outsourcing, whereas on the other hand non-commercial online platforms could undermine profit-making and anticipate a co-operative economy. For example, Tiziana Terranova speaks of "free labor" (performed without payment) in the case where prosumers produce surplus value in the circulation-sphere of the cultural industries [17]

Criticism

Given the lack of set standards as to what "Web 2.0" actually means, implies, or requires, the term can mean radically different things to different people.

The argument exists that "Web 2.0" does not represent a new version of the World Wide Web at all, but merely continues to use so-called "Web 1.0" technologies and concepts. Note that techniques such as Ajax do not replace underlying protocols like HTTP, but add an additional layer of abstraction on top of them. Many of the ideas of Web 2.0 had already featured in implementations on networked systems well before the term "Web 2.0" emerged. Amazon.com, for instance, has allowed users to write reviews and consumer guides since its launch in 1995, in a form of self-publishing. Amazon also opened its API to outside developers in 2002.[18] Previous developments also came from research in computer-supported collaborative learning and computer-supported cooperative work and from established products like Lotus Notes and Lotus Domino.

In a podcast interview Tim Berners-Lee described the term "Web 2.0" as a "piece of jargon": "nobody really knows what it means"; and went on to say "if Web 2.0 for you is blogs and wikis, then that is people to people. But that was what the Web was supposed to be all along."[5]

Conversely, when someone proclaims a website "Web 2.0" for the use of some trivial feature (such as blogs or gradient-boxes) observers may generally consider it more an attempt at promotion than an actual endorsement of the ideas behind Web 2.0. "Web 2.0"

in such circumstances has sometimes sunk simply to the status of a marketing buzzword, which can mean whatever a salesperson wants it to mean, with little connection to most of the worthy but (currently) unrelated ideas originally brought together under the "Web 2.0" banner.

Other criticism has included the term "a second bubble," (referring to the Dot-com bubble of circa 1995–2001), suggesting that too many Web 2.0 companies attempt to develop the same product with a lack of business models. The Economist has written of "Bubble 2.0."[19]

Venture capitalist Josh Kopelman noted that Web 2.0 excited only 53,651 people (the number of subscribers to TechCrunch, a Weblog covering Web 2.0 matters), too few users to make them an economically-viable target for consumer applications.[20]

Trademark

In November 2004, CMP Media applied to the USPTO for a service mark on the use of the term "WEB 2.0" for live events.[21] On the basis of this application, CMP Media sent a cease-and-desist demand to the Irish non-profit organization IT@Cork on May 24, 2006,[22] but retracted it two days later.[23] The "WEB 2.0" service mark registration passed final PTO Examining Attorney review on May 10, 2006, but as of June 12, 2006 the PTO had not published the mark for opposition. The European Union application (application number 004972212, which would confer unambiguous status in Ireland) remains currently pending after its filing on March 23, 2006.

References:

See Appendix A "References 4"

Web 3.0

Web 3.0 is a term that is used to describe various evolution of Web usage and interaction along several paths. These include transforming the Web into a database, a move towards making content accessible by multiple non-browser applications, the leveraging of artificial intelligence technologies, the Semantic web, the Geospatial Web,[citation needed] or the 3D web. Gartner suggests the need to differentiate incremental changes to Web 2.0 from Web 3.0 [1]. Tim Berners-Lee coined GGG (Giant Global Graph) as another facet of Web 3.0[2].

History

In early 2006, the term "Web 3.0" was used in a blog article by Jeffrey Zeldman critical of Web 2.0 and associated technologies such as Ajax.[3]

In May 2006, Tim Berners-Lee stated[4]:

“People keep asking what Web 3.0 is. I think maybe when you've got an overlay of scalable vector graphics - everything rippling and folding and looking misty - on Web 2.0 and access to a semantic Web integrated across a huge space of data, you'll have access to an unbelievable data resource. ”

—Tim Berners-Lee, A 'more revolutionary' Web

At the Seoul Digital Forum in May 2007, Eric Schmidt, CEO of Google, was asked to define Web 2.0 and Web 3.0.[2] He responded:

“Web 2.0 is a marketing term, and I think you've just invented Web 3.0.

But if I were to guess what Web 3.0 is, I would tell you that it's a different way of building applications... My prediction would be that Web 3.0 will ultimately be seen as applications which are pieced together. There are a number of characteristics: the applications are relatively small, the data is in the cloud, the applications can run on any device, PC or mobile phone, the applications are very fast and they're very customizable. Futhermore, the applications are distributed virally: literally by social networks, by email. You won't go to the store and purchase them... That's a very different application model than we've ever seen in computing.
”

—Eric Schmidt

At the Technet Summit in November 2006, Jerry Yang, founder and Chief of Yahoo, stated [5]:

“ Web 2.0 is well documented and talked about. The power of the Net reached a critical mass, with capabilities that can be done on a network level. We are also seeing richer devices over last four years and richer ways of interacting with the network, not only in hardware like game consoles and mobile devices, but also in the software layer. You don't have to be a computer scientist to create a program. We are seeing that manifest in Web 2.0 and 3.0 will be a great extension of that, a true communal medium…the distinction between professional, semi-professional and consumers will get blurred, creating a network effect of business and applications. ”

—Jerry Yang

At the same Technet Summit, Reed Hastings, founder and CEO of Netflix, stated a simpler formula for defining the phases of the Web:

“ Web 1.0 was dial-up, 50K average bandwidth, Web 2.0 is an average 1 megabit of bandwidth and Web 3.0 will be 10 megabits of bandwidth all the time, which will be the full video Web, and that will feel like Web 3.0. ”

—Reed Hastings

The term Web 3.0 became a subject of increased interest and debate from late 2006 extending into 2007.[citation needed]

Innovations associated with "Web 3.0"

Web-based applications and desktops

Web 3.0 technologies, such as intelligent software that utilize semantic data, have been implemented and used on a small scale by multiple companies for the purpose of more efficient data manipulation[6]. In recent years, however, there has been an increasing focus on bringing semantic web technologies to the general public.

Web 3.0 debates

There is considerable debate as to what the term Web 3.0 means, and what a suitable definition might be.

Transforming the Web into a database

The first step towards a "Web 3.0" is the emergence of "The Data Web" as structured data records are published to the Web in reusable and remotely queryable formats, such as XML, RDF and microformats. The recent growth of SPARQL technology provides a standardized query language and API for searching across distributed RDF databases on the Web. The Data Web enables a new level of data integration and application interoperability, making data as openly accessible and linkable as Web pages. The Data Web is the first step on the path towards the full Semantic Web. In the Data Web phase, the focus is principally on making structured data available using RDF. The full Semantic Web stage will widen the scope such that both structured data and even what is traditionally thought of as unstructured or semi-structured content (such as Web pages, documents, etc.) will be widely available in RDF and OWL semantic formats. [7]

An evolutionary path to artificial intelligence

Web 3.0 has also been used to describe an evolutionary path for the Web that leads to artificial intelligence that can reason about the Web in a quasi-human fashion. Some skeptics regard this as an unobtainable vision. However, companies such as IBM and Google are implementing new technologies that are yielding surprising information such as making predictions of hit songs from mining information on college music Web sites. There is also debate over whether the driving force behind Web 3.0 will be intelligent systems, or whether intelligence will emerge in a more organic fashion, from systems of intelligent people, such as via collaborative filtering services like del.icio.us, Flickr and Digg that extract meaning and order from the existing Web and how people interact with it.[7]

The realization of the Semantic Web and SOA

Related to the artificial intelligence direction, Web 3.0 could be the realization and extension of the Semantic web concept. Academic research is being conducted to develop software for reasoning, based on description logic and intelligent agents. Such applications can perform logical reasoning operations using sets of rules that express logical relationships between concepts and data on the Web.[8]

Sramana Mitra differs on the viewpoint that Semantic Web would be the essence of the next generation of the Internet and proposes a formula to encapsulate Web 3.0. [9]

Web 3.0 has also been linked to a possible convergence of Service-oriented architecture and the Semantic web.[10]

Evolution towards 3D

Another possible path for Web 3.0 is towards the 3 dimensional vision championed by the Web3D Consortium. This would involve the Web transforming into a series of 3D spaces, taking the concept realised by Second Life further.[11] This could open up new ways to connect and collaborate using 3D shared spaces.[12]

Web 3.0 as an "Executable" Web Abstraction Layer

Where Web 1.0 was a "read-only" web, with content being produced by and large by the organizations backing any given site, and Web 2.0 was an extension into the "read-write" web that engaged users in an active role, Web 3.0 could extend this one step further by allowing people to modify the site or resource itself. With the still exponential growth of computer power, it is not inconceivable that the next generation of sites will be equipped with the resources to run user-contributed code on them.[citation needed] The "executable web" can morph online applications into Omni Functional Platforms that deliver a single interface than multiple nodes of functionality.[13][14]

Proposed expanded definition

Nova Spivack defines Web 3.0 as the third decade of the Web (2010–2020) during which he suggests several major complementary technology trends will reach new levels of maturity simultaneously including:

* Transformation of the Web from a network of separately siloed applications and content repositories to a more seamless and interoperable whole.
* ubiquitous connectivity, broadband adoption, mobile Internet access and mobile devices;
* network computing, software-as-a-service business models, Web services interoperability, distributed computing, grid computing and cloud computing;
* open technologies, open APIs and protocols, open data formats, open-source software platforms and open data (e.g. Creative Commons, Open Data License);
* open identity, OpenID, open reputation, roaming portable identity and personal data;
* the intelligent web, Semantic Web technologies such as RDF, OWL, SWRL, SPARQL, GRDDL, semantic application platforms, and statement-based datastores;
* distributed databases, the "World Wide Database" (enabled by Semantic Web technologies); and
* intelligent applications, natural language processing.[15], machine learning, machine reasoning, autonomous agents.[16]

Social network analysis

Social network analysis (related to network theory) has emerged as a key technique in modern sociology, anthropology, sociolinguistics, geography, social psychology, communication studies, information science, organizational studies, economics, and biology as well as a popular topic of speculation and study.

People have used the social network metaphor for over a century to connote complex sets of relationships between members of social systems at all scales, from interpersonal to international. Yet not until J. A. Barnes in 1954 did social scientists start using the term systematically to denote patterns of ties that cut across the concepts traditionally used by the public and social scientists: bounded groups (e.g., tribes, families) and social categories (e.g., gender, ethnicity). Scholars such as S.D. Berkowitz, Stephen Borgatti, Ronald Burt, Linton Freeman, Mark Granovetter, Nicholas Mullins, Anatol Rapoport, Stanley Wasserman, Barry Wellman and Harrison White expanded the use of social networks.

Social network analysis has now moved from being a suggestive metaphor to an analytic approach to a paradigm, with its own theoretical statements, methods and research tribes. Analysts reason from whole to part; from structure to relation to individual; from behavior to attitude. They either study *whole networks*, all of the ties containing specified relations in a defined population, or *personal networks*, the ties that specified people have, such as their "personal communities".

Several analytic tendencies distinguish social network analysis:
There is no assumption that groups are the building blocks of society: the approach is open to studying less-bounded social systems, from nonlocal communities to links among Web sites.
Rather than treating individuals (persons, organizations, states) as discrete units of analysis, it focuses on how the structure of ties affects individuals and their relationships.

By contrast with analyses that assume that socialization into norms determines behavior, network analysis looks to see the extent to which the structure and composition of ties affect norms.

The shape of a social network helps determine a network's usefulness to its individuals. Smaller, tighter networks can be less useful to their members than networks with lots of loose connections (weak ties) to individuals outside the main network. More open networks, with many weak ties and social connections, are more likely to introduce new

ideas and opportunities to their members than closed networks with many redundant ties. In other words, a group of friends who only do things with each other already share the same knowledge and opportunities. A group of individuals with connections to other social worlds is likely to have access to a wider range of information. It is better for individual success to have connections to a variety of networks rather than many connections within a single network. Similarly, individuals can exercise influence or act as brokers within their social networks by bridging two networks that are not directly linked (called filling structural holes).

The power of social network analysis stems from its difference from traditional social scientific studies, which assume that it is the attributes of individual actors -- whether they are friendly or unfriendly, smart or dumb, etc. -- that matter. Social network analysis produces an alternate view, where the attributes of individuals are less important than their relationships and ties with other actors within the network. This approach has turned out to be useful for explaining many real-world phenomena, but leaves less room for individual agency, the ability for individuals to influence their success, because so much of it rests within the structure of their network.

Social networks have also been used to examine how organizations interact with each other, characterizing the many informal connections that link executives together, as well as associations and connections between individual employees at different organizations. For example, power within organizations often comes more from the degree to which an individual within a network is at the center of many relationships than actual job title. Social networks also play a key role in hiring, in business success, and in job performance. Networks provide ways for companies to gather information, deter competition, and collude in setting prices or policies.

History of social network analysis

A summary of the progress of social networks and social network analysis has been written by Linton Freeman. His 2004 book, The Development of Social Network Analysis[1] is especially useful for developments until the 1980s.

Precursors of social networks in the late 1800s include Émile Durkheim and Ferdinand Tönnies. Tönnies argued that social groups can exist as personal and direct social ties that either link individuals who share values and belief (gemeinschaft) or impersonal, formal and instrumental social links (gesellschaft). Durkheim gave a non-individualistic explanation of social facts arguing that social phenomena arise when interacting individuals constitute a reality that can no longer be accounted for in terms of the

properties of individual actors. He distinguished between a traditional society – "mechanical solidarity" – which prevails if individual differences are minimized, and the modern society – "organic solidarity" – that develops out of cooperation between differentiated individuals with independent roles.

Georg Simmel, writing at the turn of the twentieth century, was the first scholar to think directly in social network terms. His essays pointed to the nature of network size on interaction and to the likelihood of interaction in ramified, loosely-knit networks rather than groups (Simmel, 1908/1971).

After a hiatus in the first decades of the twentieth century, three main traditions in social networks appeared. In the 1930s, J.L. Moreno pioneered the systematic recording and analysis of social interaction in small groups, especially classrooms and work groups (sociometry), while a Harvard group led by W. Lloyd Warner and Elton Mayo explored interpersonal relations at work. In 1940, A.R. Radcliffe-Brown's presidential address to British anthropologists urged the systematic study of networks.[2] However, it took about 15 years before this call was followed-up systematically.

Social network analysis developed with the kinship studies of Elizabeth Bott in England in the 1950s and the 1950s-1960s urbanization studies of the University of Manchester group of anthropologists (centered around Max Gluckman and later J. Clyde Mitchell) investigating community networks in southern Africa, India and the United Kingdom. Concomittantly, British anthropologist S.F. Nadel codified a theory of social structure that was influential in later network analysis.[3]

In the 1960s-1970s, a growing number of scholars worked to combine the different tracks and traditions. One large group was centered around Harrison White and his students at Harvard University: Ivan Chase, Bonnie Erickson, Harriet Friedmann, Mark Granovetter, Nancy Howell, Joel Levine, Nicholas Mullins, John Padgett, Michael Schwartz and Barry Wellman. White's group thought of themselves as rebelling against the reigning structural-functionalist orthodoxy of then-dominant Harvard sociologist Talcott Parsons, leading them to devalue concerns with symbols, values, norms and culture. They also were opposed to the methodological individualism espoused by another Harvard sociologist, George Homans, which was endemic among the dominant survey researchers and positivists of the time. are among the former students of White who have developed social network analysis. [4]

White's was not the only group. Significant independent work was done by scholars elsewhere: University of California Irvine social scientists interested in mathematical

applications, centered around Linton Freeman, including John Boyd, Susan Freeman, Kathryn Faust, A. Kimball Romney and Douglas White); quantitative analysts at the University of Chicago, including Joseph Galaskiewicz, Wendy Griswold, Edward Laumann, Peter Marsden, Martina Morris, and John Padgett; and communication scholars at Michigan State University, including Nan Lin and Everett Rogers. A substantively-oriented University of Toronto sociology group developed in the 1970s, centered on former students of Harrison White: S.D. Berkowitz, Harriet Friedmann, Nancy Leslie Howard, Nancy Howell, Lorne Tepperman and Barry Wellman, and also including noted modeler and game theorist Anatol Rapoport. [5]

Applications

The **evolution of social networks** can sometimes be modeled by the use of agent based models, providing insight into the interplay between communication rules, rumor spreading and social structure. Here is an interactive model of rumour spreading, based on rumour spreading from model on Cmol.

Diffusion of innovations theory explores social networks and their role in influencing the spread of new ideas and practices. Change agents and opinion leaders often play major roles in spurring the adoption of innovations, although factors inherent to the innovations also play a role.

Dunbar's number:

The so-called **Rule of 150**, asserts that the size of a genuine social network is limited to about 150 members. The rule arises from cross-cultural studies in sociology and especially anthropology of the maximum size of a village (in modern parlance most reasonably understood as an ecovillage). It is theorized in evolutionary psychology that the number may be some kind of limit of average human ability to recognize members and track emotional facts about all members of a group. However, it may be due to economics and the need to track "free riders", as it may be easier in larger groups to take advantage of the benefits of living in a community without contributing to those benefits.

Guanxi is a central concept in Chinese society that can be summarized as the use of personal influence. Guanxi can be studied from a social network approach.[6]

The small world phenomenon is the hypothesis that the chain of social acquaintances required to connect one arbitrary person to another arbitrary person anywhere in the world is generally short. The concept gave rise to the famous phrase six degrees of separation

after a 1967 small world experiment by psychologist Stanley Milgram. In Milgram's experiment, a sample of US individuals were asked to reach a particular target person by passing a message along a chain of acquaintances. The average length of successful chains turned out to be about five intermediaries or six separation steps (the majority of chains in that study actually failed to complete). Academic researchers continue to explore this phenomenon. Judith Kleinfeld has written an article[7] that points out the many problems with the original Milgram research. A recent electronic Small World experiment[8] at Columbia University showed that about five to seven degrees of separation are sufficient for connecting any two people through e-mail.

The study of socio-technical systems is loosely linked to social network analysis, and looks at relations among individuals, institutions, objects and technologies.

Business applications

Social networks connect people at low cost; this can be beneficial for **entrepreneurs** and **small businesses** looking to expand their contact base. These networks often act as a customer relationship management tool for companies selling products and services. Companies can also use social networks for advertising in the form of banners and text ads. Since businesses operate globally, **social networks** can make it easier to keep in touch with contacts around the world. In many ways business networking on social networks has eclipsed the amount of networking that takes place on dedicated business networking websites.

Metrics (Measures) in social network analysis

Betweenness
Degree an individual lies between other individuals in the network; the extent to which a node is directly connected only to those other nodes that are not directly connected to each other; an intermediary; liaisons; bridges. Therefore, it's the number of people who a person is connected to indirectly through their direct links.

Closeness
The degree an individual is near all other individuals in a network (directly or indirectly). It reflects the ability to access information through the "grapevine" of network members. Thus, closeness is the inverse of the sum of the shortest distances between each individual and every other person in the network.

Centrality Degree
The count of the number of ties to other actors in the network. See also degree (graph theory).

Flow betweenness Centrality
The degree that a node contributes to sum of maximum flow between all pairs of nodes (not that node).

Centrality Eigenvector
Eigenvector centrality is a measure of the importance of a node in a network. It assigns relative scores to all nodes in the network based on the principle that connections to nodes having a high score contribute more to the score of the node in question.

Centralization
The difference between the n of links for each node divided by maximum possible sum of differences. A centralized network will have much of its links dispersed around one or a few nodes, while a decentralized network is one in which there is little variation between the n of links each node possesses

Clustering Coefficient
The clustering coefficient is a measure of the likelihood that two associates of a node are associates themselves. A higher clustering coefficient indicates a greater 'cliquishness'.

Cohesion
Refers to the degree to which actors are connected directly to each other by cohesive bonds. Groups are identified as ‘cliques’ if every actor is directly tied to every other actor, ‘social circles’ if there is less stringency of direct contact, which is imprecise, or as structurally cohesive blocks if precision is wanted.

Density
Individual-level **density** is the degree a respondent's ties know one another/ proportion of ties among an individual's nominees. Network or global-level density is the proportion of ties in a network relative to the total number possible (sparse versus dense networks).
Path Length
The distances between pairs of nodes in the network. Average path-length is the average of these distances between all pairs of nodes.

Radiality

Degree an individual's network reaches out into the network and provides novel information and influence

Reach
The degree any member of a network can reach other members of the network.

Structural Cohesion
The minimum number of members who, if removed from a group, would disconnect the group.[9]

Structural Equivalence
Refers to the extent to which actors have a common set of linkages to other actors in the system. The actors don't need to have any ties to each other to be structurally equivalent.

Structural Hole
Static holes that can be strategically filled by connecting one or more links to link together other points. Linked to ideas of social capital: if you link to two people who are not linked you can control their communication.

Professional association and journals

The International Network for Social Network Analysis is the professional association of social network analysis. Started in 1977 by Barry Wellman at the University of Toronto, it now has more than 1200 members and until recently was headed by William Richards (Simon Fraser University).

Netwiki is a scientific wiki devoted to network theory, which uses tools from subjects such as graph theory, statistical mechanics, and dynamical systems to study real-world networks in the social sciences, technology, biology, etc.[10]

There are several journals: *Social Networks*, *Connections*, and the *Journal of Social Structure.*

Network analytic software

Many social network tools for scholarly work are available online such as the long time standard *UCINet* [2], *Pajek* [3], *ORA* [4],or the "network" package in "R"). They are relatively easy to use to present graphical images of networks. Business oriented software

is also available. Examples include *InFlow*[5], *NetMiner* [6]. An open source package for linux is Social Networks Visualizer or *SocNetV* [7]; a related package installer of *SocNetV* for Mac OS X [8] is available.
A systematic overview and comparison of a selection of software packages for social network analysis was provided by Huisman and Van Duijn (see references). A large list of software packages and libraries can be found under Computer Programs for Social Network Analysis.

Social Networking Service

A **social network service** focuses on the building and verifying of online social networks for communities of people who share interests and activities, or who are interested in exploring the interests and activities of others, and which necessitates the use of software.

Most social network services are primarily web based and provide a collection of various ways for users to interact, such as chat, messaging, email, video, voice chat, file sharing, blogging, discussion groups, and so on.

The main types of social networking services are those which contain directories of some categories (such as former classmates), means to connect with friends (usually with self-description pages), and recommender systems linked to trust. Popular methods now combine many of these, with MySpace, Bebo and Facebook being the mostly widely used in 2007.

References

See Appendix A “References 1”

Content delivery network

A content delivery network or content distribution networks (CDNs) is a system of computers networked together across the Internet that cooperate transparently to deliver content (especially large media content) to end users. The first web content based CDN's were Sandpiper, Mirror Image and Skycache followed by Akamai and Digital Island. The first video based CDN was iBEAM Broadcasting. In 1999 Speedera Networks was founded in Silicon Valley. Speedera was a highly succesful CDN and quickly managed to become the #2 CDN globally. In 2005, Akamai Technologies acquired Speedera for approx 230M$.

Current Market Overview

Currently there are approx 30 different kinds of Content Delivery providers on the market. They all range in size, type, reach and reliability. The top 3 CDN are considered to be Akamai, CDNetworks and Limelight. It's expected that in 2008 over 65% of the global CDN market is divided among these 3 players.

Technology

CDN nodes are deployed in multiple locations, often over multiple backbones. These nodes cooperate with each other to satisfy requests for content by end users, transparently moving content behind the scenes to optimize the delivery process. Optimization can take the form of reducing bandwidth costs, improving end-user performance, or both.

The number of nodes and servers making up a CDN varies, depending on the architecture, some reaching thousands of nodes with tens of thousands of servers.

Requests for content are intelligently directed to nodes that are optimal in some way. When optimizing for performance, locations that can serve content quickly to the user may be chosen. This may be measured by choosing locations that are the fewest hops or fewest number of network seconds away from the requestor, so as to optimize delivery across local networks. When optimizing for cost, locations that are less expensive to serve from may be chosen instead. Often these two goals tend to align, as servers that are close to the end user sometimes have an advantage in serving costs, perhaps because they are located within the same network as the end user.

Content networking techniques

The Internet was designed according to the end-to-end principle [1]. This principle keeps the core network relatively simple and moves the intelligence as much as possible to the network end-points: the hosts and clients. As a result the core network is specialized, simplified, and optimized to only forward data packets. Content Delivery Networks augment the end-to end transport network by distributing on it a variety of intelligent applications employing techniques designed to optimize content delivery. The resulting tightly integrated overlay uses web caching, server-load balancing, request routing, and content services[2]. These techniques are briefly described below.

Because closer is better, web caches store popular content closer to the user. These shared network appliances reduce bandwidth requirements, reduce server load, and improve the client response times for content stored in the cache.

Server-load balancing uses one or more layer 4–7 switches, also known as a web switch, content switch, or multilayer switch to share traffic among a number of servers or web caches. Here the switch is assigned a single virtual IP address. Traffic arriving at the switch is then directed to one of the real web servers attached to the switch. This has the advantages of balancing load, increasing total capacity, improving scalability, and providing increased reliability by redistributing the load of a failed web server and providing server health checks.

A content cluster or service node can be formed using a layer 4–7 switch to balance load across a number of servers or a number of web caches within the network.

Request routing directs client requests to the content source best able to serve the request. This may involve directing a client request to the service node that is closest to the client, or to the one with the most capacity. A variety of algorithms are used to route the request. These include Global Server Load Balancing, DNS-based request routing, HTML rewriting[3], and anycasting[4]. Proximity—choosing the closest service node—is estimated using a variety of techniques including reactive probing, proactive probing, and connection monitoring.

Service providers increasingly provide value-added services beyond basic data transport. Features such as virus scanning and parental control are being offered, hoping to increase service attractiveness, user loyalty, revenue, and profit. Web caches and service nodes distributed throughout the content delivery network provide convenient dispatch points for connecting to enhanced services. This handing messages off for further processing is sometimes called vectoring of messages.

Content Service Protocols

Two protocols suites are designed to provide access to a wide variety of content services distributed throughout a content network. The Internet Content Adaptation Protocol (ICAP) was developed in the late 1990's[5] [6] to provide an open standard for connecting application servers. A more recently defined and robust solution is provided by the Open Pluggable Edge Services (OPES) protocol[7]. This architecture defines OPES service applications that can reside on the OPES processor itself or be executed remotely on a Callout Server.

See Appendix A "References 3"

Digital rights management

Digital rights management (DRM) is an umbrella term that refers to access control technologies used by publishers and copyright holders to limit usage of digital media or devices. It may also refer to restrictions associated with specific instances of digital works or devices. To some extent, DRM overlaps with copy protection, but DRM is usually applied to creative media (music, films, etc.) whereas copy protection typically refers to software.

The use of digital rights management has been controversial. Advocates argue it is necessary for copyright holders to prevent unauthorized duplication of their work to ensure continued revenue streams.[1] Opponents, such as The Free Software Foundation, maintain that the use of the word "rights" is misleading and suggest that people instead use the term digital restrictions management.[2] Their position is essentially that copyright holders are attempting to restrict use of copyrighted material in ways not included in the statutory, common law, or Constitutional grant of exclusive commercial use to them. The Electronic Frontier Foundation, and other opponents, also consider DRM schemes to be anti-competitive practices.[3]

Introduction

Digital rights management technologies attempt to control use of digital media by preventing access, copying or conversion by end users to other formats. Long before the arrival of digital or even electronic media, copyright holders, content producers, or other financially or artistically interested parties had business and legal objections to copying technologies. Examples include: player piano rolls early in the 20th century, audio tape recording, and video tape recording (e.g. the "Betamax case" in the U.S.). Copying technology thus exemplifies a disruptive technology.

Digital media have vastly increased the scope of these concerns. While analog media inevitably loses quality with each copy generation, and in some cases even during normal use, digital media files may be duplicated an unlimited number of times with no degradation in the quality of subsequent copies. The advent of personal computers as household appliances and the sheer ease of ripping media files from CDs or from radio broadcasts, combined with the internet and popular file sharing tools, has made unauthorized distribution of copies of copyrighted digital files (often referred to as digital piracy) much easier. In effect, virtually any end user or consumer with an Internet connection is a potential node in a distribution network.

Although technical controls on the reproduction and use of software have been intermittently used since the 1970s, the term 'DRM' has come to primarily mean the use of these measures to control copyrightable (eg, artistic) content. Some observers claim that certain DRM technologies enable publishers to enforce access policies that not only prevent copyright violations, but also prevent legal fair use.

While DRM is most commonly used by the entertainment industry (e.g. film and recording), it has found use in other situations as well. Many online music stores, such as Apple's iTunes Store, as well as certain e-book publishers, have adopted various DRM strategies. In recent years, a number of television producers have begun demanding implementation of DRM measures to control access to the content of their shows in connection with the popularity of time-shifting digital video recorder systems such as TiVo. [4]

Technologies

DRM and film

An early example of a DRM system was the Content Scrambling System (CSS) employed by the DVD Forum on film DVDs since circa 1996. CSS used a simple encryption algorithm, and required device manufacturers to sign license agreements that restricted the inclusion of features, such as digital outputs that could be used to extract high-quality digital copies of the film, in their players. Thus, the only consumer hardware capable of decoding DVD films was controlled, albeit indirectly, by the DVD Forum, restricting the use of DVD media on other systems until the release of DeCSS by Jon Lech Johansen in 1999, which allowed a CSS-encrypted DVD to play properly on a computer using Linux, for which the Alliance had not arranged a licensed version of the CSS playing software.

Microsoft's Windows Vista contains a DRM system called the Protected Media Path, which contains the Protected Video Path (PVP). PVP tries to stop DRM-restricted content from playing while unsigned software is running in order to prevent the unsigned software from accessing the content. Additionally, PVP can encrypt information during transmission to the monitor or the graphics card, which makes it more difficult to make unauthorized recordings.

Advanced Access Content System (AACS) is a DRM system for HD DVD and Blu-Ray Discs developed by the AACS Licensing Administrator, LLC (AACS LA), a consortium that includes Disney, Intel, Microsoft, Matsushita (Panasonic), Warner Brothers, IBM, Toshiba and Sony. In January 2007 a process key was published on the internet by crackers, enabling unrestricted access to AACS-restricted HD DVD content.

The Broadcast Flag requires that all HDTVs obey what Hollywood commands as far as determining whether or not a data stream is allowed to be recorded. This would block legitimate uses, such as recording a television show and then burning it onto a DVD.

DRM and music

Audio CDs

In 2002, Bertelsmann (comprising BMG, Arista, and RCA) was the first corporation to use DRM on audio CDs. This was initially done on promotional CDs, but all CDs from these companies would eventually include at least some DRM.

It should be noted that discs with DRM installed are not legitimate standards compliant Compact Discs (CDs) but rather CD-ROM media, therefore they all lack the CD logotype found on discs which follow the standard (known as Redbook).

However, these CDs could not be played on all CD players. Many consumers could also no longer play CDs they had purchased on their computers. PCs running Microsoft Windows would sometimes even crash when attempting to play the CDs.

In 2005, Sony BMG introduced new DRM technology which installed DRM software on user's computers, without clearly notifying the user or requiring their confirmation. Among other things, the installed software included a rootkit, which created a severe security vulnerability others could exploit. When the nature of the DRM involved was made public much later, Sony initially minimized the significance of the vulnerabilities its software had created, but was eventually compelled to recall millions of CDs, and released several attempts to patch the surreptitiously included software to at least remove the rootkit.

Several class action lawsuits were filed, which were ultimately settled by agreements to provide affected consumers with a cash payout or album downloads free of DRM.[5]

Sony's DRM software actually had only a limited ability to prevent copying, as it affected only playback on Windows computers, not on other equipment. Even on the Windows platform, users regularly bypassed the restrictions. And, while the Sony DRM technology created fundamental vulnerabilities in customers' computers, parts of it could be trivially bypassed by holding down the "shift" key while inserting the CD, or by disabling the autorun feature. In addition, audio tracks could simply be played and re-recorded, thus completely bypassing all of the DRM (this is known as the analog hole). Sony's first two attempts at releasing a patch which would remove the DRM software from users' computers failed.

In January 2007, EMI stopped publishing audio CDs with DRM, stating that "the costs of DRM do not measure up to the results." EMI was the last publisher to do so, and audio CDs containing DRM are no longer released by any major publishers.[6]

Internet music

Many online music stores employ DRM to restrict usage of music purchased and downloaded online. There are many options for consumers buying digital music over the internet, in terms of both stores and purchase options.

* The iTunes Store, run by Apple Inc., allows users to purchase a track online for $.99 US. The tracks purchased use Apple's FairPlay DRM system. Starting on October 17, 2007, users can download DRM-free music for the same price as file with DRM.[7]

* Napster music store, which offers a subscription-based approach to DRM alongside permanent purchases. Users of the subscription service can download and stream an unlimited amount of music encoded to Windows Media Audio (WMA) while subscribed to the service. But as soon as the user misses a payment, the service renders all of the downloaded music unusable. Napster also charges users who wish to use the music on their portable device an additional $5 per month. Furthermore, Napster requires users to pay an additional $0.99 per track to burn it to CD or listen to it after the subscription expires. Songs bought through Napster can be played on players carrying the Microsoft PlaysForSure logo (which, notably, do not include iPods or even Microsoft's own Zune).

* Wal-Mart Music Downloads, another online music download store, also uses DRM. It charges $0.88 per track for all non-sale downloads. All Wal-Mart Music Downloads are able to be played on any Windows PlaysForSure marked product. The music does play

on the SanDisk's Sansa mp3 player, for example, but must be copied to the player's internal memory. It can not be played through the player's Micro SD card slot, which is a problem that many users of the mp3 player experience.

* Sony operate an online music download service called "Connect" which uses Sony's proprietary OpenMG DRM technology. Music downloaded from this store (usually via Sony's SonicStage software) is only playable on computers running Windows and Sony hardware (including the PSP).

The various services are currently not interoperable, though those that use the same DRM system (for instance the several Windows Media DRM format stores, including Napster) all provide songs that can be played side-by-side through the same player program. Almost all stores require client software of some sort to be downloaded, and some also need plug-ins. Several colleges and universities, such as Rensselaer Polytechnic Institute, have made arrangements with assorted Internet music suppliers to provide access (typically DRM-restricted) to music files for their students, to less than universal popularity, sometimes making payments from student activity fee funds.[8] One of the problems is that the music becomes unplayable after leaving school unless the student continues to pay individually. Another is that few of these vendors are compatible with the most common portable music player, the Apple iPod. The Gowers Review of Intellectual Property (to HMG in the UK; 141 pages, 40+ specific recommendations) has taken note of the incompatibilities, and suggests (Recommendations 8 -- 12) that there be explicit fair dealing exceptions to copyright allowing libraries to copy and format-shift between DRM schemes, and further allowing end users to do the same privately. If adopted, some of the acrimony may decrease.

Although DRM is prevalent for Internet music, some Online music stores such as eMusic, Audio Lunchbox, www.dogmazic.net, www.amazon.com and Anthology recordings do not use DRM. Major labels have begun releasing more online music without DRM. Eric Bangeman suggests in Ars Technica that this is because the record labels are "slowly beginning to realize that they can't have DRMed music and complete control over the online music market at the same time... One way to break the cycle is to sell music that is playable on any digital audio player. eMusic does exactly that, and their surprisingly extensive catalog of non-DRMed music has vaulted it into the number two online music store position behind the iTunes Store."[9] Apple's Steve Jobs has called on the music industry to eliminate DRM in an open letter titled Thoughts on Music[10]. Apple's iTunes store will start to sell DRM-free 256 kbit/s (up from 128 kbit/s) music from EMI for a premium price (this has since reverted to the standard price). In March of 2007, Musicload.de, one of Europe's largest online music retailers, announced their position strongly against DRM. In an open letter, Musicload stated that three out of every four calls

to their customer support phone service are as a result of consumer frustration with DRM. [11]

DRM and documents

Enterprise digital rights management (E-DRM or ERM) is the application of DRM technology to the control of access to corporate documents such as Microsoft Word, PDF, and AutoCAD files, emails, and intranet web pages rather than to the control of consumer media [12]. E-DRM is generally intended to prevent the unauthorized use (such as industrial or corporate espionage or inadvertent release) of proprietary documents. E-DRM typically integrates with content management system software. An example of an E-DRM system is Microsoft's Rights Management Services. Additional E-DRM vendors include Adobe Systems, GigaTrust, Oracle, and EMC Corporation.

DRM has been used by organizations such as the British Library in its secure electronic delivery service to permit worldwide access to substantial numbers of rare (and in many cases unique) documents which, for legal reasons, were previously only available to authorized individuals actually visiting the Library's document centre at Boston Spa in England.

Watermarks

Digital watermarks are unobtrusive features of media that are added during production or distribution. Digital watermarks involve data steganographically embedded within the audio or video data.

Watermarks can be used for different purposes that may include:

* for recording the copyright owner
* for recording the distributor
* for recording the distribution chain
* for identifying the purchaser of the music

Watermarks are not complete DRM mechanisms in their own right, but are used as part of a system for Digital Rights Management, such as helping provide prosecution evidence for purely legal avenues of rights management, rather than direct technological restriction.

Metadata

Sometimes, metadata is included in purchased music which records information such as the purchaser's name, account information, or email address. This information is not embedded in the actual audio or video data, like a watermark.

As an example, metadata is used in media purchased from Apple's iTunes Store for DRM-free as well as DRM-restricted versions of their music or videos. This information is included as MPEG standard metadata. [13][14]

Laws regarding DRM

Digital rights management systems have received some international legal backing by implementation of the 1996 WIPO Copyright Treaty (WCT). Article 11 of the Treaty requires nations party to the treaties to enact laws against DRM circumvention.

The WCT has been implemented in most member states of the World Intellectual Property Organization. The American implementation is the Digital Millennium Copyright Act (DMCA), while in Europe the treaty has been implemented by the 2001 European directive on copyright, which requires member states of the European Union to implement legal protections for technological prevention measures. In 2006, the lower house of the French parliament adopted such legislation as part of the controversial DADVSI law, but added that protected DRM techniques should be made interoperable, a move which caused widespread controversy in the United States.

Digital Millennium Copyright Act

Main article: Digital Millennium Copyright Act

The Digital Millennium Copyright Act (DMCA) is an extension to United States copyright law passed unanimously on May 14, 1998, which criminalizes the production and dissemination of technology that allows users to circumvent technical copy-restriction methods. Under the Act, circumvention of a technological measure that effectively controls access to a work is illegal if done with the primary intent of violating the rights of copyright holders. (For a more detailed analysis of the statute, see WIPO Copyright and Performances and Phonograms Treaties Implementation Act.)

Reverse engineering of existing systems is expressly permitted under the Act under specific conditions. Under the reverse engineering safe harbor, circumvention necessary to achieve interoperability with other software is specifically authorized. See 17 U.S.C.

Sec. 1201(f). Open-source software to decrypt content scrambled with the Content Scrambling System and other encryption techniques presents an intractable problem with the application of the Act. Much depends on the intent of the actor. If the decryption is done for the purpose of achieving interoperability of open source operating systems with proprietary operating systems, the circumvention would be protected by Section 1201(f) the Act. Cf., Universal City Studios, Inc. v. Corley, 273 F.3d 429 (2d Cir. 2001) at notes 5 and 16. However, dissemination of such software for the purpose of violating or encouraging others to violate copyrights has been held illegal. See Universal City Studios, Inc. v. Reimerdes, 111 F. Supp. 2d 346 (S.D.N.Y. 2000).

On 22 May 2001, the European Union passed the EU Copyright Directive, an implementation of the 1996 WIPO Copyright Treaty that addressed many of the same issues as the DMCA.

The DMCA has been largely ineffective in protecting DRM systems, as software allowing users to circumvent DRM remains widely available, as for instance over the Internet. However, those with an interest in preserving the DRM systems have attempted to use the Act to restrict the distribution and development of such software, as in the case of DeCSS.

Although the Act contains an exception for research, the exception is subject to vague qualifiers that do little to reassure the research community. Cf., 17 U.S.C. Sec. 1201(g). The DMCA has had an impact on the worldwide cryptography research community, because many fear that their cryptanalytic research violates, or might be construed to violate, the DMCA. The arrest of Russian programmer Dmitry Sklyarov in 2001, for alleged infringement of the DMCA, was a highly publicized example of the law's use to prevent or penalize development of anti-DRM measures. Sklyarov was arrested in the United States after a presentation at DEF CON, and subsequently spent several months in jail. The DMCA has also been cited as chilling to non-criminal inclined users, such as students of cryptanalysis (including, in a well-known instance, Professor Felten and students at Princeton[15]), and security consultants such as the Netherlands based Niels Ferguson, who has declined to publish information about vulnerabilities he discovered in an Intel secure-computing scheme because of his concern about being arrested under the DMCA when he travels to the US.

On 25 April 2007 the European Parliament supported the first directive of EU, which aims to harmonize criminal law in the member states. It adopted a first reading report on harmonizing the national measures for fighting copyright abuse. If the European Parliament and the Council approve the legislation, the submitted directive will oblige the member states to consider a crime a violation of international copyright committed with

commercial purposes. The text suggests numerous measures: from fines to imprisonment, depending on the gravity of the offense.

The EP members supported the Commission motion, changing some of the texts. They excluded patent rights from the range of the directive and decided that the sanctions should apply only to offenses with commercial purposes. Copying for personal, non-commercial purposes was also excluded from the range of the directive.

International issues

In Europe, there are several dialog activities that are uncharacterized by its consensus-building intention:

* Workshop on Digital Rights Management of the World Wide Web Consortium (W3C), January 2001. [3]
* Participative preparation of the European Committee for Standardization/Information Society Standardisation System (CEN/ISSS) DRM Report, 2003 (finished). [4]
* DRM Workshops of DG Information Society, European Commission (finished), and the work of the DRM working groups (finished), as well as the work of the High Level Group on DRM (ongoing). [5]
* Consultation process of the European Commission, DG Internal Market, on the Communication COM(2004)261 by the European Commission on "Management of Copyright and Related Rights" (closed). [6]
* The INDICARE project is an ongoing dialogue on consumer acceptability of DRM solutions in Europe. It is an open and neutral platform for exchange of facts and opinions, mainly based on articles by authors from science and practice.
* The AXMEDIS project is a European Commission Integrated Project of the FP6. The main goal of AXMEDIS is atomating the content production, copy-prevention and distribution, reducing the related costs and supporting DRM at both B2B and B2C areas harmonising them.
* The Gowers Review of Intellectual Property is the result of a commission by the British Government from Andrew Gowers, undertaken in December 2005 and published in 2006, with recommendations regarding copyright term, exceptions, orphaned works, and copyright enforcement.

The European Community was expected to produce a recommendation on DRM in 2006, phasing out the use of levies (compensation to rights holders charged on media sales for lost revenue due to unauthorized copying) given the advances in DRM/TPM technology. However, opposition from the member states, particularly France, have now made it unlikely that the recommendation will be adopted.

Controversy

The intent of DRM is to provide technical means to assure that the copyright holders (originally artists, but commonly assigned to publishers, software developers, etc.) can maintain control of their content by restricting use of digital copies. This becomes controversial because DRM imposed limitations on the use of legitimately acquired digital media do not necessarily match the fair use (fair dealing in some places) rights granted by law to owners of copies. This gives rise to concerns that DRM schemes enormously complicate, and may prevent, effective archive management and historical research as well. Others argue that DRM is ineffective at preventing illegal copies because no DRM technology is (or could possibly be) fool proof. Once one version is compromised (or simply copied from a medium without DRM) it will become widely available, e.g. on the Internet or via large-scale commercial piracy. Thus all DRM to date is claimed to be fundamentally technically flawed as a method of protecting legal copyright control. If so, its effect is essentially to ensure vendor lock-in and, likely, anti-competitive practices afterward. DRM opponents usually base their opposition on one or more of these concerns.

Additional arguments against DRM are based on the fact that Copyright Laws limit the duration of copyrights, requiring that the DRM-restricted material be placed into the public domain at the end of the granted copyright period. DRM systems violate this requirement of copyright law inasmuch as DRM systems are not programmed to terminate at the end of the copyright period, effectively extending the "copyright" beyond what is allowable by law. As such, this use of DRM is arguably itself a violation of the same copyright law that the proponents of DRM claim the system enforces.

DRM opponents

A parody on the Home Taping Is Killing Music logo.
A parody on the Home Taping Is Killing Music logo.

Many organizations, prominent individuals, and computer scientists are opposed to DRM. Two notable DRM critics are John Walker, as expressed for instance, in his article The Digital Imprimatur: How big brother and big media can put the Internet genie back in the bottle[16], and Richard Stallman in his article The Right to Read[17] and in other public statements "DRM is an example of a malicious feature - a feature designed to hurt the user of the software, and therefore, it's something for which there can never be toleration".[18] Professor Ross Anderson of Cambridge University heads a British organization which opposes DRM and similar efforts in the UK and elsewhere. Cory Doctorow, a prominent writer and technology blogger, spoke on the Microsoft campus criticizing the technology, the morality, and the marketing of DRM.[19]

The Electronic Frontier Foundation and similar organizations such as FreeCulture.org also hold positions which are characterized as opposed to DRM.

The Foundation for a Free Information Infrastructure has criticized DRM's impact as a trade barrier from a free market perspective.

The final version of the GNU General Public License version 3, as released by the Free Software Foundation, prohibits using DRM to restrict free redistribution and modification of works covered by the license, and includes a clause stating that the license's provisions shall be interpreted as disfavoring use of DRM. Also, in May 2006, the FSF launched a "Defective by Design" campaign against DRM.

Creative Commons provides licensing options encouraging the expansion of and building upon creative work without the use of DRM.[20]

Bill Gates spoke about DRM at CES in 2006. According to him, DRM is not where it should be, and causes problems for legitimate consumers while trying to distinguish between legitimate and illegitimate users.[21]

According to Steve Jobs, Apple opposes DRM music after a public letter calling its music labels to stop requiring DRM on its iTunes store. To date, EMI has complied. Apple considers DRM on video content as a separate issue.
Defective By Design member protesting DRM on May 25, 2007.
Defective By Design member protesting DRM on May 25, 2007.

As already noted, many DRM opponents consider "digital rights management" to be a misnomer. They argue that DRM manages rights (or access) the same way prison manages freedom and often refer to it as "digital restrictions management". Alternatively, ZDNet Executive Editor David Berlind suggests the term "Content Restriction, Annulment and Protection" or "CRAP" for short.[22]

The Norwegian Consumer rights organization "Forbrukerrådet" complained to Apple Inc. in 2007 about the company's use of DRM in, and in conjunction with, its iPod and iTunes products. Apple was accused of restricting users' access to their music and videos in an unlawful way, and to use EULAs conflicting with Norwegian consumer legislation. The complaint was supported by consumers' ombudsmen in Sweden and Denmark, and is currently being reviewed in the EU.

The use of DRM may also be a barrier to future historians, since technologies designed to permit data to be read only on particular machines, or with particular keys, or for certain periods, may well make future data recovery impossible — see Digital Revolution. This argument connects the issue of DRM with that of asset management and archive technology.

DRM opponents argue that the presence of DRM violates existing private property rights and restricts a range of heretofore normal and legal user activities. A DRM component would control a device a user owns (such as a Digital audio player) by restricting how it may act with regards to certain content, overriding some of the user's wishes (for example, preventing the user from burning a copyrighted song to CD as part of a compilation or a review). An example of this effect may be seen in Microsoft's Windows Vista operating system in which content is disabled or degraded depending on the DRM scheme's evaluation of whether the hardware and its use are 'secure'. All forms of DRM depend on the DRM enabled device (e.g., computer, DVD player, TV) imposing restrictions that (at least by intent) cannot be disabled or modified by the user.

Tools like FairUse4WM have been created to strip Windows Media of DRM restrictions.[23]

Asus will release a soundcard which features a function called Analog Loopback Transformation to bypass the digital restrictions of DRM. This feature allows the user to record DRM-restricted audio via the soundcard's built-in analog I/O connection.[24]

Problems with DRM

Methods to bypass DRM

There are many methods to bypass DRM control on audio and video content.

One simple method to bypass DRM on audio files is to burn the content to an audio CD and then rip it into DRM-free files. This is only possible when the software that plays these DRM-restricted audio files allows CD-burning. Some software products simplify and automate this burn-rip process by allowing the user to burn music to a CD-RW disc or to a Virtual CD-R drive, then automatically ripping and encoding the music, and automatically repeating this process until all selected music has been converted, rather than forcing the user to do this one CD (72-80 minutes' worth of music) at a time. Many software programs have been developed that intercept the data stream as it is decrypted out of the DRM-restricted file, and then use this data to construct a DRM-free file. This DRM-free file can be a lossless copy of the original, or can be compressed further if the user does not mind

the slight loss in quality that accompanies a smaller file size. These programs require a decryption key. Programs that do this for DVDs, HD DVDs, and Blu-ray Discs include universal decryption keys in the software itself. Programs that do this for TiVo ToGo recordings, iTunes audio, and PlaysForSure songs, however, rely on the user's own key - that is, they can only process content that the user has legally acquired under his or her own account.

Another method is to use software to record the signals being sent through the audio or video cards, or to plug analog recording devices into the analog outputs of the media player. These techniques utilize the so-called "analog hole" (see below).

Analog hole

All forms of DRM for audio and visual material are subject to the 'analog hole', namely that in order for a viewer to play the material, the digital signal must be turned into an analog signal containing light and/or sound for the viewer, and so available to be copied as no DRM is capable of controlling content in this form. In other words, a user could playback a purchased audio file while using a separate program to record the sound back into the computer into a non-DRM protected file format.

All DRM to date, and probably all future ones can therefore be bypassed by recording this signal and digitally storing and distributing it in a non DRM limited form. However the conversion from digital to analog and back is likely to force a loss of quality, particularly when using lossy digital formats.

DRM on general computing platforms

Many of the DRM systems in use are designed to work on general purpose computing hardware, such as desktop PCs apparently because this equipment is felt to be a major contributor to revenue loss from disallowed copying. Large commercial pirates avoid consumer equipment, so losses from such infringers will not be covered by such provisions.

Some [25] have suggested that any such scheme can never be secure since the software must include all the information, such as decryption keys, necessary to decrypt the content. It is suggested that one can always extract this information and decrypt and copy the content, bypassing the restrictions imposed by a DRM system.

DRM on distributed purpose built hardware

Many DRM schemes use encrypted media which requires purpose built hardware to hear or see the content. This appears to ensure that only licensed users (those with the hardware) can access the content. It additionally tries to protect a secret decryption key from the users of the system.

While this in principle can work, it is extremely difficult to build the hardware to protect the secret key against a sufficiently determined adversary. Many such systems have failed in the field, and in fact, it is thought that none have yet survived several years of deployment. Once the secret key is known, building a version of the hardware that performs no checks is often relatively straightforward.

In addition user verification provisions are frequently subject to attack.

Watermarks

Watermarks are usually easily removed, although some degradation of video or audio can occur.

In particular, most compression is intended to only retain perceptible features of an image, and hence if the watermarks are invisible, then they are very typically removed by compression systems as a side-effect.

Obsolescence

When standards and formats change, it may be difficult to transfer DRM-restricted content to new media. Additionally, any system that requires contact with an authentication server is vulnerable to that server becoming unavailable, as happened in 2007[26] when videos purchased from MLB.com prior to 2006 became unplayable due to a change to the servers that validate the licences.

When Microsoft introduced their Zune[27] media player in 2006, it did not support content that uses Microsoft's own PlaysForSure DRM scheme they had previously been selling. The EFF calls this "a raw deal".[28]

Coding Quality

On the download page for DRM, the source code has the following comment "//Lets [sic] just die here if we have errors. How to report them is TBD." Even Microsoft does not have

long term confidence in the product (see this article in The Register "File swap nets will win, DRM and lawyers lose, say MS researchers"). With the lock-down of the security kernel in Windows Vista to external security vendors, a new threat was introduced as system crackers learned to do what they could no longer do. Oliver Friedrichs, the director of emerging technologies in the Symantec security response team, wrote in August 2006 "researchers and attackers can, and have, already found ways to disable and work around PatchGuard". In good design practice, it is the responsibility of the designer to develop the test scripts, (for example in Iterative and incremental development and Microsoft's own Architecture Journal on Test-Driven Infrastructures), and think of how an application may be broken. In the case of security, if the designer does not do it, a system cracker will do it for them (see this blog by George Ou on ZDNet "Microsoft blocks FairUse4WM v2 after 3 months of DRM free music").

Historical note

A very early — possibly the earliest — implementation of DRM was the Software Service System (SSS) devised by the Japanese engineer Ryoichi Mori in 1983 [29] and subsequently refined under the name superdistribution. The SSS was based on encryption, with specialized hardware that controlled decryption and also enabled payments to be sent to the copyright holder. The underlying principle of the SSS and subsequently of superdistribution was that the distribution of encrypted digital products should be completely unrestricted and that users of those products would not just be permitted to redistribute them but would actually be encouraged to do so.

IPTV (Internet Protocol Television)

IPTV (**Internet Protocol Television**) is a system where a digital television service is delivered by using Internet Protocol over a network infrastructure, which may include delivery by a broadband connection. A general definition of IPTV is television content that, instead of being delivered through traditional broadcast and cable formats, is received by the viewer through the technologies used for computer networks.

For residential users, IPTV is often provided in conjunction with Video on Demand and may be bundled with Internet services such as Web access and VoIP. The commercial bundling of IPTV, VoIP and Internet access is referred to as "Triple Play" service (adding mobility is called "Quadruple Play"). IPTV is typically supplied by a service provider using a closed network infrastructure. This closed network approach is in competition with the delivery of TV content over the public Internet, called Internet Television. In businesses, IPTV may be used to deliver television content over corporate LANs.

What do I need to experience IPTV?

A consumer possessing a broadband connection and a television will be ready for the IPTV revolution (set-top boxes will be available upon rollout of the technology in your area).

How does IPTV work?

IPTV uses a two-way digital broadcast signal (sent through a switched telephone or cable network by way of a broadband connection and a set-top box programmed with software (much like a cable or DSS box) that can handle viewer requests to access to many available media sources.

The Set Top Box

The viewer's TV connects to a Set Top Box (STB) that decodes the IP video and converts it into standard television signals. The STB is the gateway to an IP video switching system. The Switched Video Service (SVS) system allows viewers to access broadcast network channels, subscription services, and movies on demand. The consumer can access different media by using the television remote to send control commands to the SVS. The unit processes the request and displays the requested media type. Though there are many possible media sources, only one video channel is utilized in the process.

IPTV is an emerging technology and will evolve into a completely interactive experience in the future!

Affiliate marketing

Affiliate marketing is a method of promoting web businesses (merchants/advertisers) in which an affiliate (publisher) is rewarded for every visitor, subscriber, customer, and/or sale provided through his/her efforts.

Affiliate marketing is also the name of the industry where a number of different types of companies and individuals are performing this form of internet marketing, including affiliate networks, affiliate management companies and in-house affiliate managers, specialized 3rd party vendors and various types of affiliates/publishers who utilize a number of different methods to advertise the products and services of their merchant/ advertiser partners.

Affiliate marketing overlaps with other internet marketing methods to some degree, because affiliates are using the same methods as most of the merchants themselves do. Those methods include organic search engine optimization, paid search engine marketing, email marketing and to some degree display advertising.

Affiliate marketing - using one site to drive traffic to another - is the stepchild of online marketing. While search engines, e-mail and RSS capture much of the attention of online retailers, affiliate marketing, despite lineage that goes back almost to the beginning of online retailing, carries a much lower profile. Yet affiliates continue to play a fundamental role in e-retailers' marketing strategies.[1]

History

The beginning

The concept of revenue sharing, paying commission for referred business, predates affiliate marketing and the internet. The translation of the revenue share principles to mainstream electronic commerce on the internet happened almost four years after the World Wide Web was born in November 1994 when CDNow launched its BuyWeb program.

With its BuyWeb program, CDNow was the first to introduce the concept of an affiliate or associate program with its idea of click-through purchasing through independent, online storefronts.

CDNow.com had the idea that music-oriented web sites could review or list albums on their pages that their visitors might be interested in purchasing and offer a link that would take the visitor directly to CDNow to purchase them. The idea for this remote purchasing originally arose because of conversations with a music publisher called Geffen Records in the fall of 1994. The management at Geffen Records wanted to sell its artists' CDs directly from its site but did not want to do it itself. Geffen Records asked CDNow if it could design a program where CDNow would do the fulfillment.

Geffen Records realized that CDNow could link directly from the artist on its Web site to Geffen's web site, bypassing the CDNow home page and going directly to an artist's music page.[2]

Affiliate marketing was used on the internet by the adult industry before CDNow launched their BuyWeb program. The consensus of marketers and adult industry insiders is that Cybererotica was either the first or among the early innovators in affiliate marketing with a cost-per-click program.[3]

Amazon.com launched its associate program in July 1996. Amazon associates would place banner or text links on their site for individual books or link directly to the Amazon's home page.

When visitors clicked from the associate's site through to Amazon.com and purchased a book, the associate received a commission. Amazon.com was not the first merchant to offer an affiliate program, but its program was the first to became widely known and served as a model for subsequent programs.[4][5]

In February 2000, Amazon.com announced that it had been granted a patent (6,029,141) on all the essential components of an affiliate program. The patent application was submitted in June 1997, which was before most affiliate programs but not before PC Flowers & Gifts.com (October 1994), AutoWeb.com (October 1995), Kbkids.com/ BrainPlay.com (January 1996), EPage(April 1996), and a handful of others.[3]

Historic development

Affiliate marketing has grown quickly since its inception. The e-commerce website, viewed as a marketing toy in the early days of the web, became an integrated part of the overall business plan and in some cases grew to a bigger business than the existing offline business. According to one report, total sales generated through affiliate networks in 2006 was £2.16 billion in the UK alone. The estimates were £1.35 billion in sales in 2005.[6] MarketingSherpa's research team estimated that, in 2006, affiliates worldwide earned

$6.5 billion in bounty and commissions from a variety of sources in retail, personal finance, gaming and gambling, travel, telecom, education, publishing and forms of lead generation other than contextual ad networks such as Google AdSense.[7]

Currently the most active sectors for affiliate marketing are the adult, gambling and retail sectors.[8] The three sectors expected to experience the greatest growth are the mobile phone, finance and travel sectors.[8] Hot on the heels of these are the entertainment (particularly gaming) and internet-related services (particularly broadband) sectors. Also several of the affiliate solution providers expect to see increased interest from B2B marketers and advertisers in using affiliate marketing as part of their mix.[8] Of course, this is constantly subject to change.

Web 2.0

The rise of blogging, interactive online communities and other new technologies, web sites and services based on the concepts that are now called Web 2.0 have impacted the affiliate marketing world as well. The new media allowed merchants to get closer to their affiliates and improved communication between each other.[9][10] New developments have made it harder for unscrupulous affiliates to make money. Emerging black sheep are detected and made known to the affiliate marketing community with much greater speed and efficiency.

Compensation methods

Predominant compensation methods

80% of affiliate programs today use revenue sharing or cost per sale (CPS) as compensation method, 19% use cost per action (CPA) and the remaining 1% are other methods, such as cost per click (CPC) or cost per mille (CPM).[11]

Diminished compensation methods

The use of pay per click (PPC/CPC) and pay per impression (CPM/CPT) in traditional affiliate marketing is far less than 1% today and negligible.

Cost per mille (thousand) (CPM/CPT) requires the publisher only to load the advertising on his website and show it to his visitors in order to get paid a commission, while PPC requires one additional step in the conversion process to generate revenue for the

publisher. Visitors must not only made aware of the ad, but also pursue them to click on it and visit the advertiser's website.

Cost per click (CPC/PPC) used to be more common in the early days of affiliate marketing, but diminished over time due to click fraud issues that are very similar to the click fraud issues modern search engines are facing today. Contextual advertising, such as Google AdSense are not considered in this statistic. It is not specified yet, if contextual advertising can be considered affiliate marketing or not.

Compensation methods for other online marketing channels

Pay per click is the predominant compensation model for pay per click search engines and their contextual advertising platforms, while pay per impression is the predominant compensation model for display advertising. CPM is used as a compensation method by Google for their AdSense/AdWords feature "Advertise on this website", but this is an exception in search engine marketing.

While search engines only recently started experimenting with the compensation structures of traditional affiliate marketing, such as pay per action/CPA,[12] they have used similar models in display advertising, offering CPA as early as 1998.[13] By the end of 2006, the market share of the CPA/performance pricing model (47%) caught up with the CPM pricing model (48%)[14] and will become the dominant pricing model for display advertising, if the trend of the last 9 years continues in 2007.[15]

CPM/CPC versus CPA/CPS (performance marketing)

In the case of CPM or CPC, the publisher does not care if the visitor is the type of audience that the advertiser tries to attract and is able to convert, because the publisher already earned his commission at this point. This leaves the greater, and, in case of CPM, the full risk and loss (if the visitor can not be converted) to the advertiser.

CPA and CPS require that referred visitors do more than visiting the advertiser's website in order for the affiliate to get paid commission. The advertiser must convert that visitor first. It is in the best interest for the affiliate to send the best targeted traffic to the advertiser as possible to increase the chance of a conversion. The risk and loss is shared between the affiliate and the advertiser.

For this reason affiliate marketing is also called "performance marketing", in reference to how employees that work in sales are typically being compensated. Employees in sales

are usually getting paid sales commission for every sale they close and sometimes a performance incentives for exceeding targeted baselines.[16] Affiliates are not employed by the advertiser whose products or services they promote, but the compensation models applied to affiliate marketing are very similar to the ones used for people in the advertisers' internal sales department.

The phrase, "Affiliates are an extended sales force for your business", which is often used to explain affiliate marketing, is not 100% accurate. The main difference between the two is that affiliate marketers cannot, or not much influence a possible prospect in the conversion process, once the prospect was sent away to the advertiser's website. The sales team of the advertiser on the other hand does have the control and influence, up to the point where the prospect signs the contract or completes the purchase.

Multi tier programs

Some advertisers offer multi-tier programs that distribute commission into a hierarchical referral network of sign-ups and sub-partners. In practical terms: publisher "A" signs up to the program with an advertiser and gets rewarded for the agreed activity conducted by a referred visitor. If publisher "A" attracts other publishers ("B", "C", etc.) to sign up for the same program using her sign-up code all future activities by the joining publishers "B" and "C" will result in additional, lower commission for publisher "A".

Snowballing, this system rewards a chain of hierarchical publishers who may or may not know of each others' existence, yet generate income for the higher level signup. This sort of structure has been successfully implemented by a company called Quixtar.com, a division of Alticor, the parent company of Amway. Quixtar has implemented a network marketing structure to implement its marketing program for major corporations such as Barnes & Noble, Office Depot, Sony Music and hundreds more.

Two-tier programs exist in the minority of affiliate programs; most are simply one-tier. Referral programs beyond 2-tier are multi-level marketing (MLM) or network marketing.

Even though Quixtar compensation plan is network marketing & wouldn't be considered 'affiliate marketing', the big company partners are considered and call themselves affiliates. Therefore, you may argue that the Quixtar company is the affiliate marketer for its partner corporation.

From the advertiser perspective

Pros and cons

Merchants like affiliate marketing,[17] because in most cases, it is a "pay for performance model", meaning the merchant does not incur a marketing expense unless results are realized, excluding the initial setup and development of the program. Some businesses owe much of their growth and success to this marketing technique, one example being Amazon.com, especially small and midsize businesses. However, unlike display advertising, affiliate marketing is not easily scalable.

Implementation options

Some merchants run *their own* affiliate programs (In House) while others use third party services provided by intermediaries to track traffic or sales that are referred from affiliates. (see outsourced program management) Merchants can choose from two different types of affiliate management solutions, standalone software or hosted services typically called affiliate networks.

Affiliate management and program management outsourcing

Successful affiliate programs require a lot of maintenance and work. The number of affiliate programs just a few years back was much smaller than it is today. Having an affiliate program that is successful is not as easy anymore. The days when programs could generate considerable revenue for the merchant even if they were poorly or not at all managed ("auto-drive") is over.

Those uncontrolled programs were one of the reasons why some of the not so positive examples of affiliates were able to do what they did (spamming,[18] trademark infringement, false advertising, "cookie cutting", typosquatting[19] etc.)

The increase of number of internet businesses in combination with the increased number of people that trust the current technology enough to do shopping and business online caused and still causes a further maturing of affiliate marketing. The opportunities to generate considerable amount of profit in combination with a much more crowded marketplace filled with about equal quality and sized competitors made it harder for merchants to get noticed, but at the same time the rewards if you get noticed much larger.

Internet advertising industry became much more professional and online media is in some areas closing the gap to offline media, where advertising is highly professional and very competitive for a lot of years already. The requirements to be successful are much higher than they were in the past. Those requirements are becoming often too much of a burden for the merchant to do it successfully in-house. More and more merchants are looking for alternative options which they find in relatively new outsourced (affiliate) program management or OPM companies that were often founded by veteran affiliate managers and network program managers.[20]

The OPM are doing this highly specialized job of affiliate program management for the merchant as a service agency very much like Ad agencies are doing the job to promote a brand or product in the offline world today.

Types of publisher (affiliate) websites

Companies and websites in affiliate marketing

Affiliate sites are often categorized by merchants (advertisers) and affiliate networks. The main categories are:

Search affiliates that utilize pay per click search engines to promote the advertisers offers (search arbitrage)
Comparison shopping sites and directories
Loyalty sites, typically characterized by providing a reward system for purchases via points back, cash back or charitable donations
Coupon and rebate sites that focus on sales promotions
Content and niche sites, including product review sites
Personal websites (these type of sites were the reason for the birth of affiliate marketing, but are today almost reduced to complete irrelevance compared to the other types of affiliate sites)
Blogs and RSS feeds
Email list affiliates (owners of large opt-in email list(s))
Registration path affiliates that include offers from other companies during a registration process on their own website.
Shopping directories that list merchants by categories without providing coupons, price comparison and other features based on information that frequently change and require ongoing updates.

CPA networks are top tier affiliates that expose offers from advertiser they are affiliated with to their own network of affiliates (not to confuse with 2nd tier)

Finding affiliate partners (advertisers)

Affiliate networks that have already a number of advertisers usually also have a large number of publishers already. This large pool of affiliates could be recruited or they might even apply to the program by themselves.

Relevant sites that attract the same audiences as the advertiser is trying to attract, but are not competing with the advertiser are potential affiliate partners as well. Even vendors or the existing customers could be recruited as affiliate, if it makes sense and is not violating any legal restrictions or regulations.

Finding affiliate programs (publishers)

Affiliate programs directories are one way to find affiliate programs, another method is large affiliate networks that provide the platform for dozens or even hundreds of advertisers. The third option is to check the target website itself for a reference to their affiliate program. Websites, which offer an affiliate program often, have a link titled "affiliate program", "affiliates", "referral program" or "webmasters" somewhere on their website, usually in the footer or "About" section of the site.

Past and current issues

In the early days of affiliate marketing, there was very little control over what affiliates were doing, which was abused by a large number of affiliates. Affiliates used **false advertisements**, forced clicks to get tracking cookies set on users' computers, and **adware**, which displays ads on computers. Many affiliate programs were poorly managed.

Email spam

In its early days many internet users held negative opinions of affiliate marketing due to the tendency of affiliates to use spam to promote the programs in which they were enrolled.[21] As affiliate marketing has matured many affiliate merchants have refined their terms and conditions to prohibit affiliates from spamming.

Search engine spam / spamdexing

There used to be much debate around the affiliate practice of spamdexing and many affiliates have converted from sending email spam to creating large volumes of autogenerated webpages, many-a-times, using product data-feeds provided by merchants. Each devoted to different niche keywords as a way of "SEOing" (see search engine optimization) their sites with the search engines. This is sometimes referred to as spamming the search engine results. Spam is the biggest threat to organic search engines whose goal is to provide quality search results for keywords or phrases entered by their users. Google's algorithm update dubbed "BigDaddy" in February 2006 which was the final stage of Google's major update dubbed "Jagger" which started mid-summer 2005 specifically targeted this kind of spam with great success and enabled Google to remove a large amount of mostly computer generated duplicate content from its index.

Sites made up mostly of affiliate links are usually badly regarded as they do not offer quality content. In 2005 there were active changes made by Google whereby certain websites were labeled as "thin affiliates"[22] and were either removed from the index, or taken from the first 2 pages of the results and moved deeper within the index. In order to avoid this categorization, webmasters who are affiliate marketers must create real value within their websites that distinguishes their work from the work of spammers or banner farms with nothing but links leading to the merchant sites.

Affiliate links work best in the context of the information contained within the website. For instance, if a website is about "How to publish a website", within the content an affiliate link leading to a merchant's ISP site would be appropriate. If a website is about sports, then an affiliate link leading to a sporting goods site might work well within the content of the articles and information about sports. The idea is to publish quality information within the site, and to link "in context" to related merchant's sites.

Adware

Adware is still an issue today, but affiliate marketers have taken steps to fight it. AdWare is not the same as spyware although both often use the same methods and technologies. Merchants usually had no clue what adware was, what it did and how it was damaging their brand. Affiliate marketers became aware of the issue much more quickly, especially because they noticed that adware often overwrites their tracking cookie and results in a decline of commissions. Affiliates who do not use adware became enraged by adware, which they felt was stealing hard earned commission from them. Adware usually has no valuable purpose or provides any useful content to the often unaware user that has the

adware running on his computer. Affiliates discussed the issues in various affiliate forums and started to get organized. It became obvious that the best way to cut off adware was by discouraging merchants from advertising via adware. Merchants that did not care or even supported adware were made public by affiliates, which damaged the merchants' reputations and also hurt the merchants' general affiliate marketing efforts. Many affiliates simply "canned" the merchant or switched to a competitor's affiliate program. Eventually, affiliate networks were also forced by merchants and affiliates to take a stand and ban certain adware publishers from their network.

Resulting from this were the Code of Conduct by Commission Junction/BeFree and Performics,[23] LinkShare's Anti-Predatory Advertising Addendum[24] and ShareASale's complete ban of software applications as medium for affiliates to promote advertiser offers.[25] Regardless of the progress made is adware still an issue. This is demonstrated by the class action lawsuit against ValueClick and its daughter company Commission Junction filed on April 20, 2007.[26]

Trademark bidding / PPC

Affiliates were among the earliest adopters of pay-per-click advertising when the first PPC search engines like Goto.com (which became later Overture.com, acquired by Yahoo! in 2003) emerged during the end of the nineteen-nineties. Later in 2000 Google launched their PPC service AdWords which is responsible for the wide spread use and acceptance of PPC as an advertising channel. More and more merchants engaged in PPC advertising, either directly or via a search marketing agency and realized that this space was already well occupied by their affiliates. Although this fact alone did create channel conflicts and hot debate between advertisers and affiliates, was the biggest issue the bidding on advertisers names, brands and trademarks by some affiliates. A larger number of advertisers started to adjust their affiliate program terms to prohibit their affiliates from bidding on those type of keywords. Some advertisers however did and still do embrace this behavior of their affiliates and allow them, even encourage them, to bid an any term they like, including the advertisers trademarks.

Lack of self regulation

Affiliate marketing is driven by entrepreneurs who are working at the forefront of internet marketing. Affiliates are the first to take advantage of new emerging trends and technologies where established advertisers do not dare to be active. Affiliates take risks and "trial and error" is probably the best way to describe how affiliate marketers are operating. This is also one of the reasons why most affiliates fail and give up before they

"make it" and become "super affiliates" who generate $10,000 and more in commission (not sales) per month. This "frontier" life and the attitude that can be found in such type of communities is probably the main reason, why the affiliate marketing industry is not able to this day to self-regulate itself beyond individual contracts between advertiser and affiliate. The 10+ years history since the beginning of affiliate marketing is full of failed attempts[27] to create an industry organization or association of some kind that could be the initiator of regulations, standards and guidelines for the industry. Some of the failed examples are the Affiliate Union and iAfma.

The only places where the different people from the industry, affiliates/publishers, merchants/advertisers, networks and 3rd party vendors and service providers like outsources program managers come together at one location are either online forums and industry trade shows. The forums are free and even small affiliates can have a big voice at places like that, which is supported by the anonymity that is provided by those platforms. Trade shows are not anonymous, but a large number, in fact the greater number (quantitative) of affiliates is not able to attend those events for financial reasons. Only performing affiliates can afford the often hefty price tags for the event passes or get it sponsored by an advertisers they promote.

Because of the anonymity of forums, the only place where you are to get the majority (quantitative) of people in the industry together, is it almost impossible to create any form of legally binding rule or regulation that must be followed by everybody in the industry. Forums had only very few successes in their role as representant of the majority in the affiliate marketing industry. The last example[28] of such a success was the halt of the "CJ LMI" ("Commission Junction Link Management Initiative") in June/July 2006, when a single network tried to impose on their publishers/affiliates the use of Javascript tracking code as a replacement for common HTML links.

Lack of industry standards

Training and certification

There are no industry standards for training and certification in affiliate marketing.[29] There are training courses and seminars that result in certifications. Some of them are also widely accepted, which is mostly because of the reputation of the person or company who is issuing the certification. Affiliate marketing is also not a subject taught in universities. Only few college teachers work with internet marketers to introduce the concept of affiliate marketing to students majoring in marketing for example.[30]

Education happens mostly in "real life" by just doing it and learning the details as you go. There are a number of books available, but readers have to watch out, because some of the so-called "how-to" or "silver bullet" books teach how to manipulate holes in the Google algorithm, which can quickly become out of date[30] or that advertisers do not permit anymore some of the strategies endorsed in the books.[31]

OPM companies usually mix formal with informal training, and do a lot of their training through group collaboration and brainstorming. Companies also try to send each marketing employee to the industry conference of their choice.[32]

Other resources used include web forums, blogs, podcasts, video seminars and specialty websites that try to teach individuals to learn affiliate marketing, such as Affiliate Classroom, whose founder Anik Singal won the first place and $15,000 in the Young Alumni Category of the University of Maryland $50K Business Plan Competition in 2006.[33]

Affiliate Summit is the largest conference in the industry, and it is not run by any of the Affiliate networks, many of which run their own annual events.

Code of Conduct

A Code of Conduct was released by the affiliate networks Commission Junction/BeFree and Performics on December 10 2002. It was created to guide practices and adherence to ethical standards for online advertising.

“Threat" to traditional affiliate networks

Affiliate marketers usually avoid this topic as much as possible, but when it is being discussed, then are the debates explosive and heated to say the least.[34][35][36] The discussion is about CPA networks (CPA = Cost per action) and their impact on "classic" affiliate marketing (traditional affiliate networks). Traditional affiliate marketing is resources intensive and requires a lot of maintenance. Most of this includes the management, monitoring and support of affiliates. Affiliate marketing is supposed to be about long-term and mutual beneficial partnerships between advertisers and affiliates. CPA networks on the other hand eliminate the need for the advertiser to build and maintain relationships to affiliates, because that task is performed by the CPA network for the advertiser. The advertiser simply puts an offer out, which is in almost every case a CPA based offer, and the CPA networks take care of the rest by mobilizing their affiliates to promote that offer.

CPS or revenue share offers are rarely be found at CPA networks, which is the main compensation model of classic affiliate marketing.

The name "affiliate marketing"

Voices in the industry are getting louder[37] that recommend a renaming of affiliate marketing. The problem with the term affiliate marketing is that it is often confused with network-marketing or multi-level marketing. "Performance marketing" is one of the alternative names that is used the most, but other recommendations were made as well, [38] but who is to decide about the change of a name of a whole industry. Something like that was attempted years ago for the search engine optimization industry, an attempt that obviously failed since it is still called SEO today.[39][40]

References

See Appendix A “References 2”

Social media optimization

Social media optimization (SMO) is a set of methods for generating publicity through social media, online communities and community websites. Methods of SMO include adding RSS feeds, adding a "Digg This" button, blogging and incorporating third party community functionalities like Flickr photo slides and galleries or YouTube videos. Social media optimization is a form of search engine marketing.

Social media optimization is in many ways connected as a technique to viral marketing where word of mouth is created not through friends or family but through the use of networking in social bookmarking, video and photo sharing websites. In a similar way the engagement with blogs achieves the same by sharing content through the use of RSS in the blogsphere and special blog search engines such as Technorati.

E-mail marketing

Email marketing is a form of direct marketing which uses electronic mail as a means of communicating commercial or fundraising messages to an audience. In its broadest sense, every email sent to a potential or current customer could be considered email marketing. However, the term is usually used to refer to:

Sending emails with the purpose of enhancing the relationship of a merchant with its current or old customers and to encourage customer loyalty and repeat business.
Sending emails with the purpose of acquiring new customers or convincing old customers to buy something immediately.
Adding advertisements in emails sent by other companies to their customers.
Emails that are being sent on the Internet (Email did and does exist outside the Internet, Network Email, FIDO etc.)

Researchers estimate that US firms alone spent $400 million on email marketing in 2006. [1]

Advantages

Email marketing (on the Internet) is popular with companies because:

The advantage of a mailing list is clearly the ability to distribute information to a wide range of specific, potential customers at a relatively low cost.
Compared to other media investments such as direct mail or printed newsletters, it is less expensive.
An exact Return on investment can be tracked ("track to basket") and has proven to be high when done properly. Email marketing is often reported as second only to search marketing as the most effective online marketing tactic.[2]
It is instant, as opposed to a mailed advertisement, an email arrives in a few seconds or minutes.
It lets the advertiser "push" the message to its audience, as opposed to a website that waits for customers to come in.
It is easy to track. An advertiser can track users via web bugs, bounce messages, un-subscribes, read-receipts, click-throughs, etc. These can be used to measure open rates, positive or negative responses, correlate sales with marketing.
Advertisers can generate repeat business affordably and automatically
Advertisers can reach substantial numbers of email subscribers who have opted in (consented) to receive email communications on subjects of interest to them
Over half of Internet users check or send email on a typical day.[3]

Specific types of interaction with messages can trigger other messages to be automatically delivered.
Specific types of interaction with messages can trigger other events such as updating the profile of the recipient to indicate a specific interest category.
Green - email marketing is paper-free

Disadvantages

Many companies use email marketing to communicate with existing customers, but many other companies send unsolicited bulk email, also known as spam.

Illicit email marketing antedates legitimate email marketing, since on the early Internet (see Arpanet) it was not permitted to use the medium for commercial purposes. As a result, marketers attempting to establish themselves as legitimate businesses in email marketing have had an uphill battle, hampered also by criminal spam operations billing themselves as legitimate.

It is frequently difficult for observers to distinguish between legitimate and spam email marketing. First off, spammers attempt to represent themselves as legitimate operators, obfuscating the issue. Second, direct-marketing political groups such as the U.S. Direct Marketing Association (DMA) have pressured legislatures to legalize activities which many Internet operators consider to be spamming, such as the sending of "opt-out" unsolicited commercial email. Third, the sheer volume of spam email has led some users to mistake legitimate commercial email (for instance, a mailing list to which the user subscribed) for spam — especially when the two have a similar appearance, as when messages include HTML and flashy graphics.

Due to the volume of spam email on the Internet, spam filters are essential to most users. Some marketers report that legitimate commercial emails frequently get caught by filters, and hidden; however, it is somewhat less common for email users to complain that spam filters block legitimate mail.

Companies considering an email marketing program must make sure that their program does not violate spam laws such as the United States' CAN-SPAM Act (Controlling the Assault of Non-Solicited Pornography and Marketing Act),[4] the European Privacy & Electronic Communications Regulations 2003 or their Internet provider's acceptable use policy. Even if a company follows the law, if Internet mail administrators find that it is sending spam it is likely to be listed in blacklists such as SPEWS.

CAN-SPAM compliance

Because the CAN-SPAM Act of 2003 authorizes a USD 11,000 penalty per violation for spamming each individual recipient, many commercial email marketers within the United States utilize a service or special software that helps ensure compliance with the Act. A variety of older systems exist which do not ensure compliance with the Act. To comply with the Act's regulation of commercial email, services typically: require users to authenticate their return address and include a valid physical address, provide a one-click unsubscribe feature, and prohibit importing lists of purchased addresses which may not have given valid permission.

In addition to satisfying legal requirements, service providers stepped in to help customers to set up and manage their own email marketing campaigns. The services provide email templates, automatically handle subscriptions and removals, and generate statistics on how many messages were received and openned, and whether the recipients clicked on any links within the messages.

Opt-in email advertising

Opt-in email advertising or permission marketing is a method of advertising by electronic mail wherein the recipient of the advertisement has consented to receive it. It is one of several ways developed by marketers to eliminate the disadvantages of email marketing. [5]

Email has become a very popular mode of communication across the world. It has also become extremely popular to advertise through. Some of the many advantages of advertising through email are the direct contact with the consumer and is “inexpensive, flexible, and simple to implement” (Fairhead, 2003). There are also disadvantages attached to email advertising such as, alienating the consumer because of overload to messages or the advertisement getting deleted without getting read.

Permission email marketing may evolve into a technology that uses a handshake protocol between sender and receiver (Fairhaed, 2003). This system is intended to eventually result in a high degree of satisfaction between consumers and marketers. If opt-in email advertising is used, the material that is emailed to consumers will be “anticipated.” It is assumed that the consumer wants to receive it, which makes it unlike unsolicited advertisements sent to the consumer (often referred to as spam). Ideally, opt-in email

advertisements will be more personal and relevant to the consumer than untargetted advertisements.

A common example of permission marketing is a newsletter sent to a firm's customers. Newsletters like this are a way to let customers know about upcoming events or promotions, or new products. In this type of advertising, a company that wants to send a newsletter to their customers may ask them at the point of purchase if they would like to receive this newsletter.

With a foundation of opted-in contact information stored in a database, marketers can automatically send out promotional materials. The marketers can also segment their promotions to specific market segments.[6]

Terms

There are number of terms used in email marketing, marketers in this space have to be familiar with, to name a few: auto-responder, bounce message, click-through rate, double opt-in or opt-in, open rate and spam for example.[7]

Research - See Appendix A "References 5"

SEO/Search engine optimization

Search engine optimization (SEO) is the process of improving the volume and quality of traffic to a web site from search engines via "natural" ("organic" or "algorithmic") search results. Usually, the earlier a site is presented in the search results, or the higher it "ranks", the more searchers will visit that site. SEO can also target different kinds of search, including image search, local search, and industry-specific vertical search engines.

As a marketing strategy for increasing a site's relevance, SEO considers how search algorithms work and what people search for. SEO efforts may involve a site's coding, presentation, and structure, as well as fixing problems that could prevent search engine indexing programs from fully spidering a site. Other, more noticeable efforts may include adding unique content to a site, ensuring that content is easily indexed by search engine robots, and making the site more appealing to users. Another class of techniques, known

as Black Hat SEO or spamdexing, use methods such as link farms and keyword stuffing that tend to harm search engine user experience. Search engines look for sites that employ these techniques and may remove their listings.

The initialism "SEO" can also refer to "search engine optimizers", a term adopted by an industry of consultants who carry out optimization projects on behalf of clients, and by employees who perform SEO services in-house. Search engine optimizers may offer SEO as a stand-alone service or as a part of a broader marketing campaign. Because effective SEO may require changes to the HTML source code of a site, SEO tactics may be incorporated into web site development and design. The term "search engine friendly" may be used to describe web site designs, menus, content management systems and shopping carts that are easy to optimize.

History

Webmasters and content providers began optimizing sites for search engines in the mid-1990s, as the first search engines were cataloging the early Web. Initially, all a webmaster needed to do was submit a page, or URL, to the various engines which would send a spider to "crawl" that page, extract links to other pages from it, and return information found on the page to be indexed.[1] The process involves a search engine spider downloading a page and storing it on the search engine's own server, where a second program, known as an indexer, extracts various information about the page, such as the words it contains and where these are located, as well as any weight for specific words, as well as any and all links the page contains, which are then placed into a scheduler for crawling at a later date.

Site owners started to recognize the value of having their sites highly ranked and visible in search engine results, creating an opportunity for both white hat and black hat SEO practitioners. According to industry analyst Danny Sullivan, the earliest known use of the phrase "search engine optimization" was a spam message posted on Usenet on July 26, 1997.[2]

Early versions of search algorithms relied on webmaster-provided information such as the keyword meta tag, or index files in engines like ALIWEB. Meta-tags provided a guide to each page's content. But using meta data to index pages was found to be less than reliable, because some webmasters abused meta tags by including irrelevant keywords to artificially increase page impressions for their website and to increase their ad revenue. Cost per thousand impressions was at the time the common means of monetizing content websites. Inaccurate, incomplete, and inconsistent meta data in meta tags caused pages

to rank for irrelevant searches, and fail to rank for relevant searches.[3] Web content providers also manipulated a number of attributes within the HTML source of a page in an attempt to rank well in search engines.[4]

By relying so much on factors exclusively within a webmaster's control, early search engines suffered from abuse and ranking manipulation. To provide better results to their users, search engines had to adapt to ensure their results pages showed the most relevant search results, rather than unrelated pages stuffed with numerous keywords by unscrupulous webmasters. Search engines responded by developing more complex ranking algorithms, taking into account additional factors that were more difficult for webmasters to manipulate.

While graduate students at Stanford University, Larry Page and Sergey Brin developed "backrub", a search engine that relied on a mathematical algorithm to rate the prominence of web pages. The number calculated by the algorithm, PageRank, is a function of the quantity and strength of inbound links.[5] PageRank estimates the likelihood that a given page will be reached by a web user who randomly surfs the web, and follows links from one page to another. In effect, this means that some links are stronger than others, as a higher PageRank page is more likely to be reached by the random surfer.

Google opens headquarters in Buenos Aires, Argentina

Page and Brin founded Google in 1998. Google attracted a loyal following among the growing number of Internet users, who liked its simple design.[6] Off-page factors such as PageRank and hyperlink analysis were considered, as well as on-page factors, to enable Google to avoid the kind of manipulation seen in search engines that only considered on-page factors for their rankings. Although PageRank was more difficult to game, webmasters had already developed link building tools and schemes to influence the Inktomi search engine, and these methods proved similarly applicable to gaining PageRank. Many sites focused on exchanging, buying, and selling links, often on a massive scale. Some of these schemes, or link farms, involved the creation of thousands of sites for the sole purpose of link spamming.[7]

To reduce the impact of link schemes, as of 2007, search engines consider a wide range of undisclosed factors for their ranking algorithms. Google says it ranks sites using more than 200 different signals.[8] The three leading search engines, Google, Yahoo and Microsoft's Live Search, do not disclose the algorithms they use to rank pages. Notable SEOs, such as Rand Fishkin, Barry Schwartz, Aaron Wall and Jill Whalen, have studied different approaches to search engine optimization, and have published their opinions in

online forums and blogs.[9][10] SEO practitioners may also study patents held by various search engines to gain insight into the algorithms.[11]

Webmasters and search engines

By 1997 search engines recognized that some webmasters were making efforts to rank well in their search engines, and even manipulating the page rankings in search results. Early search engines, such as Infoseek, adjusted their algorithms to prevent webmasters from manipulating rankings by stuffing pages with excessive or irrelevant keywords.[12]

Due to the high marketing value of targeted search results, there is potential for an adversarial relationship between search engines and SEOs. In 2005, an annual conference, AIRWeb, Adversarial Information Retrieval on the Web,[13] was created to discuss and minimize the damaging effects of aggressive web content providers.

SEO companies that employ overly aggressive techniques can get their client websites banned from the search results. In 2005, the Wall Street Journal profiled a company, Traffic Power, that allegedly used high-risk techniques and failed to disclose those risks to its clients.[14] Wired magazine reported that the same company sued blogger Aaron Wall for writing about the ban.[15] Google's Matt Cutts later confirmed that Google did in fact ban Traffic Power and some of its clients.[16]

Some search engines have also reached out to the SEO industry, and are frequent sponsors and guests at SEO conferences and seminars. In fact, with the advent of paid inclusion, some search engines now have a vested interest in the health of the optimization community. Major search engines provide information and guidelines to help with site optimization.[17][18][19] Google has a Sitemaps program[20] to help webmasters learn if Google is having any problems indexing their website and also provides data on Google traffic to the website. Yahoo! Site Explorer provides a way for webmasters to submit URLs, determine how many pages are in the Yahoo! index and view link information.[21]

Getting listings

The leading search engines, Google, Yahoo! and Microsoft, use crawlers to find pages for their algorithmic search results. Pages that are linked from other search engine indexed pages do not need to be submitted because they are found automatically. Some search engines, notably Yahoo!, operate a paid submission service that guarantee crawling for either a set fee or cost per click.[22] Such programs usually guarantee inclusion in the

database, but do not guarantee specific ranking within the search results.[23] Yahoo's paid inclusion program has drawn criticism from advertisers and competitors.[24] Two major directories, the Yahoo Directory and the Open Directory Project both require manual submission and human editorial review.[25] Google offers Google Sitemaps, for which an XML type feed can be created and submitted for free to ensure that all pages are found, especially pages that aren't discoverable by automatically following links.[26]

Search engine crawlers may look at a number of different factors when crawling a site. Not every page is indexed by the search engines. Distance of pages from the root directory of a site may also be a factor in whether or not pages get crawled.[27]

Preventing listings

To avoid undesirable search listings, webmasters can instruct spiders not to crawl certain files or directories through the standard robots.txt file in the root directory of the domain. Additionally, a page can be explicitly excluded from a search engine's database by using a meta tag specific to robots. When a search engine visits a site, the robots.txt located in the root directory is the first file crawled. The robots.txt file is then parsed, and will instruct the robot as to which pages are not to be crawled. As a search engine crawler may keep a cached copy of this file, it may on occasion crawl pages a webmaster does not wish crawled. Pages typically prevented from being crawled include login specific pages such as shopping carts and user-specific content such as search results from internal searches. In March 2007, Google warned webmasters that they should prevent indexing of internal search results because those pages are considered search spam.[28]

White hat versus black hat

SEO techniques are classified by some into two broad categories: techniques that search engines recommend as part of good design, and those techniques that search engines do not approve of and attempt to minimize the effect of, referred to as spamdexing. Some industry commentators classify these methods, and the practitioners who employ them, as either white hat SEO, or black hat SEO.[29] White hats tend to produce results that last a long time, whereas black hats anticipate that their sites will eventually be banned once the search engines discover what they are doing.[30]

A SEO tactic, technique or method is considered white hat if it conforms to the search engines' guidelines and involves no deception. As the search engine guidelines[31][17][18][19] are not written as a series of rules or commandments, this is an important distinction to note. White hat SEO is not just about following guidelines, but is about

ensuring that the content a search engine indexes and subsequently ranks is the same content a user will see.

White hat advice is generally summed up as creating content for users, not for search engines, and then making that content easily accessible to the spiders, rather than attempting to game thealgorithm. White hat SEO is in many ways similar to web development that promotes accessibility,[32] although the two are not identical.

Black hat SEO attempts to improve rankings in ways that are disapproved of by the search engines, or involve deception. One black hat technique uses text that is hidden, either as text colored similar to the background, in an invisible div, or positioned off screen. Another method gives a different page depending on whether the page is being requested by a human visitor or a search engine, a technique known as cloaking.

Search engines may penalize sites they discover using black hat methods, either by reducing their rankings or eliminating their listings from their databases altogether. Such penalties can be applied either automatically by the search engines' algorithms, or by a manual site review.

One infamous example was the February 2006 Google removal of both BMW Germany and Ricoh Germany for use of deceptive practices.[33] Both companies, however, quickly apologized, fixed the offending pages, and were restored to Google's list.[34]

As a marketing strategy

Eye tracking studies have shown that searchers scan a search results page from top to bottom and left to right (for left to right languages), looking for a relevant result. Placement at or near the top of the rankings therefore increases the number of searchers who will visit a site.[35] However, more search engine referrals does not guarantee more sales. SEO is not necessarily an appropriate strategy for every website, and other Internet marketing strategies can be much more effective, depending on the site operator's goals. [36]A successful Internet marketing campaign may drive organic search results to pages, but it also may involve the use of paid advertising on search engines and other pages, building high quality web pages to engage and persuade, addressing technical issues that may keep search engines from crawling and indexing those sites, setting up analytics programs to enable site owners to measure their successes, and improving a site's conversion rate.[37]

SEO may generate a return on investment. However, search engines are not paid for organic search traffic, their algorithms change, and there are no guarantees of continued referrals. Due to this lack of guarantees and certainty, a business that relies heavily on search engine traffic can suffer major losses if the search engines stop sending visitors.[38] It is considered wise business practice for website operators to liberate themselves from dependence on search engine traffic.[39] A top ranked SEO blog Seomoz.org[40] has reported, "Search marketers, in a twist of irony, receive a very small share of their traffic from search engines." Instead, their main sources of traffic are links from other websites.[41]

International markets

A Baidu search results page

The search engines' market shares vary from market to market, as does competition. In 2003, Danny Sullivan stated that Google represented about 75% of all searches.[42] In markets outside the United States, Google's share is often larger, and Google remains the dominant search engine worldwide as of 2007.[43] As of 2006, Google held about 40% of the market in the United States, but Google had an 85-90% market share in Germany.[44] While there were hundreds of SEO firms in the US at that time, there were only about five in Germany.[44]

In Russia the situation is reversed. Local search engine Yandex controls 50% of the paid advertising revenue, while Google has less than 9%.[45] In China, Baidu continues to lead in market share, although Google has been gaining share as of 2007.[46]

Successful search optimization for international markets may require professional translation of web pages, registration of a domain name with a top level domain in the target market, and web hosting that provides a local IP address. Otherwise, the fundamental elements of search optimization are essentially the same, regardless of language.[44]

Legal precedents

In 2002, SearchKing filed suit in an Oklahoma court against the search engine Google. SearchKing's claim was that Google's tactics to prevent spamdexing constituted an unfair business practice. In May 2003, the court pronounced a summary judgment in Google's favor.[47]

In March 2006, KinderStart.com, LLC filed a First Amendment complaint against Google and also attempted to include potential members of the class of plaintiffs in a class action. [48] The plaintiff's web site was removed from Google's index prior to the lawsuit and the amount of traffic to the site plummeted. On March 16, 2007 the United States District Court dismissed KinderStart's complaint without leave to amend, and partially granted Google's motion for Rule 11 sanctions against KinderStart's attorney, requiring him to pay part of Google's legal expenses.[49][50]

Research: See Appendix A "References 6"

Search engine marketing

Search Engine Marketing, or SEM, is a form of Internet Marketing that seeks to promote websites by increasing their visibility in the Search Engine result pages (SERPs). According to the Search Engine Marketing Professionals Organization, SEM methods include: Search Engine Optimization (or SEO), paid placement, and paid inclusion.[1] Other sources, including the New York Times, define SEM as the practice of buying paid search listings with the goal of obtaining better free search listings.[2][3]

Market structure

In 2006, North American advertisers spent US$9.4 billion on search engine marketing, a 62% increase over the prior year and a 750% increase over the 2002 year. The largest SEM vendors are Google AdWords, Yahoo! Search Marketing and Microsoft adCenter.[1] As of 2006, SEM was growing much faster than traditional advertising. [2]

History

As the number of sites on the Web increased in the mid-to-late 90s, search engines started appearing to help people find information quickly. Search engines developed business models to finance their services, such as pay per click programs offered by Open Text [4] in 1996 and then Goto.com [5] in 1998. Goto.com later changed its name [6] to Overture in 2001, and was purchased by Yahoo! in 2003, and now offers paid search opportunities for advertisers through Yahoo! Search Marketing. Google also began to offer advertisements on search results pages in 2000 through the Google AdWords

program. By 2007 pay-per-click programs proved to be primary money-makers [7] for search engines.

Search Engine Optimization consultants expanded their offerings to help businesses learn about and use the advertising opportunites offered by search engines, and new agencies focusing primarily upon marketing and advertising through search engines emerged. The term "Search Engine Marketing" was proposed by Danny Sullivan in 2001 [8] to cover the spectrum of activities involved in performing SEO, managing paid listings at the search engines, submitting sites to directories, and developing online marketing strategies for businesses, organizations, and individuals. In 2007 Search Engine Marketing is stronger than ever [9] with SEM Budgets up 750% as shown with stats dating back to 2002 vs 2006.

Ethical questions

Paid search advertising hasn't been without controversy, and issues around how many search engines present advertising on their pages of search result sets have been the target of a series of studies and reports [10] [11] [12] by Consumer Reports WebWatch, from Consumers Union. The FTC also issued a letter [13] in 2002 about the importance of disclosure of paid advertising on search engines, in response to a complaint from Commercial Alert, a consumer advocacy group with ties to Ralph Nader.

References: See Appendix A “References 7”

Contextual advertising

Contextual advertising is the term applied to advertisements appearing on websites or other media, such as content displayed in mobile phones, where the advertisements are selected and served by automated systems based on the content displayed by the user.

Google AdSense was the first major contextual advertising program. It worked by providing webmasters with JavaScript code that, when inserted into web pages, called up relevant advertisements from the Google inventory of advertisers. The relevance was calculated by a separate Google bot that indexed the content of the page.

Since the advent of AdSense, the Yahoo! Publisher Network, Microsoft adCenter and others have been gearing up to make similar offerings.

Contextual advertising has made a major impact on earnings of many websites. As the ads are more targeted they are more likely to get clicked, thus generating revenue for the owner of the website (and the server of the advertisement). A large part of Google's earnings are from their share of the contextual ads served on the millions of webpages running the Adsense program.

Advertising on a Web site that is targeted to the specific individual who is visiting the Web site. A contextual ad system scans the text of a Web site for keywords and returns ads to the Web page based on what the user is viewing, either through ads placed on the page or pop-up ads. For example, if the user is viewing a site about sports, and the site uses contextual advertising, the user might see ads for sports-related companies, such as memorabilia dealers or ticket sellers. Contextual advertising also is used by search engines to display ads on their search results pages based on what word(s) the users has searched for.

Contextual advertising has attracted some controversy through the use of techniques such as third-party hyperlinking, where a third-party installs software onto a user's computer that interacts with the browser by turning keywords on a Web page into links that lead to advertisers that are not paying the Web site to advertise on its pages. A contextual ad is the advertisement that dynamically appears on a Web site.

Agency Roles

There are many agencies that will help brands understand how contextual advertising options affect their advertising plans. There are three main components to online advertising. Creative (what does the ad look like), media planning (where do the ads run) and media buying (how do you pay for the ads). Contextual Advertising replaces the middle component, media planning. Instead of humans choosing placement options, that function is replaced with computers facilitating the placement across 1,000's of sites.

Paid inclusion

Paid inclusion is a search engine marketing product where the search engine company charges fees related to inclusion of websites in their search index. Paid inclusion products are provided by most search engine companies, the most notable exception being Google.

The fee structure is both a filter against superfluous submissions and a revenue generator. Typically, the fee covers an annual subscription for one webpage, which will automatically be catalogued on a regular basis. A per-click fee may also apply. Each search engine is different. Some sites allow only paid inclusion, although these have had little success. More frequently, many search engines, like Yahoo![1], mix paid inclusion (per-page and per-click fee) with results from web crawling. Others, like Google (and a little recently, Ask.com[2][3]), do not let webmasters pay to be in their search engine listing (advertisements are shown separately and labeled as such).

Some detractors of paid inclusion allege that it causes searches to return results based more on the economic standing of the interests of a web site, and less on the relevancy of that site to end-users.

Often the line between pay per click advertising and paid inclusion is debatable. Some have lobbied for any paid listings to be labeled as an advertisement, while defenders insist they are not actually ads since the webmasters do not control the content of the listing, its ranking, or even whether it is shown to any users. Another advantage of paid inclusion is that it allows site owners to specify particular schedules for crawling pages. In the general case, one has no control as to when their page will be crawled or added to a search engine index. Paid inclusion proves to be particularly useful for cases where pages are dynamically generated and frequently modified.

Paid inclusion is a search engine marketing method in itself, but also a tool of search engine optimization, since experts and firms can test out different approaches to improving ranking, and see the results often within a couple of days, instead of waiting weeks or months. Knowledge gained this way can be used to optimize other web pages, without paying the search engine company.

This World Wide Web-related article is a stub. You can help by expanding it.

References: See Appendix A “References 8”

Interactive advertising

Interactive Advertising is the use of interactive media to promote and/or influence the buying decisions of the consumer in an online and offline environment. Interactive advertising can utilise media such as the Internet, interactive television, mobile devices (WAP and SMS), as well as kiosk-based terminals.

Interactive advertising affords the marketer the ability to engage the consumer in a direct and personal way, enabling a sophisticated and dimensional dialogue, which can affect a potential customer's buying decisions particularly in an e-commerce environment.

Perhaps one of the most effective implementations of interactive advertising is so-called Viral marketing. This technique uses images, texts, web links, Flash animations, audio/video clips etc., passed from user to user chain letter-style, via email. A notable example of this is the Subservient Chicken, a campaign by Burger King to promote their new line of chicken sandwiches and the "Have It Your Way" campaign.

Interactive advertising is also assuming other avatars, such as online directories for brands. These directories presently perform a complementary role to conventional advertising, helping viewers recall and compare brands primarily seen on television. Response is mediated usually through forms and click-to-call technologies. A good example of this is indibiz.tv[1]that presently hosts a number of successful brands in the Indian market.

Agencies and Designers

As the internet has expanded so has the interactive advertising industry, and most - if not all - of the major advertising players have a dedicated interactive business. These range from the global advertising agencies (AtmosphereBBDO, AKQA, Ogilvy Interactive, Tribal DDB etc.) to smaller specialised 'boutiques'.

Revenue sharing

Revenue sharing is the splitting of operating profits and losses between the general partner(s) and limited partners in a limited partnership. More generally, the practice of

sharing operating profits with a company's employees, or of sharing the revenues resulting between companies in an alliance.

Revenue sharing, as it pertains to the United States government, was in place from 1972-1987. Under this policy, Congress gave an annual share of the federal tax revenue to the states and their cities, counties and townships. Revenue sharing was extremely popular with state officials, but it lost federal support during the Reagan Administration. Revenue sharing was ended in 1987 to help narrow the national government's deficit. In 1987, revenue sharing was primarily replaced with block grants.

Revenue sharing, also known as cost per sale is with about 80%[1] the predominant compensation method used in affiliate marketing on the internet. A common scenario is an ecommerce web site operator who pays an affiliate a percentage of the order amounts (usually excluding tax, shipping and other 3rd party cost that are part of the customers order), generated by visitors of the ecommerce web site, that were referred by the affiliate via various different methods.

References : See Appendix A “References 9”

Cost per action

Cost Per Action or CPA (as it is often initialized to) is a phrase often used in online advertising and online marketing circles.

CPA is considered the optimal form of buying online advertising from a direct response advertiser's point of view. An advertiser only pays for the ad when an action has occurred. An action can be a product being purchased, a form being filled, etc. (The desired action to be performed is determined by the advertiser.) Google has incorporated this model into their Google AdSense [1] offering while eBay has recently announced a similar pricing called AdContext.

The CPA can be determined by different factors, depending where the online advertising inventory is being purchased.

CPA as "Cost Per Acquisition"

CPA is sometimes referred to as "Cost Per Acquisition", which has to do with the fact that most CPA offers by advertisers are about acquiring something (mostly new customers, prospects orleads). Using the term "Cost Per Acquisition" instead of "Cost Per Action" is not incorrect. It is actually more specific. "Cost Per Acquisition" is included in "Cost Per Action", but not all "Cost Per Action" offers can be referred to as "Cost Per Acquisition".

Effective cost per action

A related term, eCPA or effective Cost Per Action, is used to measure the effectiveness of advertising inventory purchased (by the advertiser) via a CPC, CPM, or CPT basis.

eCPA is used to measure the effectiveness of advertising inventory purchased (by the advertiser) via a CPC, CPM, or CPT basis. In other words, the eCPA tells the advertiser what they would have paid if they purchased the advertising inventory on a CPA basis (instead of a CPC, CPM, or CPT basis).

Pay per click

Pay per click (PPC) is an advertising model used on search engines, advertising networks, and content websites/blogs, where advertisers only pay when a user actually clicks on an ad to visit the advertiser's website. Advertisers bid on keywords they believe their target market would type in the search bar when they are looking for a product or service. When a user types a keyword query matching the advertiser's keyword list, or views a page with relevant content, the advertiser's ad may be shown. These ads are called a "Sponsored link" or "sponsored ads" and appear next to, and sometimes, above the natural or organic results on search engine results pages, or anywhere a webmaster/ blogger chooses on a content page.

Pay per click ads may also appear on content network websites. In this case, ad networks such as Google Adsense and Yahoo! Publisher Network attempt to provide ads that are relevant to the content of the page where they appear, and no search function is involved.

While many companies exist in this space, Google AdWords, Yahoo! Search Marketing, and Microsoft adCenter are the largest network operators as of 2007. Depending on the search engine, minimum prices per click start at US$0.01 (up to US$0.50). Very popular search terms can cost much more on popular engines. Arguably this advertising model

may be open to abuse through click fraud, although Google and other search engines have implemented automated systems to guard against this.

Categories

PPC engines can be categorized into two major categories "Keyword" or sponsored match and "Content Match". Sponsored match display your listing on the search engine itself whereas content match features ads on publisher sites and in newsletters and emails. [1]

There are other types of PPC engines that deal with Products and/or services. Search engine companies may fall into more than one category. More models are continually evolving. Pay per click programs do not generate any revenue solely from traffic for sites that display the ads. Revenue is generated only when a user clicks on the ad itself.

Keyword PPCs

Advertisers using these bid on "keywords", which can be words or phrases, and can include product model numbers. When a user searches for a particular word or phrase, the list of advertiser links appears in order of the amount bid. Keywords, also referred to as search terms, are the very heart of pay per click advertising. The terms are guarded as highly valued trade secrets by the advertisers, and many firms offer software or services to help advertisers develop keyword strategies. Content Match, will distribute the keyword ad to the search engine's partner sites and/or publishers that have distribution agreements with the search engine company.

As of 2007, notable PPC Keyword search engines include: Google AdWords, Yahoo! Search Marketing, Microsoft adCenter, Ask, LookSmart, Miva, Kanoodle, Yandex and Baidu.

Online Comparison Shopping Engines

"Product" engines let advertisers provide "feeds" of their product databases and when users search for a product, the links to the different advertisers for that particular product appear, giving more prominence to advertisers who pay more, but letting the user sort by price to see the lowest priced product and then click on it to buy. These engines are also called Product comparison engines or Price comparison engines.

Some Online Comparison Shopping engines such as Shopping.com use a PPC model and have a defined rate card. [2] whereas others such as Google Product Search, part of Google Base (previously known as Froogle) do not charge any type of fee for the listing but still require an active product feed to function.[3]

Noteworthy PPC Product search engines include: Shopzilla, NexTag, and Shopping.com.

Service PPCs

"Service" engines let advertisers provide feeds of their service databases and when users search for a service offering links to advertisers for that particular service appear, giving prominence to advertisers who pay more, but letting users sort their results by price or other methods. Some Product PPCs have expanded into the service space while other service engines operate in specific verticals.

Noteworthy PPC services include NexTag, SideStep, and TripAdvisor.

Pay per call

Similar to pay per click, pay per call is a business model for ad listings in search engines and directories that allows publishers to charge local advertisers on a per-call basis for each lead (call) they generate. The term "pay per call" is sometimes confused with "click to call"[1]. Click-to-call, along with call tracking, is a technology that enables the “pay-per-call” business model.

Pay-per-call is not just restricted to local advertisers. Many of the pay-per-call search engines allows advertisers with a national presence to create ads with local telephone numbers.

According to the Kelsey Group, the pay-per-phone-call market is expected to reach US $3.7 billion by 2010.

History

In February 1998, Jeffrey Brewer of Goto.com, a 25 employee startup company (later Overture, now part of Yahoo!), presented a PPC search engine proof-of-concept to the TED8 conference in California.[4] This and the events that followed created the PPC

advertising system. Credit for the concept of the PPC model is generally given to the Idealab and Goto.com founder, Bill Gross.

Google started search engine advertising in December 1999. It was not until October 2000 before the adwords system was introduced. Allowing advertisers to create text ads for placement on the search engine. However PPC was only introduced in 2002, until then, advertisements were charged at CPM. Yahoo Advertisements have always been PPC, since its introduction in 1998.

References: See Appendix A “References 10”

Web analytics

Web analytics is the study of the behaviour of website visitors. In a commercial context, web analytics especially refers to the use of data collected from a web site to determine which aspects of the website work towards the business objectives; for example, which landing pages encourage people to make a purchase.

Data collected almost always includes web traffic reports. It may also include e-mail response rates, direct mail campaign data, sales and lead information, user performance data such as click heat mapping, or other custom metrics as needed. This data is typically compared against key performance indicators for performance, and used to improve a web site or marketing campaign's audience response.

Many different vendors provide web analytics software and services.

Web analytics technologies

There are two main technological approaches to collecting web analytics data. The first method, logfile analysis, reads the logfiles in which the web server records all its transactions. The second method, page tagging, uses JavaScript on each page to notify a third-party server when a page is rendered by a web browser.

Web server logfile analysis

Web servers have always recorded all their transactions in a logfile. It was soon realised that these logfiles could be read by a program to provide data on the popularity of the website. Thus arose web log analysis software.

In the early 1990s, web site statistics consisted primarily of counting the number of client requests (or hits) made to the web server. This was a reasonable method initially, since each web site often consisted of a single HTML file. However, with the introduction of images in HTML, and web sites that spanned multiple HTML files, this count became less useful. The first true commercial Log Analyzer was released by IPRO in 1994[1].

Two units of measure were introduced in the mid 1990s to gauge more accurately the amount of human activity on web servers. These were page views and visits (or sessions). A page view was defined as a request made to the web server for a page, as opposed to a graphic, while a visit was defined as a sequence of requests from a uniquely identified client that expired after a certain amount of inactivity, usually 30 minutes. The page views and visits are still commonly displayed metrics, but are now considered rather unsophisticated measurements.

The emergence of search engine spiders and robots in the late 1990s, along with web proxies and dynamically assigned IP addresses for large companies and ISPs, made it more difficult to identify unique human visitors to a website. Log analyzers responded by tracking visits by cookies, and by ignoring requests from known spiders.

The extensive use of web caches also presented a problem for logfile analysis. If a person revisits a page, the second request will often be retrieved from the browser's cache, and so no request will be received by the web server. This means that the person's path through the site is lost. Caching can be defeated by configuring the web server, but this can result in degraded performance for the visitor to the website.

Page tagging

Concerns about the accuracy of logfile analysis in the presence of caching, and the desire to be able to perform web analytics as an outsourced service, led to the second data collection method, page tagging or 'Web bugs'.

In the mid 1990s, Web counters were commonly seen — these were images included in a web page that showed the number of times the image had been requested, which was an estimate of the number of visits to that page. In the late 1990s this concept evolved to include a small invisible image instead of a visible one, and, by using JavaScript, to pass

along with the image request certain information about the page and the visitor. This information can then be processed remotely by a web analytics company, and extensive statistics generated.

The web analytics service also manages the process of assigning a cookie to the user, which can uniquely identify them during their visit and in subsequent visits.

With the increasing popularity of Ajax-based solutions, an alternative to the use of an invisible image, is to implement a call back to the server from the rendered page. In this case, when the page is rendered on the web browser, a piece of Ajax code would call back to the server and pass information about the client that can then be aggregated by a web analytics company. This is in some ways flawed by browser restrictions on the servers which can be contacted with XmlHttpRequest objects.

Logfile analysis vs page tagging

Both logfile analysis programs and page tagging solutions are readily available to companies that wish to perform web analytics. In many cases, the same web analytics company will offer both approaches. The question then arises of which method a company should choose. There are advantages and disadvantages to each approach.

Advantages of logfile analysis

The main advantages of logfile analysis over page tagging are as follows.

The web server normally already produces logfiles, so the raw data is already available. To collect data via page tagging requires changes to the website.
The web server reliably records every transaction it makes. Page tagging relies on the visitors' browsers co-operating, which a certain proportion may not do (for example, if JavaScript is disabled).
The data is on the company's own servers, and is in a standard, rather than a proprietary, format. This makes it easy for a company to switch programs later, use several different programs, and analyze historical data with a new program. Page tagging solutions involve vendor lock-in.
Logfiles contain information on visits from search engine spiders. Although these should not be reported as part of the human activity, it is important data for performing search engine optimization.
Logfiles contain information on failed requests; page tagging only records an event if the page is successfully viewed.

Advantages of page tagging

The main advantages of page tagging over logfile analysis are as follows.

The JavaScript is automatically run every time the page is loaded. Thus there are fewer worries about caching.
It is easier to add additional information to the JavaScript, which can then be collected by the remote server. For example, information about the visitors' screen sizes, or the price of the goods they purchased, can be added in this way. With logfile analysis, information not normally collected by the web server can only be recorded by modifying the URL.
Page tagging can report on events which do not involve a request to the web server, such as interactions within Flash movies.
The page tagging service manages the process of assigning cookies to visitors; with logfile analysis, the server has to be configured to do this.
Page tagging is available to companies who do not run their own web servers.

Economic factors

Logfile analysis is almost always performed in-house. Page tagging can be performed in-house, but it is more often provided as a third-party service. The economic difference between these two models can also be a consideration for a company deciding which to purchase.

Logfile analysis typically involves a one-off software purchase; however, some vendors are introducing maximum annual page views with additional costs to process additional information.
Page tagging most often involves a monthly fee, although some vendors offer installable page tagging solutions with no additional page view costs.

Which solution is cheaper often depends on the amount of technical expertise within the company, the vendor chosen, the amount of activity seen on the web sites, the depth and type of information sought, and the number of distinct web sites needing statistics.

Hybrid methods

Some companies are now producing programs which collect data through both logfiles and page tagging. By using a hybrid method, they aim to produce more accurate statistics than either method on its own. The first Hybrid solution was produced in 1998 by Rufus Evison who then spun the product out to create a company based upon the increased accuracy of hybrid methods [2].

Other methods

Other methods of data collection have been used, but are not currently widely deployed. These include integrating the web analytics program into the web server, and collecting data by sniffing the network traffic passing between the web server and the outside world. Packet Sniffing is used by some of the largest e-commerce sites because it involves no changes to the site or servers and cannot compromise operation. It also provides better data in real-time or in log file format and it is easy to feed datawarehouses and join the data with CRM, and enterprise data.

There is also another method of the page tagging analysis. Instead of getting the information from the user side, when he / she opens the page, it’s also possible to let the script work on the server side. Right before a page is sent to a user it then sends the data.

Key definitions

There are no globally agreed definitions within web analytics as the industry bodies have been trying to agree definitions that are useful and definitive for some time. The main bodies who have had input in this area have been Jicwebs(Industry Committee for Web Standards)/ABCe (Auditing Bureau of Circulations electronic, UK and Europe), The WAA (Web Analytics Association, US) and to a lesser extent the IAB (Interactive Advertising Bureau). This does not prevent the following list from being a useful guide, suffering only slightly from ambiguity. Both the WAA and the ABCe provide more definitive lists for those who are declaring their statistics using the metrics defined by either.

Hit - A request for a file from the web server. Available only in log analysis. The number of hits received by a website is frequently cited to assert its popularity, but this number is extremely misleading and dramatically over-estimates popularity. A single web-page typically consists of multiple (often dozens) of discrete files, each of which is counted as a hit as the page is downloaded, so the number of hits is really an arbitrary number more reflective of the complexity of individual pages on the website than the website's actual popularity. The total number of visitors or page views provides a more realistic and accurate assessment of popularity.

Page View - A request for a file whose type is defined as a page in log analysis. An occurrence of the script being run in page tagging. In log analysis, a single page view may generate multiple hits as all the resources required to view the page (images, .js and .css files) are also requested from the web server.
Visit / Session - A series of requests from the same uniquely identified client with a set timeout. A visit is expected to contain multiple hits (in log analysis) and page views.
First Visit / First Session - A visit from a visitor who has not made any previous visits.
Visitor / Unique Visitor/UniqueUser - The uniquely identified client generating requests on the web server (log analysis) or viewing pages (page tagging) within a defined time period (i.e. day, week or month). A Unique Visitor counts once within the timescale. A visitor can make multiple visits. The Unique User is now the only mandatory metric for an ABCe audit [[3]].
Repeat Visitor - A visitor that has made at least one previous visit. The period between the last and current visit is called visitor recency and is measured in days.
New Visitor - A visitor that has not made any previous visits. This definition creates a certain amount of confusion (see common confusions below), and is sometimes substituted with analysis of first visits.
Impression - An impression is each time an advertisement loads on a users screen. Anytime you see a banner, that is an impression.
Singletons - The number of visits where only a single page is viewed. While not a useful metric in and of itself the number of singletons is indicative of various forms of "Click Fraud" as well as being used to calculate bounce rate and in some cases to identify automatons ("bots").
Bounce Rate / % Exit - The percentage of visits where the visitor enters and exits at the same page without visiting any other pages on the site in between.

New visitors + repeat visitors unequal to total visitors

Another common misconception in web analytics is that the sum of the new visitors and the repeat visitors ought to be the total number of visitors. Again this becomes clear if the visitors are viewed as individuals on a small scale, but still causes a large number of complaints that analytics software cannot be working because of a failure to understand the metrics.

Here the culprit is the metric of a new visitor. There is really no such thing as a new visitor when you are considering a web site from an ongoing perspective. If a visitor makes their first visit on a given day and then returns to the web site on the same day they are both a

new visitor and a repeat visitor for that day. So if we look at them as an individual which are they? The answer has to be both, so the definition of the metric is at fault.

A new visitor is not an individual; it is a fact of the web measurement. For this reason it is easiest to conceptualise the same facet as a first visit (or first session). This resolves the conflict andso removes the confusion. Nobody expects the number of first visits to add to the number of repeat visitors to give the total number of visitors. The metric will have the same number as the new visitors, but it is clearer that it will not add in this fashion.

On the day in question there was a first visit made by our chosen individual. There was also a repeat visit made by the same individual. The number of first visits and the number of repeat visits will add up to the total number of visits for that day.

Web analytics methods

Problems with cookies

Historically, vendors of page-tagging analytics solutions have used third-party cookies, that is cookies sent from the vendor's domain instead of the domain of the website being browsed. Third-party cookies can handle visitors who cross multiple unrelated domains within the company's site, since the cookie is always handled by the vendor's servers.

However, third-party cookies in principle allow tracking an individual user across the sites of different companies, allowing the analytics vendor to collate the user's activity on sites where heprovided personal information with his activity on other sites where he thought he was anonymous. Although web analytics companies deny doing this, other companies such as companies supplying banner ads have done so. Privacy concerns about cookies have therefore led a noticeable minority of users to block or delete third-party cookies. In 2005, some reports showed that about 28% of Internet users blocked third-party cookies and 22% deleted them at least once a month [4].

Most vendors of page tagging solutions have now moved to provide at least the option of using first-party cookies (cookies assigned from the client subdomain).

Another problem is cookie deletion. When web analytics depend on cookies to identify unique visitors, the statistics are dependent on a persistent cookie to hold a unique visitor ID. When users delete cookies, they usually delete both first- and third-party cookies. If this is done between interactions with the site, the user will appear as a first-time visitor at their next interaction point. Without a persistent and unique visitor id, conversions, click-

stream analysis, and other metrics dependent on the activities of a unique visitor over time, cannot be accurate.

Cookies are used because IP addresses are not always unique to users and may be shared by large groups or proxies. Other methods of uniquely identifying a user are technically challenging and would limit the trackable audience or would be considered suspicious. Cookies are the selected option because they reach the lowest common denominator without using technologies regarded as spyware.

Unique landing pages vs referrals for campaign tracking

Tracking the amount of activity generated through advertising relationships with external web sites through the referrals reports available in most web analytics packages is significantly less accurate than using unique landing pages.

Referring URLs are an unreliable source of information for the following reasons:

They may or may not be provided by the web browser.
They may or may not be recorded by the web server.
They can be obfuscated intentionally by web browsers that wish to browse anonymously.
They can be distorted or hidden by redirects, intentionally or not.

References: See Appendix A “References 11”

Behavioral targeting

Behavioral targeting or behavioural targeting is a technique used by online publishers and advertisers to increase the effectiveness of their campaigns.

Behavioral targeting uses information collected on an individual's web-browsing behavior, such as the pages they have visited or the searches they have made, to select which advertisements to display to that individual. Practitioners believe this helps them deliver their online advertisements to the users who are most likely to be influenced by them.

Behavioral marketing can be used on its own or in conjunction with other forms of targeting based on factors like geography, demographics or the surrounding content.

Examples of behavioural targeting in advertising targeting systems include: nugg.ad, AdLINK 360, Boomerang, DoubleClick, and WunderLoop

Onsite Behavioral targeting

Behavioural targeting techniques may also be applied to content within a retail or other e-commerce website as a technique for increasing the relevance of product offers and promotions on a visitor by visitor basis. Again, behavioral data can be combined with demographic and past purchase history in order to produce a greater degree of granularity in the targeting.

Self-learning onsite behavioral targeting systems will monitor visitor response to site content and learn what is most likely to generate a desired conversion event. The best content for each behavioral trait or pattern is often established using numerous simultaneous multivariate tests. A downside of onsite behavioural targeting is the relatively high level of traffic required before statistical confidence levels can be reached regarding the probability of a particular offer generating a conversion from a user with a set behavioural profile. This can be overcome in some systems through a rules based approach, allowing administrators to set the content and offers shown to those with particular traits.

Examples of onsite behavioural targeting systems include: Maxymiser and Touch Clarity

Concerns

Many online users & advocacy groups are concerned about privacy issues around doing this type of targeting. This is an area that the behavioral targeting industry is trying to minimize through education, advocacy & product constraints to keep all information non-personally identifiable.

The Long Tail

The phrase ***The Long Tail*** (as a proper noun with capitalized letters) was first coined by Chris Anderson in an October 2004 *Wired magazine* article[1] to describe certain business and economic models such as Amazon.com or Netflix. Businesses with distribution power can sell a greater volume of otherwise hard to find items at small volumes than of popular items at large volumes. The term **long tail** is also generally used in statistics, often applied in relation to wealth distributions or vocabulary use.

The long tail in statistics

The long tail, colored in yellow.

The long tail is the colloquial name for a long-known feature of some statistical distributions (Zipf, Power laws, Pareto distributions and/or general Lévy distributions). The feature is also known as ***heavy tails, power-law tails***, or ***Pareto tails***. Such distributions resemble the accompanying graph.

In these distributions a high-frequency or high-amplitude population is followed by a low-frequency or low-amplitude population which gradually "tails off." In many cases the infrequent or low-amplitude events—the long tail, represented here by the yellow portion of the graph—can make up the majority of the graph.

The Long Tail by Chris Anderson

The phrase The Long Tail was, according to Chris Anderson, first coined[2] by himself. The concept drew in part from an influential February 2003 essay by Clay Shirky, "Power Laws, Weblogs and Inequality"[3] that noted that a relative handful of weblogs have many links going into them but "the long tail" of millions of weblogs may have only a handful of links going into them. Beginning in a series of speeches in early 2004 and culminating with the publication of a Wired magazine article in October 2004, Anderson described the effects of the long tail on current and future business models. Anderson later extended it into the book The Long Tail: Why the Future of Business is Selling Less of More (2006).

Anderson argued that products that are in low demand or have low sales volume can collectively make up a market share that rivals or exceeds the relatively few current bestsellers and blockbusters, if the store or distribution channel is large enough. Anderson cites earlier research by Erik Brynjolfsson, Yu (Jeffrey) Hu, and Michael D. Smith, who first used a log-linear curve on an XY graph to describe the relationship between Amazon sales and Amazon sales ranking and found a large proportion of Amazon.com's book sales come from obscure books that are not available in brick-and-mortar stores. The Long Tail is a potential market and, as the examples illustrate, the distribution and sales channel opportunities created by the Internet often enable businesses to tap into that market successfully.

An Amazon employee described the Long Tail as follows: "We sold more books today that didn't sell at all yesterday than we sold today of all the books that did sell yesterday."[4]

Anderson has explained the term as a reference to the tail of a demand curve.[2] The term has since been rederived from an XY graph that is created when charting popularity to inventory. In the graph shown above, Amazon's book sales or Netflix's movie rentals would be represented along the vertical line, while the book or movie ranks are along the horizontal axis. The total volume of low popularity items exceeds the volume of high popularity items.

Academic research on long tail by Brynjolfsson, Hu, and Smith

In his Wired article, Anderson cites earlier research[5] by Erik Brynjolfsson, Yu (Jeffrey) Hu, and Michael D. Smith, who first used a log-linear curve on an XY graph to describe the relationship between Amazon sales and Amazon sales ranking. They found a large proportion of Amazon.com's book sales come from obscure books that are not available in brick-and-mortar stores. They then quantified the potential value of the long tail to consumers. In an article published in 2003 these authors showed that, while most of the discussion about the value of the Internet to consumers has revolved around lower prices, consumer benefit (a.k.a. consumer surplus) from access to increased product variety in online book stores is ten times larger than their benefit from access to lower prices online. Thus, the primary value of the internet to consumers comes from releasing new sources of value by providing access to products in the long tail.

In a 2006 working paper titled "Goodbye Pareto Principle, Hello Long Tail"[6], Erik Brynjolfsson, Yu (Jeffrey) Hu, and Duncan Simester found that, by greatly lowering search costs, information technology in general and Internet markets in particular could substantially increase the collective share of hard to find products, thereby creating a longer tail in the distribution of sales. They used a theoretical model to show how a reduction in search costs will affect the concentration in product sales. By analyzing data collected from a multi-channel retailing company, they showed empirical evidence that the Internet channel exhibits a significantly less concentrated sales distribution, when compared with traditional channels. An 80/20 rule fits the distribution of product sales in the catalog channel quite well, but in the Internet channel, this rule needs to be modified to a 72/28 rule in order to fit the distribution of product sales in that channel. The difference in the sales distribution is highly significant, even after controlling for consumer differences.

Demand-side and supply-side drivers

The key supply side factor that determines whether a sales distribution has a Long Tail is the cost of inventory storage and distribution. Where inventory storage and distribution costs are insignificant, it becomes economically viable to sell relatively unpopular products; however when storage and distribution costs are high only the most popular products can be sold. Take movie rentals as an example: A traditional movie rental store has limited shelf space, which it pays for in the form of building overhead; to maximize its profits, it must stock only the most popular movies to ensure that no shelf space is wasted. Because Netflix stocks movies in centralized warehouses, its storage costs are far lower and its distribution costs are the same for a popular or unpopular movie. Netflix is therefore able to build a viable business stocking a far wider range of movies than a traditional movie rental store. Those economics of storage and distribution then enable the advantageous use of the Long Tail: Netflix finds that in aggregate "unpopular" movies are rented more than popular movies.

A recent MIT Sloan Management Review article, titled "From Niches to Riches: Anatomy of the Long Tail",[7] examines the Long Tail from both the supply side and the demand side and identifies several key drivers. On the supply side, the authors point out how e-tailers' expanded, centralized warehousing allows for more offerings, thus making it possible for them to cater to more varied tastes.

On the demand side, tools such as search engines, recommender software and sampling tools are allowing customers to find products outside of their geographic area. The authors also look toward the future to discuss second order amplified effects of Long Tail, including the growth of markets serving smaller niches.

Cultural and political impact

The Long Tail has possible implications for culture and politics. Where the opportunity cost of inventory storage and distribution is high, only the most popular products are sold. But where the Long Tail works, minority tastes are catered to, and individuals are offered greater choice. In situations where popularity is currently determined by the lowest common denominator, a Long Tail model may lead to improvement in a society's level of culture. Television is a good example of this: TV stations have a limited supply of profitable or "prime" time slots during which people who generate an income will watch TV. These people with money to spend are targeted by advertisers who pay for the programming so the opportunity cost of each time slot is high. Stations, therefore, choose programs that have a high probability to appeal to people in the profitable demographics in order to guarantee a return. Twin Peaks, for example, did not have broad appeal but stayed on the air for two seasons because it attracted young professionals with money to

spend. Generally, as the number of TV stations grows or TV programming is distributed through other digital channels, the key demographic individuals are split into smaller and smaller groups. As the targeted groups get into smaller niches and the quantity of channels becomes less of an opportunity cost, previously ignored groups become profitable demographics in the long tail. These groups along the long tail then become targeted for television programming that might have niche appeal. As the opportunity cost goes down with more channels and smaller niches, the choice of TV programs grows and greater cultural diversity rises aslong as there is money in it.

Some of the most successful Internet businesses have leveraged the Long Tail as part of their businesses. Examples include eBay (auctions), Yahoo! and Google (web search), Amazon (retail) and iTunes Store (music and podcasts) amongst the major companies, along with smaller Internet companies like Audible (audio books) and Netflix (video rental).

Often presented as a phenomenon of interest primarily to mass market retailers and web-based businesses, the Long Tail also has implications for the producers of content, especially those whose products could not - for economic reasons - find a place in pre-Internet information distribution channels controlled by book publishers, record companies, movie studios, and television networks. Looked at from the producers' side, the Long Tail has made possible a flowering of creativity across all fields of human endeavour. One example of this is YouTube, where thousands of diverse videos - whose content, production value or lack of popularity make them innappropriate for traditional television - are easily accessible to a wide range of viewers.

Internet commercialization pioneer and media historian Ken McCarthy addressed this phenomenon in detail from the producers' point of view at a 1994 meeting attended by Marc Andreessen, members of Wired Magazine's staff, and others. Explaining that the pre-Internet media industry made its distribution and promotion decisions based on what he called "lifeboat economics" and not on quality or even potential lifetime demand, he laid out a detailed vision of the impact he expected the Internet would have on the structure of the media industry with what has turned out to be a remarkable degree of accuracy, foreshadowing many of the ideas that appeared in Anderson's popular book.[8]

The recent adoption of computer games as tools for education and training is beginning to exhibit a long-tailed pattern. It is significantly less expensive to modify a game than it has been to create unique training applications, such as those for training in business, commercial flight, and military missions. This has led some to envision a time in which game-based training devices or simulations will be available for thousands of different job descriptions. Smith pursues this idea for military simulation, but the same would apply to a number of other industries.

Competition and the Long Tail

The Long Tail may threaten established businesses.[9] Before a Long Tail works, only the most popular products are generally offered. When the cost of inventory storage and distribution fall, a wide range of products become available. This can, in turn, have the effect of reducing demand for the most popular products. For example, Web content businesses with broad coverage like Yahoo! or CNET may be threatened by the rise of smaller Web sites that focus on niches of content, and cover that content better than the larger sites. The competitive threat from these niche sites is reduced by the cost of establishing and maintaining them and the bother required for readers to track multiple small Web sites. These factors have been transformed by easy and cheap Web site software and the spread of RSS. Similarly, mass-market distributors like Blockbuster may be threatened by distributors like Netflix, which supply the titles that Blockbuster doesn't offer because they are not already very popular. In some cases, the area under the long tail is greater than the area under the peak.

Application programming interface

An application programming interface (API) is a source code interface that an operating system or library provides to support requests for services to be made of it by computerprograms.[1]

API versus ABI

An API is similar to an application binary interface (ABI) in that both specify details of how two independent computer programs can interact. However, an API is typically defined at a higher level (i.e., in terms of a programming language that can be compiled when an application is built, rather than an explicit low level description of how data is laid out in memory). For example, the Linux Standard Base is an ABI, while POSIX is an API.[2]

Distinction between API specification and its implementation

The software that provides the functionality described by an API is said to be an implementation of the API. The API itself is abstract, in that it specifies an interface and

the behavior of the identifiers specified in that interface, it does not specify how the behavior might be implemented.

Release policies

There are two general kinds of API publishing policies that are often encountered:

Some companies protect information on their APIs from the general public. For example, Sony used to make its official PlayStation 2 API available only to licensed PlayStation developers. This enabled Sony to control who wrote PlayStation 2 games. Such control can have quality control benefits and potential license revenue.
Some companies make their APIs freely available. For example, until the release of Windows Vista, Microsoft made most of its API information public, so that software would be written for the Windows platform.

It is to be expected that companies base their choice of publishing policy on maximizing benefit to themselves.

Some example APIs

The PC BIOS call interface
Single UNIX Specification (SUS)
Windows API
Java Platform, Standard Edition API
Java Platform, Enterprise Edition APIs
ASPI for SCSI device interfacing
Carbon and Cocoa for the Macintosh OS
OpenGL cross-platform 3D graphics API
DirectX for Microsoft Windows
Simple DirectMedia Layer (SDL)
Google Maps API
YouTube API
Digg API
MediaWiki API

Mashup

Mashup (or mash it up) is a Jamaican Creole term meaning to destroy. In the context of reggae, dancehall or ska music, it can take on a positive connotation and mean an exceptional performance or event. The term has also been used in hip-hop, especially in cities such as New York that have a high Jamaican population. DJ Z-TRIP's Uneasy Listening album is an example of a DJ mashup (see Z-Trip, 2004). DJ Danger Mouse as well records mashups; he combined the Beatles White Album with Jay-Z's Black album to create the Grey Album.

In popular culture, Mashup usually means:

Mashup (web application hybrid), a web application that combines data and/or functionality from more than one source Mashup (music), a musical genre of songs that consist entirely of parts of other songs Mashup (video), a video that is edited from more than one source to appear as one Mashup, in parts of the UK means a mash or pot of tea (colloq. Yorkshire), other areas brew or stand tea

Although mashups in the past have been made via analog manipulations, albeit with considerable limitations, nearly all modern mashups use readily available computer technology to mash up digital information goods. In practice this very often means, as in the case of Danger Mouse's Grey Album or fan films of George Lucas's Star Wars (Jenkins, 2003), the recombination and alteration of samples from existing culture products covered by copyright. Thus, the 21st-century phenomenon of digital mashups consists to a considerable extent of consumers and other unlicensed participants penetrating the value chain of media industry incumbents such as record/TV/film producers, recreating and redistributing new works built from pieces of other, wholly original ones (Hughes & Lang, 2006).

References: See Appendix A “References 12”

PHP

PHP is a reflective programming language originally designed for producing dynamic web pages.[1] PHP is used mainly in server-side scripting, but can be used from a command

line interface or in standalone graphical applications. Textual User Interfaces can also be created using ncurses. PHP is a recursive initialism for PHP: Hypertext Preprocessor.

The main implementation is produced by The PHP Group and released under the PHP License. This implementation serves to define a de facto standard for PHP, as there is no formal specification.The most recent version of PHP is 5.2.4, released on 30 August 2007. It is considered to be free software by the Free Software Foundation.[2]

History

PHP was written as a set of Common Gateway Interface (CGI) binaries in the C programming language by the Danish/Greenlandic programmer Rasmus Lerdorf in 1994, to replace a small set of Perl scripts he had been using to maintain his personal homepage.[3] Lerdorf initially created PHP to display his résumé and to collect certain data, such as how much traffic his page was receiving. Personal Home Page Tools was publicly released on 8 June 1995 after Lerdorf combined it with his own Form Interpreter to create PHP/FI (this release is considered PHP version 2).[4]

Zeev Suraski and Andi Gutmans, two Israeli developers at the Technion IIT, rewrote the parser in 1997 and formed the base of PHP 3, changing the language's name to the recursive initialism PHP: Hypertext Preprocessor. The development team officially released PHP/FI 2 in November 1997 after months of beta testing. Public testing of PHP 3 began and the official launch came in June 1998. Suraski and Gutmans then started a new rewrite of PHP's core, producing the Zend Engine in 1999.[5] They also founded Zend Technologies in Ramat Gan, Israel, which actively manages the development of PHP.

In May 2000, PHP 4, powered by the Zend Engine 1.0, was released. The most recent update released by The PHP Group, is for the older PHP version 4 code branch which, as of October 2007, is up to version 4.4.7. PHP 4 will be supported by security updates until August 8, 2008. [6]

On July 13, 2004, PHP 5 was released powered by the new Zend Engine II. PHP 5 included new features such as:[7]

Improved support for object-oriented programming
The PHP Data Objects extension, which defines a lightweight and consistent interface for accessing databases
Performance enhancements

Better support for MySQL and MSSQL
Embedded support for SQLite
Integrated SOAP support
Data iterators
Error handling via exceptions

Currently, two major versions of PHP are being actively developed: 5.x and 4.4.x. The latest stable version, PHP 5.2.4, was released on Aug 30, 2007. On July 13, 2007, the PHP group announced that active development on PHP4 will cease by December 31, 2007, however, critical security updates will be provided until August 8, 2008.[8] PHP 6 is currently under development, and is slated to release in conjunction with the decommission of PHP 4.

Usage

PHP is a widely-used general-purpose scripting language that is especially suited for Web development and can be embedded into HTML. PHP generally runs on a web server, taking PHP code as its input and creating Web pages as output. However, it can also be used for command-line scripting and client-side GUI applications. PHP can be deployed on most web servers and on almost every operating system and platform free of charge. The PHP Group also provides the complete source code for users to build, customize and extend for their own use.

PHP primarily acts as a filter. The PHP program takes input from a file or stream containing text and special PHP instructions and outputs another stream of data for display.

From PHP 4, the PHP parser compiles input to produce bytecode for processing by the Zend Engine, giving improved performance over its interpreter predecessor. PHP 5 uses the Zend Engine II.

Server-side scripting

Originally designed to create dynamic web pages, PHP's principal focus is server-side scripting. While running the PHP parser with a web server and web browser, the PHP model can be compared to other server-side scripting languages such as Microsoft's ASP.NET system, Sun Microsystems' JavaServer Pages, mod_perl and the Ruby on Rails framework, as they all provide dynamic content to the client from a web server. To more

directly compete with the "framework" approach taken by these systems, Zend is working on the Zend Framework - an emerging (as of June 2006) set of PHP building blocks and best practices; other PHP frameworks along the same lines include CakePHP, PRADO and Symfony.

The LAMP architecture has become popular in the Web industry as a way of deploying inexpensive, reliable, scalable, secure web applications. PHP is commonly used as the P in this bundle alongside Linux, Apache and MySQL, although the P can also refer to Python or Perl. PHP can be used with a large number of relational database management systems, runs on all of the most popular web servers and is available for many different operating systems. This flexibility means that PHP has a wide installation base across the Internet; over 19 million Internet domains are currently hosted on servers with PHP installed.[9]

Examples of popular server-side PHP applications include phpBB, WordPress, and MediaWiki.

Command-line scripting

PHP also provides a command line interface SAPI for developing shell and desktop applications, daemons, log parsing, or other system administration tasks. PHP is increasingly used on the command line for tasks that have traditionally been the domain of Perl, Python, awk, or shell scripting.[10]

Client-side GUI applications

PHP provides bindings to GUI libraries such as GTK+ (with PHP-GTK), Qt with PHP-Qt and text mode libraries like ncurses in order to facilitate development of a broader range of cross-platform GUI applications.

Ajax

Ajax (programming), a technique used in web application development
Ajax framework, a framework for the Ajax technique
Ajax Development Platforms, Ajax Development Platforms
AjaxWindows, a web-based operating system
Ajax Libraries, famous libraries for developing applications based on Ajax

Section 2:

Who's Who in 2.0

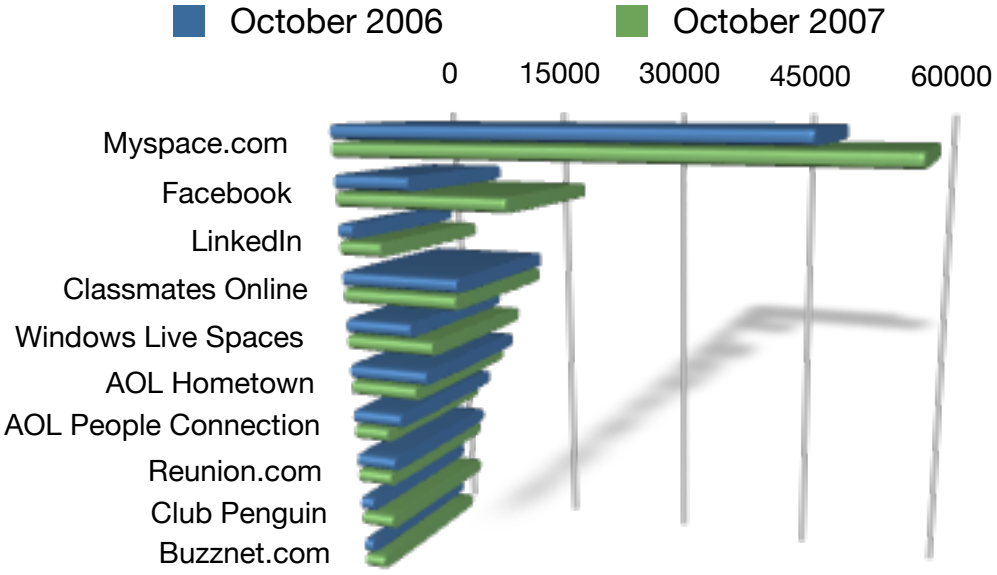
As you begin to explore Belonging Networks and consider implementing Social Networking technology, it's important to see who's using this technology other then the typical Myspace, FaceBook, and Youtube posy. How is it growing? What is working? What's trendy?

This section of our publication is dedicated to showing off Social Networks. This is a good guide to pass on to your marketing teams and creative partners. We've compiled our favorites, added opinions of top bloggers as well as the highlights from the Social Networking 2006 awards.

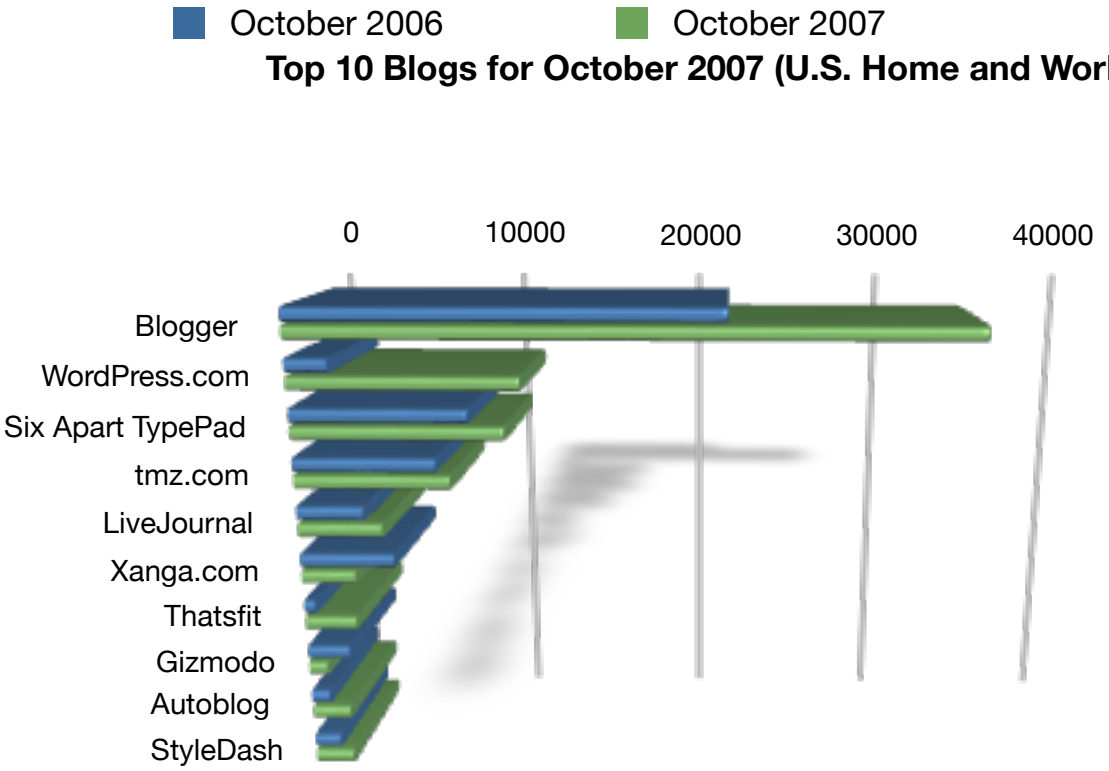
To start out we'll examine some current numbers on social networks.

Top 10 Social Networking Sites for October 2007 (U.S., Home and Work			
Site	**Oct-06 (000)**	**Oct-07 (000)**	**Percent Change**
Myspace.com	49,516	58,843	19%
Facebook	8,682	19,519	125%
LinkedIn	1,705	4,919	-2%
Classmates Online	13,564	13,278	32%
Windows Live Spaces	7,795	10,261	-15%
AOL Hometown	9,298	7,923	189%
AOL People Connection	5,849	4,084	-30%
Reunion.com	4,723	4,082	-14%
Club Penguin	1,512	3,880	157%
Buzznet.com	1,104	2,397	117%

Top 10 Social Networking Sites for October 2007 (U.S., Home and Work)



Top 10 Blogs for October 2007 (U.S. Home and Work)			
Blogger	21572	34104	58%
WordPress.com	2104	11440	444%
Six Apart TypePad	8813	10601	20%
tmz.com	7107	7805	10%
LiveJournal	3366	4260	27%
Xanga.com	4760	2741	-42%
Thatsfit	534	2613	389%
Gizmodo	2135	941	127%
Autoblog	920	1949	112%
StyleDash	1319	1947	48%
Source: Nielsen Online, November 2007			


October 2006
October 2007
Top 10 Blogs for October 2007 (U.S. Home and Work)
0
10000
20000
30000
40000
Blogger
WordPress.com
Six Apart TypePad
tmz.com
LiveJournal
Xanga.com
Thatsfit
Gizmodo
Autoblog
StyleDash

Social Networking Awards - The Top Social Networks of 2006

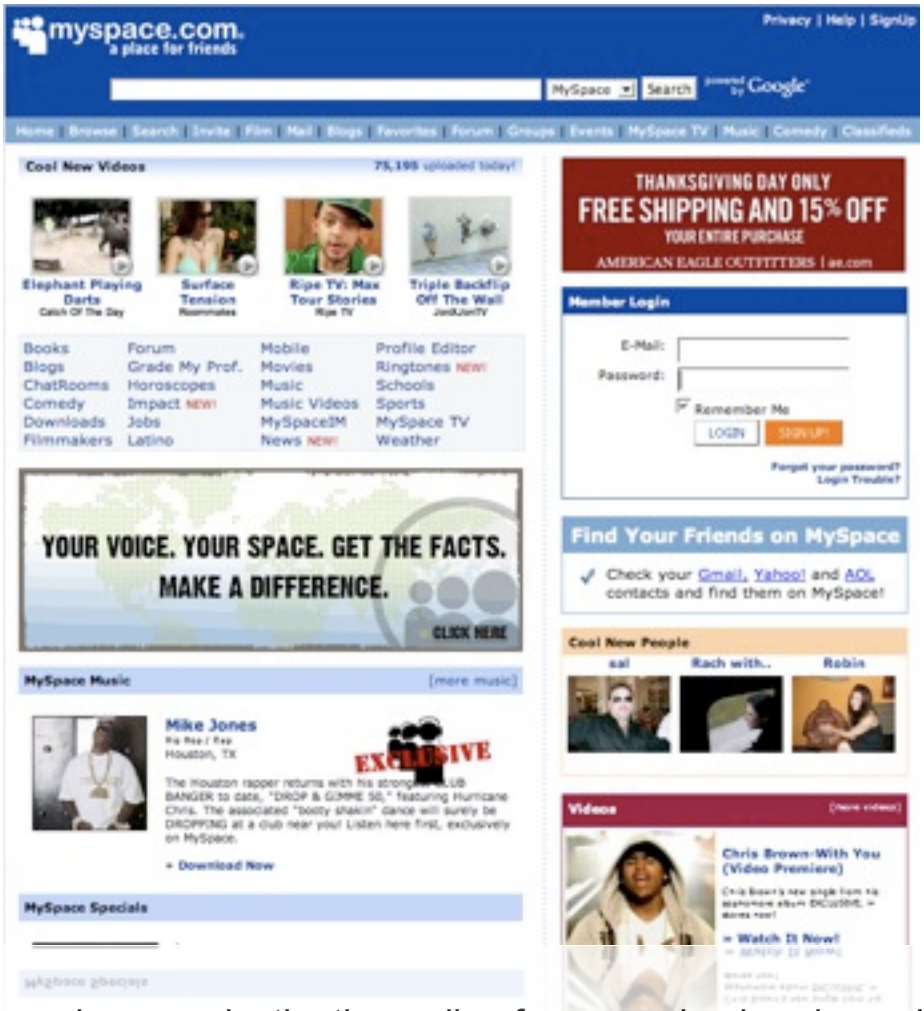
December 24, 2006 — 04:59 AM PST — by Pete Cashmore

The Social Networking Awards are sponsored by Photobucket. If you have a social site, you can use Photobucket's JWidget tool - this is a free plugin that provides image and video hosting for your users.

Is it really the holiday already? Not quite - we've still got to announce the Social Networking Awards 2006! With thousands of votes cast, the People's Choice attracted a much bigger response than anyone expected. Meanwhile, we agonized over which companies to pick as Mashable's choices (the "Judge's Choice").

For those who are interested, our picks were made by Mashable, Mashable Labs and Advantage Consulting Services, the team that oversees social network consulting for our clients, in addition to recommending the best partners and white label social networks. The ACS team also has a background in web development (they were behind the stats service CrazyEgg, for instance), but they don't have any competing services in the social networking space. Our criteria were: Growth and Momentum; Design and Usability; Uniqueness/Innovation. There are two winners in each category, followed by the sites that are "Hot for 2007″ - a combination of your votes and our picks.

1. Mainstream and Large Scale Networks



Our Choice: MySpace

People's Choice: Multiply

Hot for 2007: Bebo, Vox, Facebook, Facebox

You can say what you like about MySpace - horrible code, ugly design, a failure to embrace outside developers - but the users don't seem to care. With over 140 million accounts (not all active, admittedly), MySpace has become a cultural phenomenon. The site's standout feature is the freedom it provides to users - you can add slideshows, pictures, custom designs and much more. MySpace is also the number one destination online for upcoming bands, and their plan to sell music from these bands next year is surely set to reshape the music industry. We see MySpace as the new MTV, with one crucial difference: the users are the stars. With a MySpace page, anyone can be a celebrity, creating an online image that's sometimes an alter-ego to their true personality. In the coming year, MySpace plans to expand to the massive Chinese market (see MySpace China). We're not convinced that they can stand up to local competition, but we're keen to find out.

Meanwhile, we think Bebo is the most "exciting" social network right now. With a massive user base and a site that actually works, we think they'll grow rapidly in 2007.

We like Multiply, and so do Multiply's dedicated users. A small post about the Social Networking Awards on the Multiply blog resulted in a landslide win for the social network, which emphasizes networking with real friends. We've expressed concerns in the past

that this “closed” model may slow their growth, but we also feel that it differentiates Multiply from the hordes of MySpace clones. That said, Multiply now has a major competitor. Vox, which came second in terms of votes despite the lack of coaxing by the Vox team, is an outstanding blog platform. We were bowled over by it when it launched in October, and if we had a “hosted blogs” category, we would have chosen Vox.

So how about the other nominees? Facebook might not be the most popular among our readership, but the majority of college students consider it to be an essential tool. However, we’re a little less optimistic about Facebook than we were at the start of the year: now that acquisition talks with Yahoo are off the cards, they may need to go it alone, while the Facebook news feed and the decision to open up the site were risky choices that may or may not pay off. Some are saying that Facebook is set for exponential growth now they allow everybody to join. Others, meanwhile, think they may be the next Friendster - overconfident, and unwilling to listen to their users. That said, Facebook users have no alternative site to defect to - we think that Facebook will continue to grow strongly in 2007.

We also noticed a tongue-in-cheek vote for Walmart’s “School Your Way” site (technically called “The Hub”), which we found hilarious - Walmart’s failed attempt at social networking was a classic example of how to do everything wrong.

2. Widgets and Add-Ons

Our Choice: Slide.com

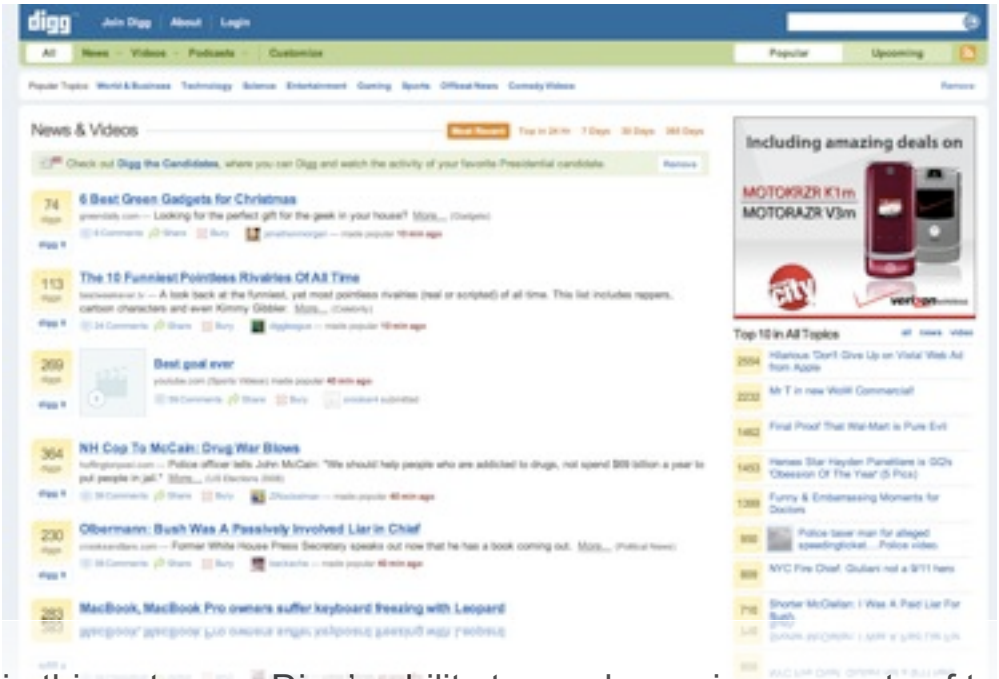
People’s Choice: Zwinky

Hot for 2007: RockYou, Stickam, Snocap, Zingfu, MyBlogLog

Slide.com and RockYou have been the most talked-about widgets this year, with Slide.com gaining a little more traction with the MySpace set. Both are impressive products which give users the freedom to express themselves. Even the launch of MySpace’s own service, MySpace slideshows, didn’t put a dent in the popularity of these two slideshow tools. Zingfu, another one of our favorites this year, has also achieved success by allowing users to create funny images of themselves and their friends. Meanwhile, we think Stickam’s live webcams are a killer idea, and the service will be a big success. We’re also hopeful that MyBlogLog, a service that helps communities to form around blogs, will successfully expand to the mainstream in 2007 - they added support for MySpace only a few weeks ago, and we think that could be crucial.

The popular vote, meanwhile, went to Zwinky. The avatar service has a huge, dedicated user base consisting largely of teens. In our original review, we said that Zwinky “will probably be a massive viral success despite a lack of interest from the geek elite”. We stand by that claim going into 2007.

3. Social News and Social Bookmarking



Our Choice: Digg

People’s Choice: Trailfire

Hot for 2007: Del.icio.us, StumbleUpon, Blinklist

As the site that defined social news as we know it, we had no hesitation in choosing Digg as our pick in this category. Digg’s ability to send massive amounts of traffic to any site became legendary, while it has largely eclipsed Slashdot as the hot hangout for tech addicts. We’ve yet to see whether the site’s expansion beyond technology will succeed, but we still feel that Digg’s contribution to the social space has been vital. Meanwhile del.icio.us, the undisputed leader of social bookmarking, has continued its unstoppable momentum this year, and will probably do so in 2007. But we also love StumbleUpon: the 4 year-old site shows us that not all successful startups were an instant hit. Even so, the enthusiasm for StumbleUpon is almost universal, and we like their new StumbleVideo service.

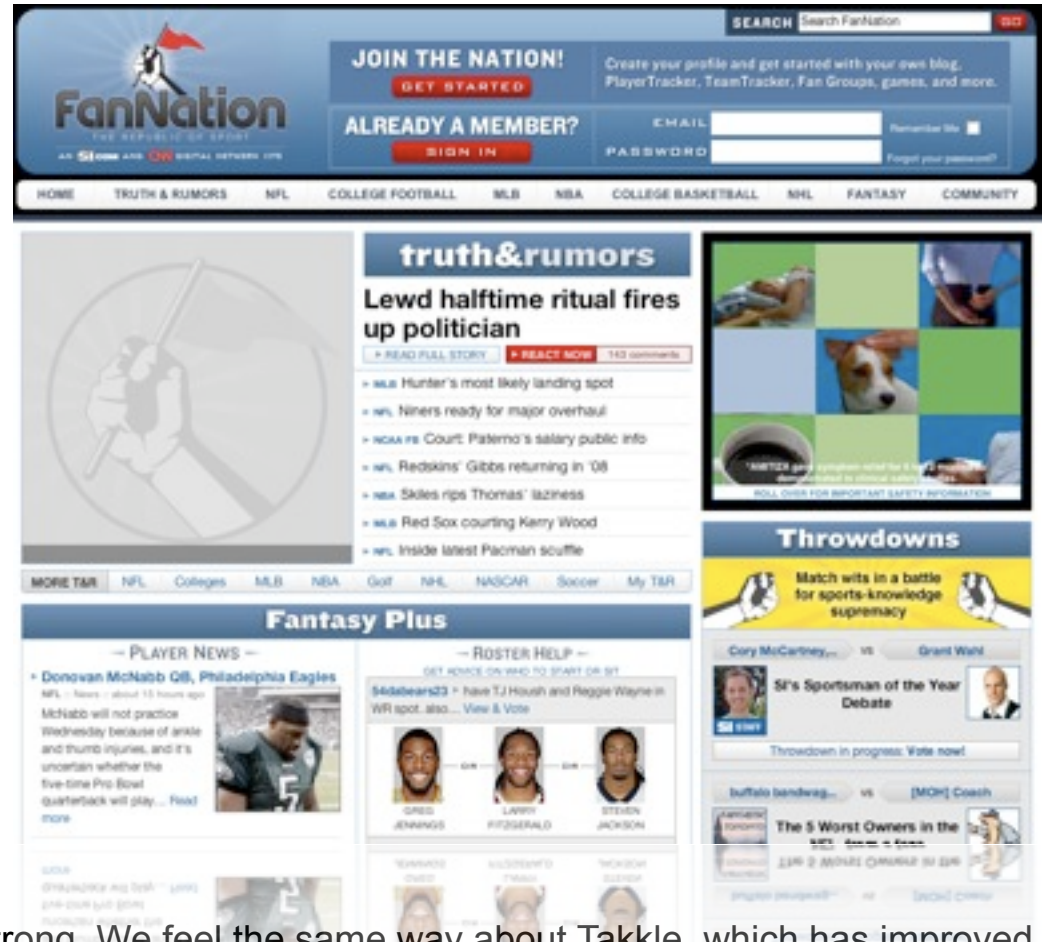
Your choice was Trailfire, a service that lets you create “trails” of pages and share them with others. We gave the service a cautiously positive review when it launched, and we’d still love the ability to create new trails without downloading the browser plugin.

4. Sports and Fitness

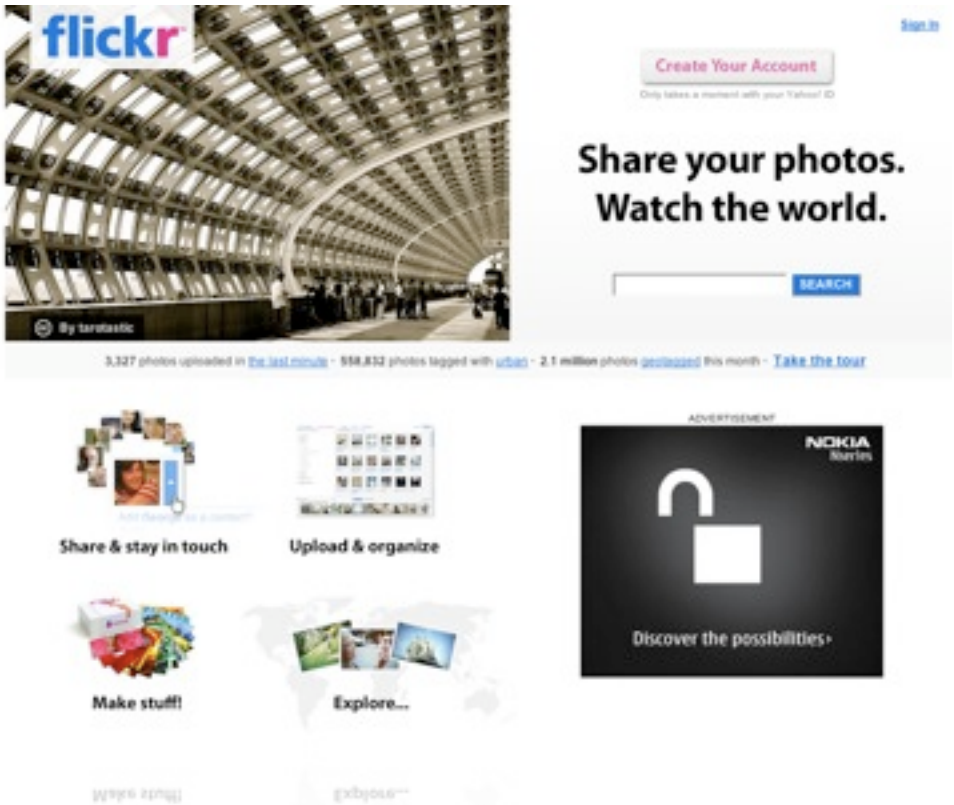
Our Choice:
FanNation

People's Choice:
Takkle

Hot for 2007:
SportsVite, Ultrafan



This category had some very strong contenders. The People's Choice went to the high school sports site Takkle (we like it too), while we picked FanNation. As we've said in the past, FanNation's interface can be a little bamboozling at first, but we think overall the site's design and feature set is strong. We feel the same way about Takkle, which has improved dramatically with the recent addition of video. However, SportsVite and Ultrafan were also very strong, and new to us. We hope to have more coverage of all these sites in the New Year. Our testing also suggested that none of these sites has established a large user base yet - there's still plenty of opportunity for newcomers in this market.



5. Photo Sharing

Our Choice: Flickr

People's Choice: Twango

Hot for 2007: Zooomr, Webshots, ImageShack, Tabblo, Pickle, BubbleShare

Our choice in this category is probably fairly predictable: Flickr was one of the early innovators in the photo-sharing space, to the extent that other new photo-sharing sites began to be labeled "Flickr clones". Perhaps one of the biggest innovators this year has been Zooomr, which has added features at a tremendous pace - they lost out narrowly in the voting to the media-sharing site Twango (we also gave that one a fairly positive review this year), but we think Zooomr might be one of the hottest players as we go into 2007. We're also excited about BubbleShare, a startup that hasn't gained much coverage here, but seems to have some innovative ideas. And let's not forget about Webshots, which was massively improved by a redesign and the addition of many new features this year.

6. Video Sharing

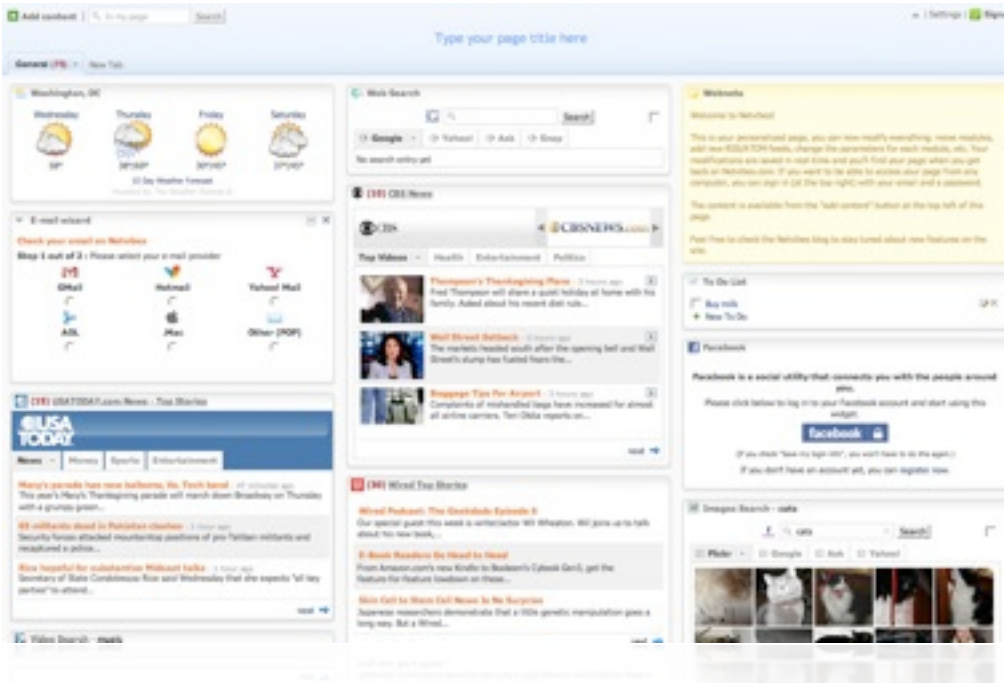
Our Choice: YouTube

People's Choice: Gotuit

Hot for 2007: Metacafe, Motionbox, Revver, vSocial, StupidVideos, Blip.tv, iFilm, Eyespot

How could we fail to choose YouTube for this category? Almost certainly the hottest startup this year, YouTube not only outpaced the competition, but provided a genuine threat to existing media companies. Their acquisition by Google showed just how far the service had come, and the appearance of a YouTube video player on the front page of Time Magazine ended the year on a high. Your pick, meanwhile, was Gotuit, which recently took social tagging a step further with the launch of its SceneMaker tool.

But frankly, there were a lot of interesting video startups this year. We also loved Jumpcut, Grouper, Eyespot, Motionbox, Veoh, Metacafe, Revver, vSocial, vPod.tv, StupidVideos, Blip.tv and iFilm - in fact, all the nominees provide hours of entertainment (or time wasting!), and all have innovated at a fast pace. And let's not forget about MySpace Video: it might not be a hot startup, but MySpace members seem to be making good use of the video section. In fact, MySpace Video versus YouTube will probably be the hardest fought battle in the video space next year.



7. Startpages

Our Choice: Netvibes

People's Choice: Pageflakes

Hot for 2007: YourMinis, Protopage, Webwag

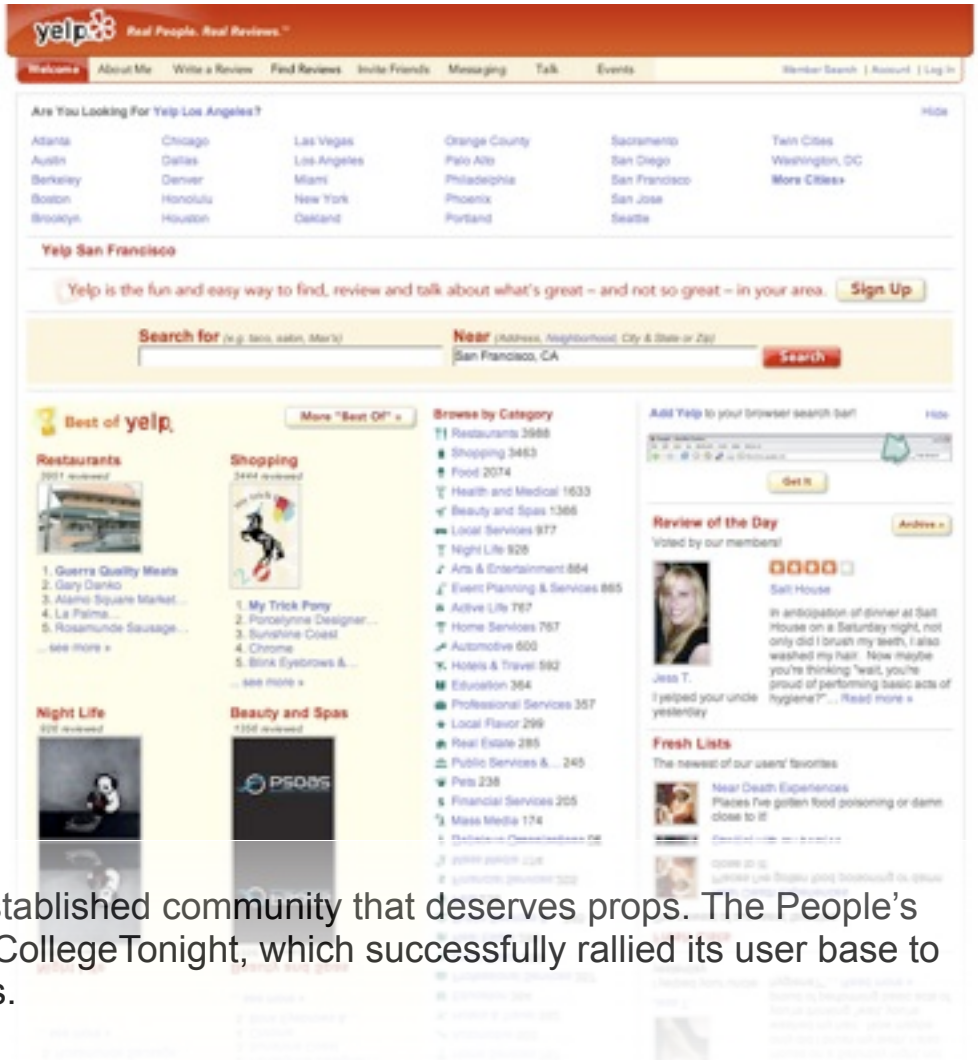
There's little doubt that Pageflakes and Netvibes are considered the top of their class. Having joined late in the game, when Netvibes was already leading the pack, we doubted that Pageflakes could make much headway - they proved us wrong, and Pageflakes is now considered to be one of the strongest contenders in this market. Netvibes also performed well in the voting, while YourMinis attracted a good amount of grassroots support - we gave them a positive review back in November. We think Webwag is also a strong contender, but once again we're wondering whether the newcomers can make progress in this market.

8. Places and Events

Our Choice: Yelp

People's Choice: CollegeTonight

Hot for 2007: MingleNow, HeyLetsGo, Planypus, ILCU (and others)



Although neither service has gained must coverage on Mashable this year, largely due to a lack of announcements, we still feel that Yelp and Upcoming.org are among the leading players in this market. Meetup is also an established community that deserves props. The People's Choice, meanwhile, went to CollegeTonight, which successfully rallied its user base to score a high number of votes.

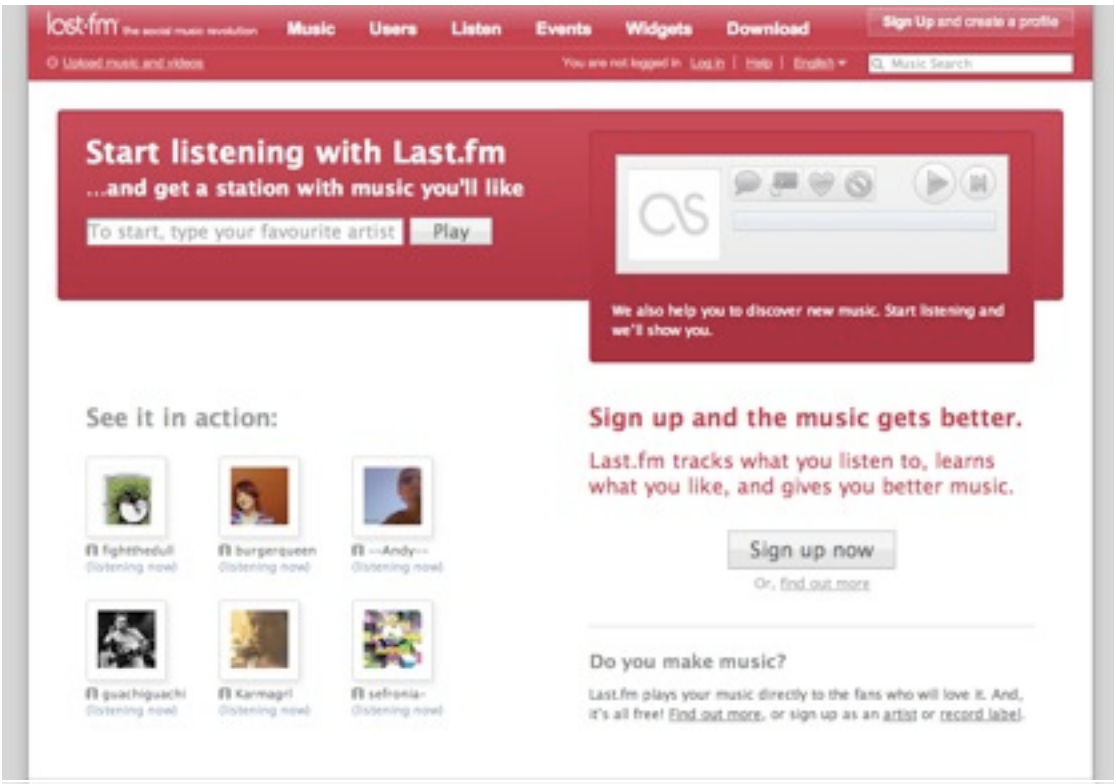
However, the other nominees were all strong - HeyLetsGo, Vibely, MingleNow, Planypus, ILCU, OnMyCity, Do512, eVelvetRope, Eventful, TripTie, TripAdvisor, Gusto, Travelistic and the rest. We feel, however, that this market is still getting established, and that makes it hard to tell which of the newcomers will make gains. We hope to return to these sites throughout 2007.

9. Music

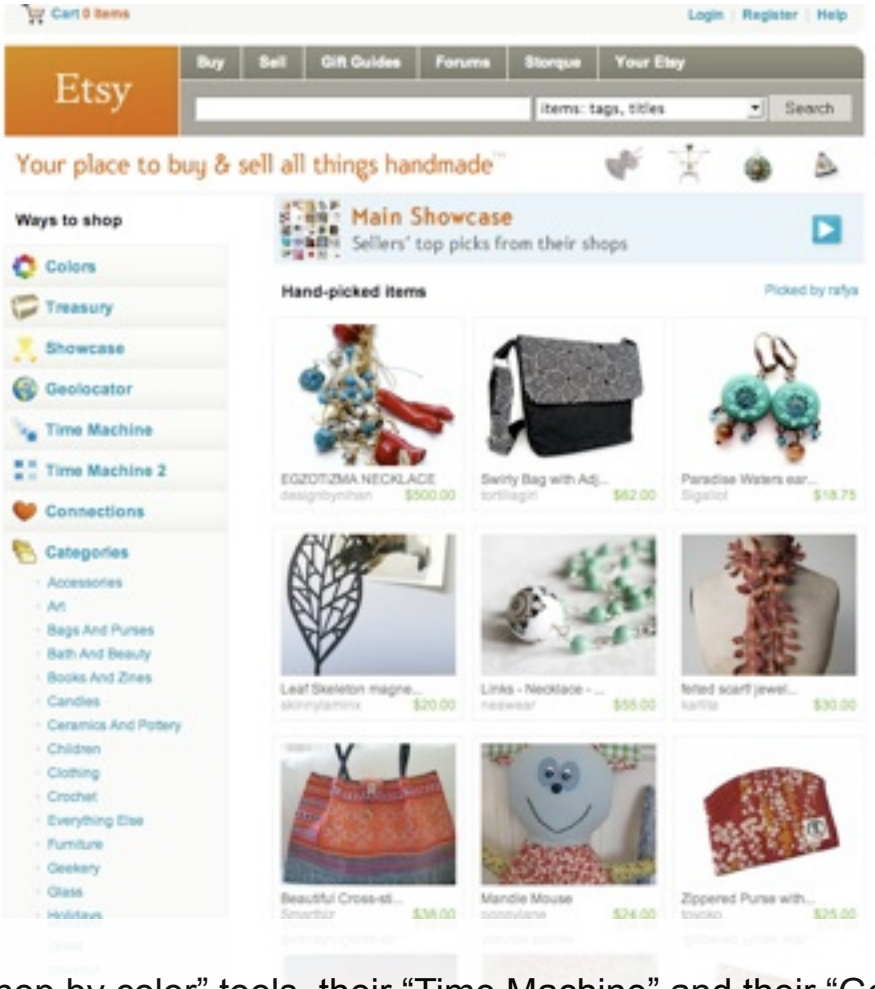
Our Choice: Last.fm

People's Choice: ReverbNation, MOG

Hot for 2007: Pandora, YourSpins, Rapspace, ProjectOpus, iLike, Splice, MusicHawk and More



When it came to choosing our favorite musical site, it really came down to two choices: Last.fm and Pandora. The clincher: Last.fm has always been inherently social, while Pandora has only added social features very recently, and we've yet to see how users react to them. The People's Choice, meanwhile, was neck and neck - when we closed the voting, the number of votes for ReverbNation and MOG was so close that we're declaring both as the winners. We don't strongly disagree with your choice: we gave positive reviews to both sites earlier this year. However, we'd also like to say that ProjectOpus, YourSpins, Qloud, iLike, Jamendo, Splice, Bandwagon, Finetune, MusicHawk and - quite frankly - all the suggestions we received for this category have been great. Generally speaking, musical social networks seem to be of a very high caliber. Although it launched in pre-Mashable days, we're also big fans of PureVolume, which is considered to be the leading musical social network by many, many users.



10. Social Shopping

Our Choice: Etsy

People's Choice: ThisNext

Hot for 2007: Crowdstorm, Kaboodle, ShopWiki, StyleFeeder

Kaboodle is probably one of the first startups that come to mind when you think of social shopping, but we decided to pick a startup that we think has been a great innovator: Etsy. Etsy doesn't compete directly with the other contenders - it's more like eBay than a shopping directory - but we like their "shop by color" tools, their "Time Machine" and their "GeoLocator". That said, we're also big fans of UK startup Crowdstorm and your choice, ThisNext. StyleFeeder is new to the scene, and has a strong offering - we think it could get traction in 2007. Likewise, ShopWiki and Hawkee get credit for creating strong products this year.

11. Mobile

Our Choice: Twitter

People's Choice: Wadja

Hot for 2007: Friendstribe, JuiceCaster, Zingku, Moblabber, Zemble, Veeker, Treemo

The mobile space is just getting started: in fact, we don't think anyone will know the true winners here until mid 2007. Call us geeky, but we liked Twitter's lightweight mobile blogging service this year, while the People's Vote went to Wadja, which offers mobile social networking via text message. That said, we simply don't know how this market will shake out, and for most of these startups, it's just too early to judge. At the start of the year, it seemed that Dodgeball, which was acquired by Google in 2005, would be a hot favorite. But the service seems to have been less buzzworthy this year, and we're not really sure why.

12. Niche and Miscellaneous Social Networks

Our Choice: Flixster

People's Choice: Dogster, LibraryThing

Hot for 2007: SneakerPlay, MothersClick, Motortopia, Minti, ComicSpace, Curbly, MyChurch, Ziki, VeryLiberating, ITtoolbox, Fanpop, ShareYourLook, FamilyThrive, Blubrry, innerTee, Listal, ConnectingMoms, FirstGiving, RealityAllStarz, CafeMom, BeGreen, AdFemme, Dianovo, eLifeList, CampusBug, SnehaH, HumanOpinion, MerchantCircle, Barrio305, GenevaOnline, MDJunction (list too long to post images!)

We've said before that Dogster, the social network that lets dogs connect (or more accurately, their adoring owners), is the premier example of serving a niche. We also received lots of positive feedback on LibraryThing when we covered them in the past - maybe it's unsurprising, then, that these two sites were almost perfectly tied when it came to the voting. So we did the fair thing and awarded both sites top ranking. Our choice, meanwhile, was Flixster - we feel that Flixster has a product that will appeal strongly to mainstream users (and if their claimed stats are true, it already is), but that it will go under the radar for the geek elite.

Admittedly, however, the niche networks category was a bit like comparing an orange to a spaceship and asking which one is better: they're just not comparable. As a result, the "Hot for 2007" section became much more lengthy than with the other categories. We also feel that a number of niche networks missed out on nominations (perhaps because it's

nearing the holidays), and frankly any site covered on Mashable over the past year could have been eligible.

When going through this process, we realized that we hate picking winners, since it implies that there must be losers. In reality, the web is so diverse that there can be hundreds of successful social sites, each catering to slightly different groups of people. We think the end results delivered an interesting set of startups, but we'd love to hear your feedback.

Notable Social Networking Sites

43 Things

Goal and Dreams; Tagging

Advogato

Free Software and Open Source developers

Amina - Chechen Republic Online

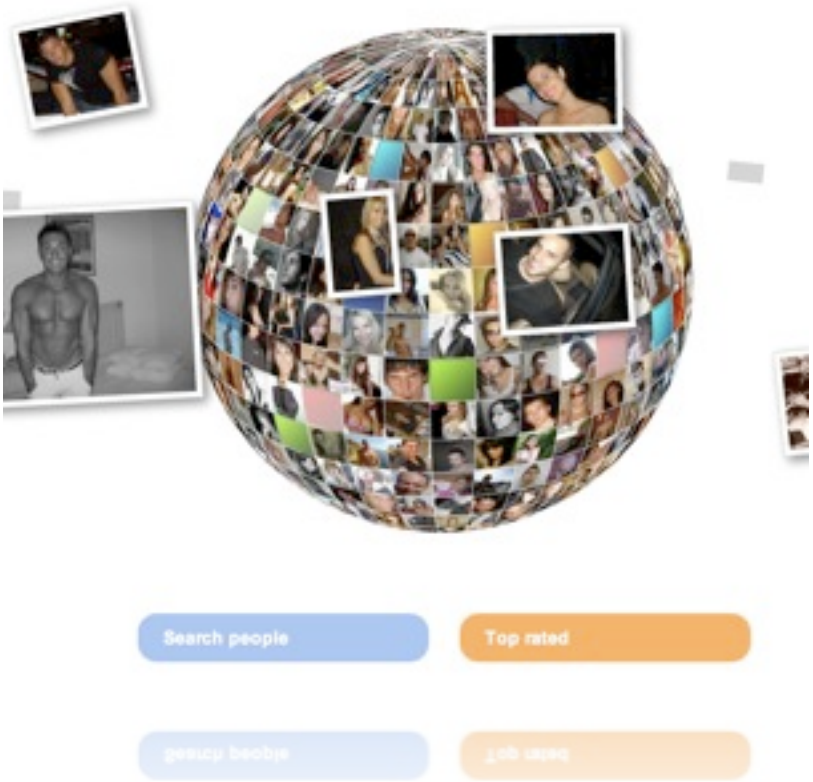
Chechens

aSmallWorld

European jet set and social elite

Badoo

European young adults



Bebo

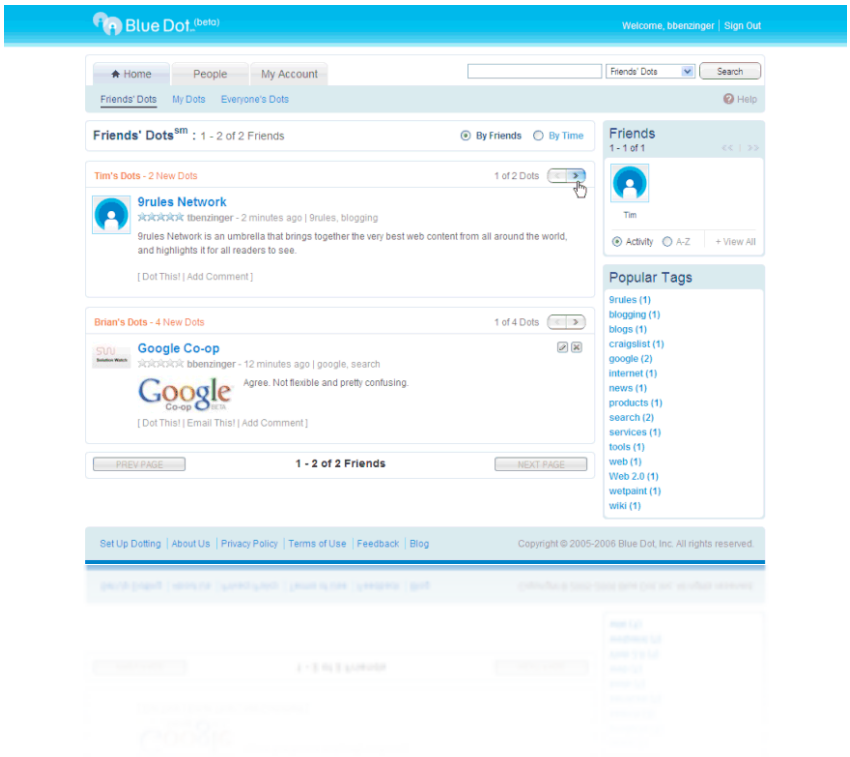
Schools and colleges

BlackPlanet.com

African-Americans

Blue Dot

Link sharing

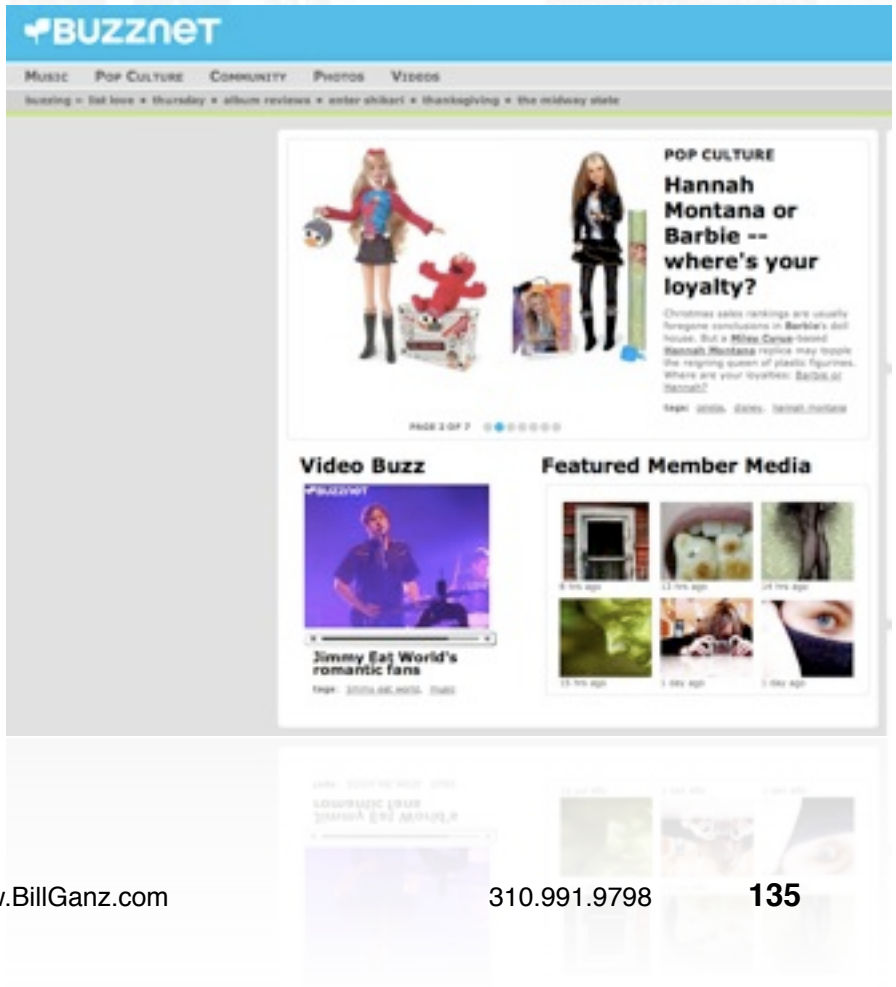


Broadcaster.com

Video sharing and webcam chat

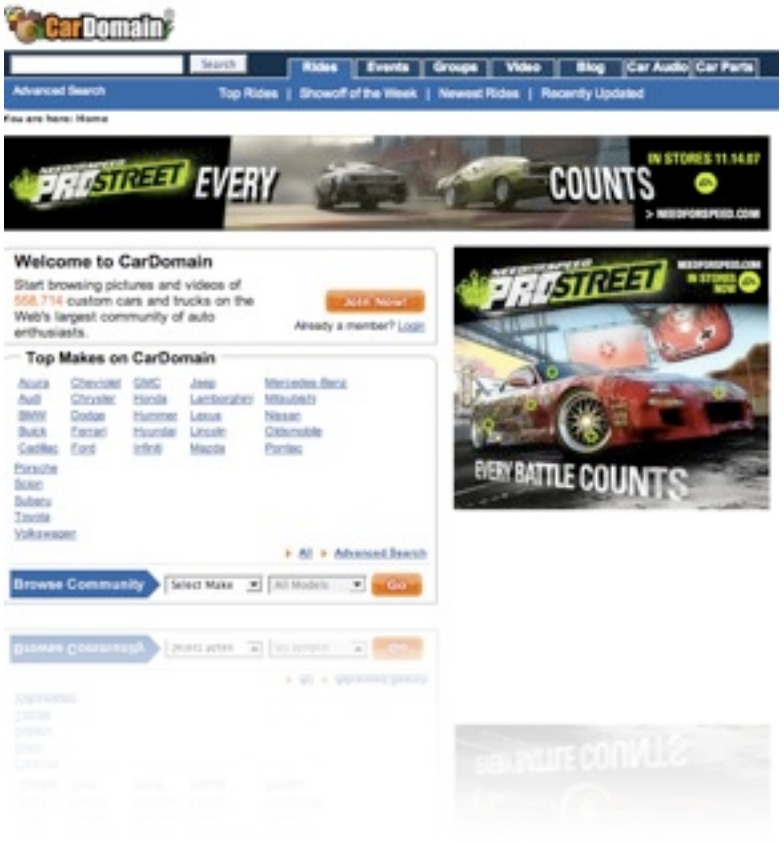
Buzznet

Music and pop-culture



CarDomain

Car enthusiasts

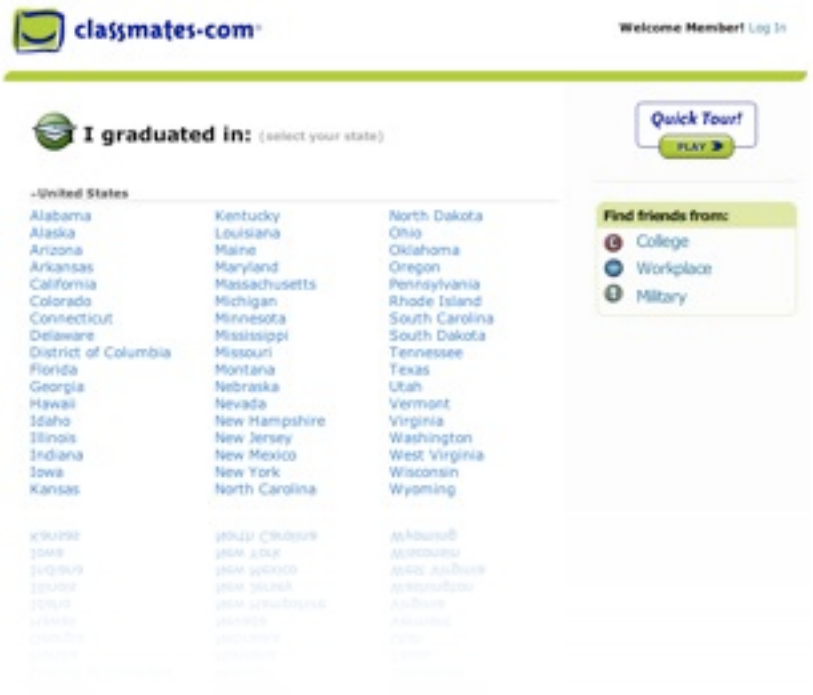


Care2

Green living and social activism

Classmates.com

School, college, work and the military



Consumating

"Consumeetings"

Couchsurfing

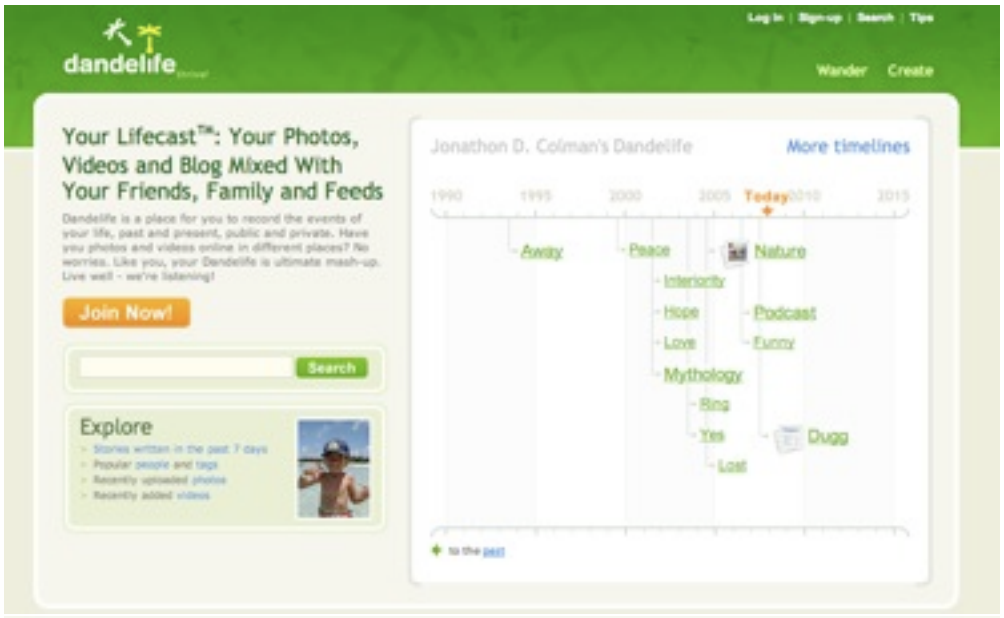
Hospitality

Cyworld

Young South Koreans
Now expanded for worldwide users

Dandelife

Collective narratives or "shared biographies"



DeadJournal

"Dark" blogs, based on LiveJournal

Dodgeball.com

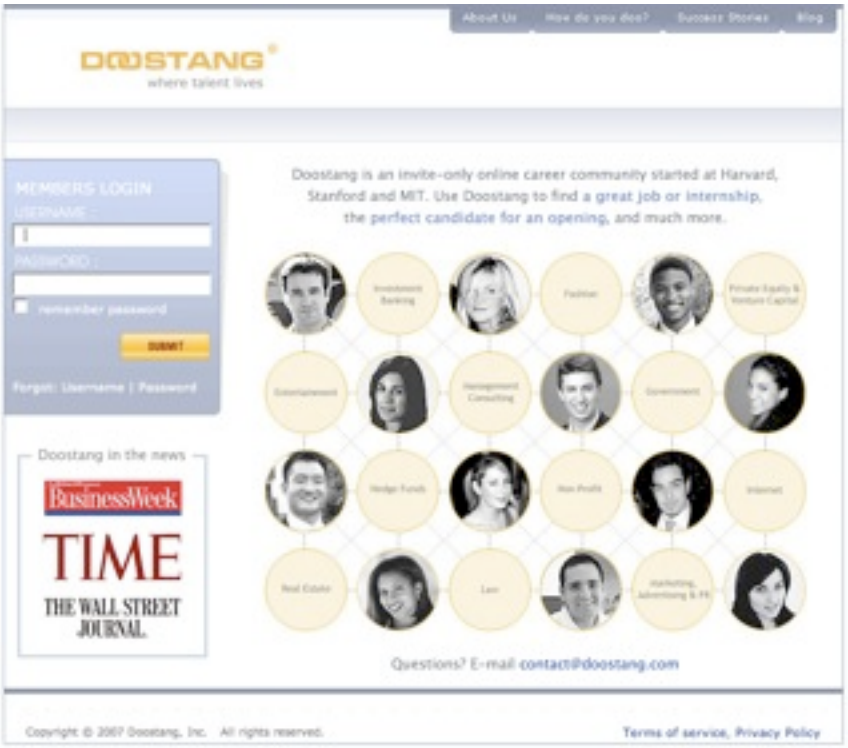
Mobile location-based service, owned by Google

DontStayIn

Clubbing (primarily UK)

Doostang

Careers



eSPIN

Teens

Experience Project

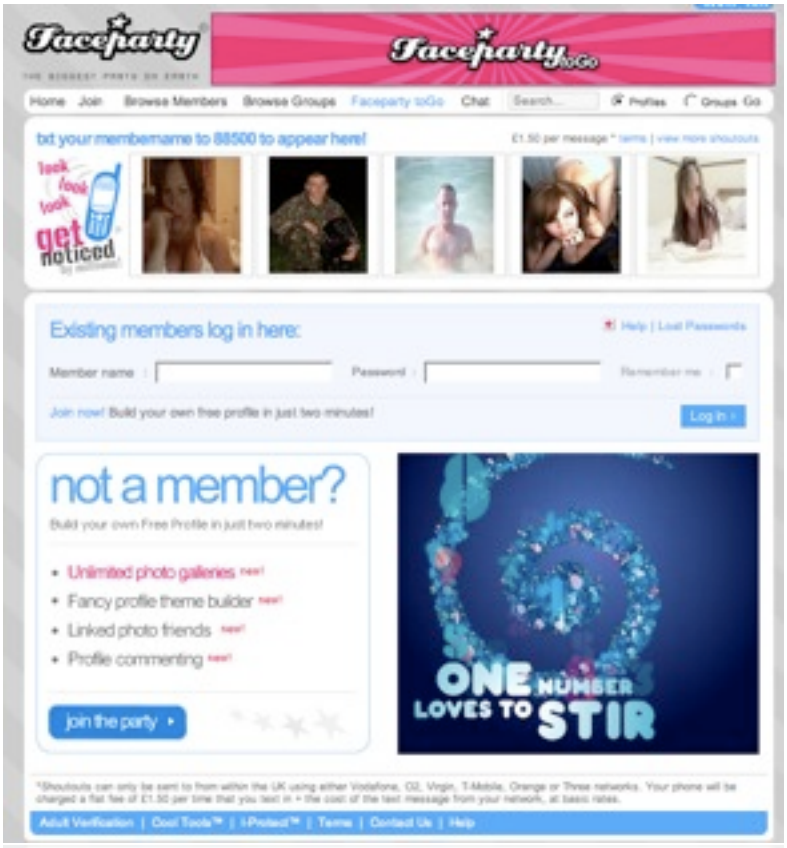
Life Experiences

Facebook

Started for colleges, then high schools, and now everyone.

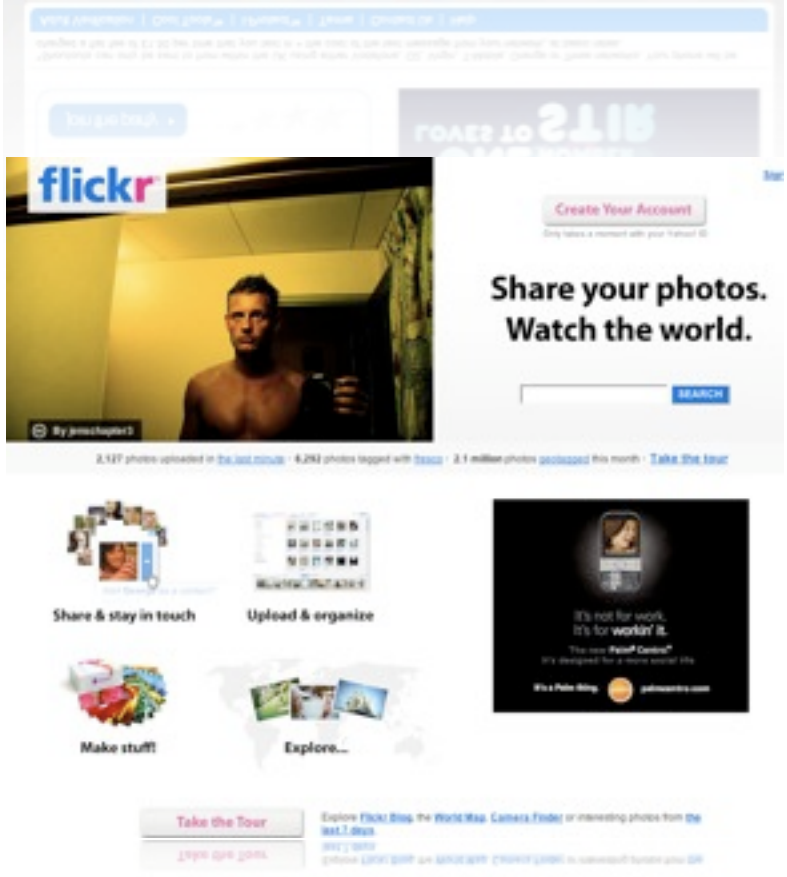
Faceparty

British teens and 20-somethings



Flickr

Photo sharing



Flirtomatic

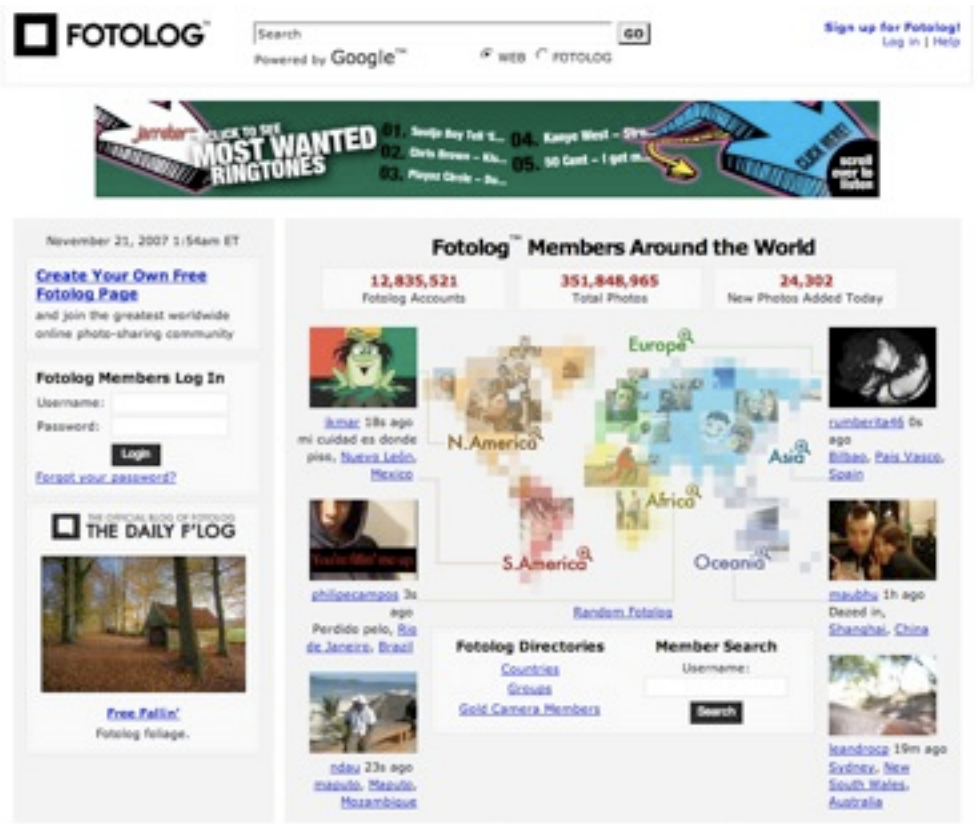
Flirting/Dating

Fotki

Photo sharing

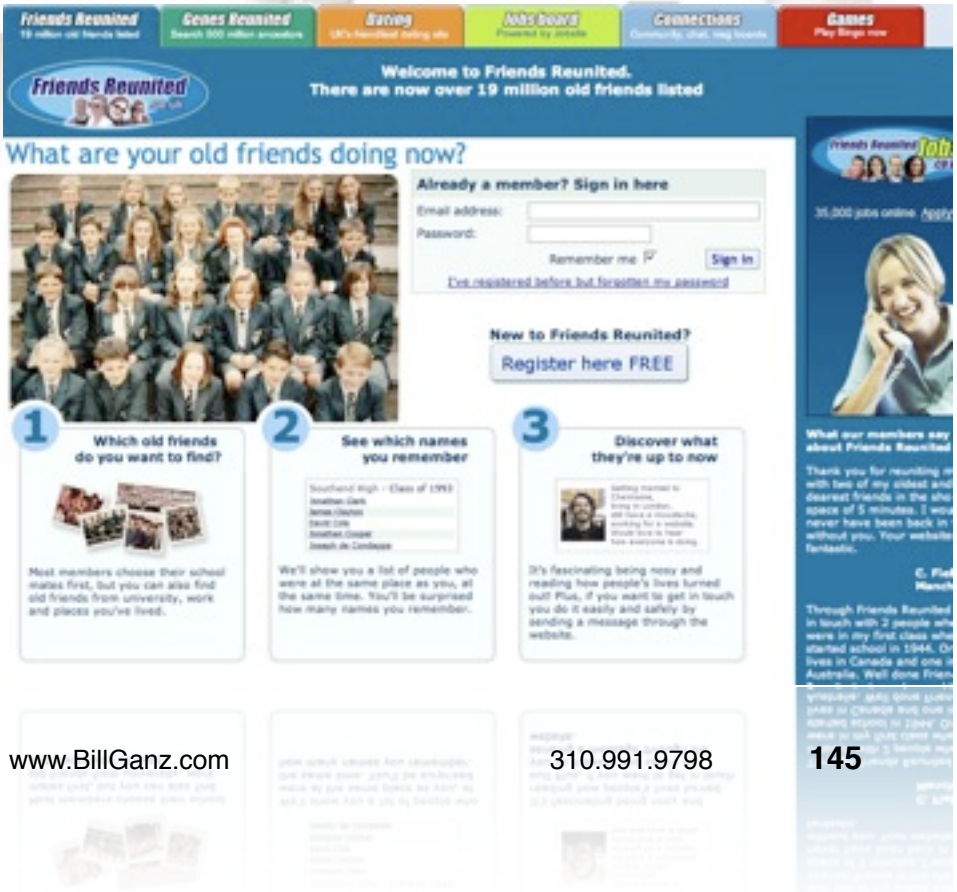
Fotolog

Photoblogging



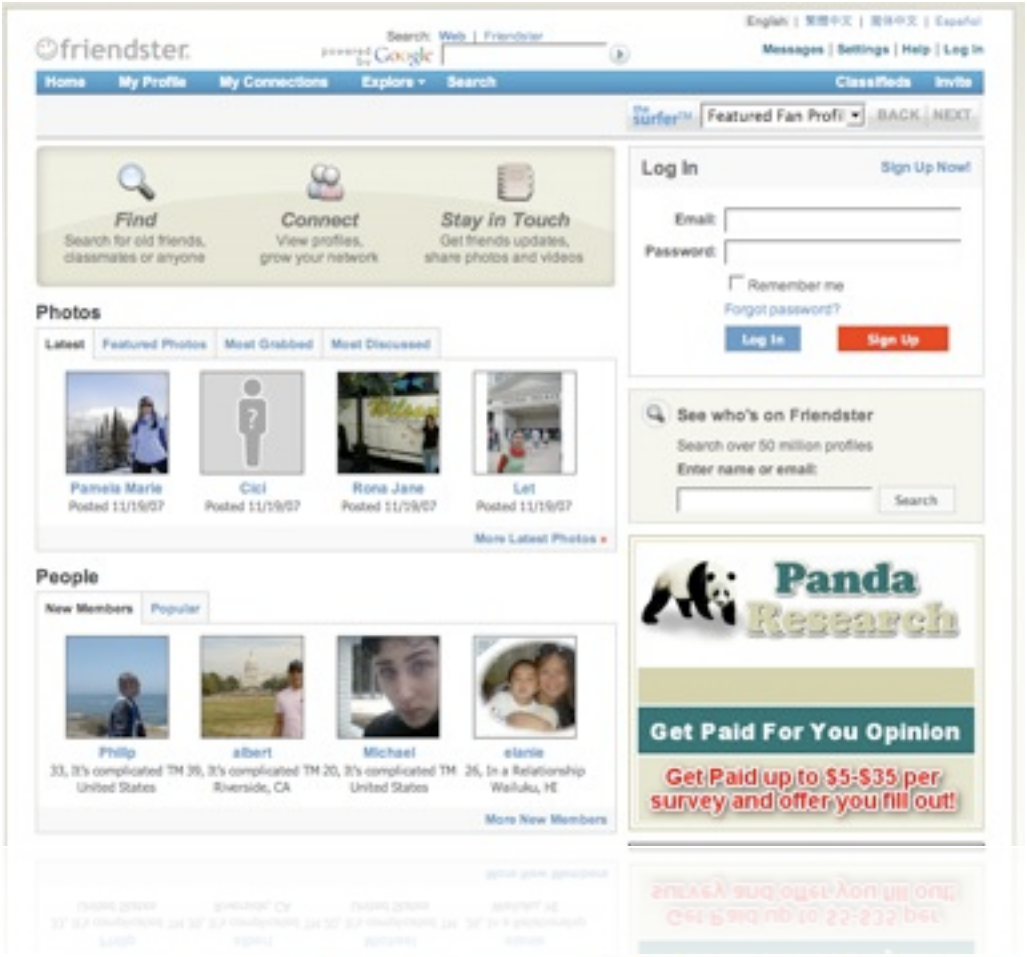
Friends Reunited

School, college, work, sport and streets



Friendster

General



Frühstückstreff

General

Gaia Online

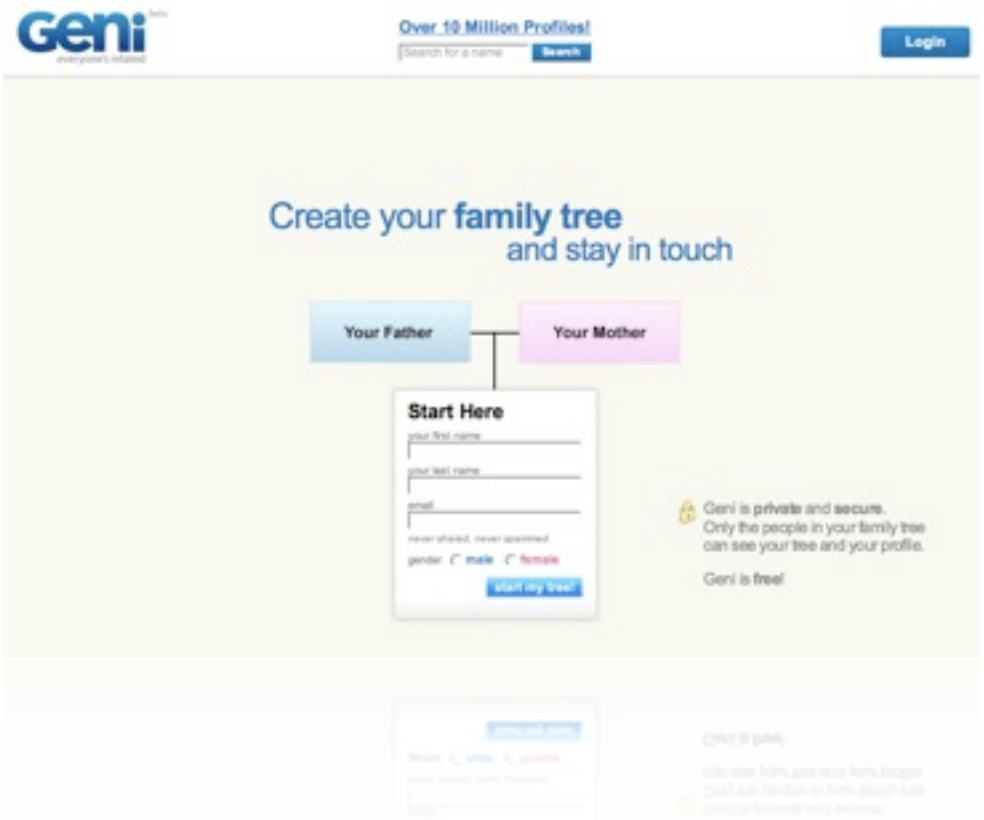
Anime and Games

Gather (website)

Article, picture, and video sharing, as well as group discussions

Geni.com

Families, genealogy

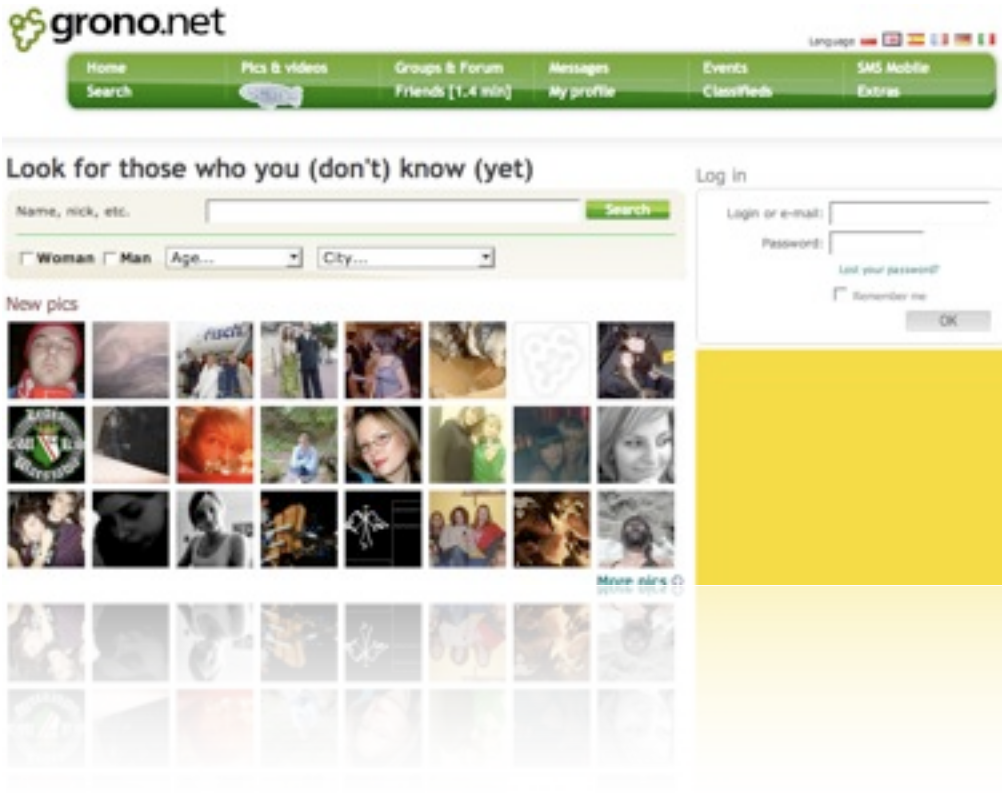


Graduates.com

School, college, and work

Grono.net

Poland

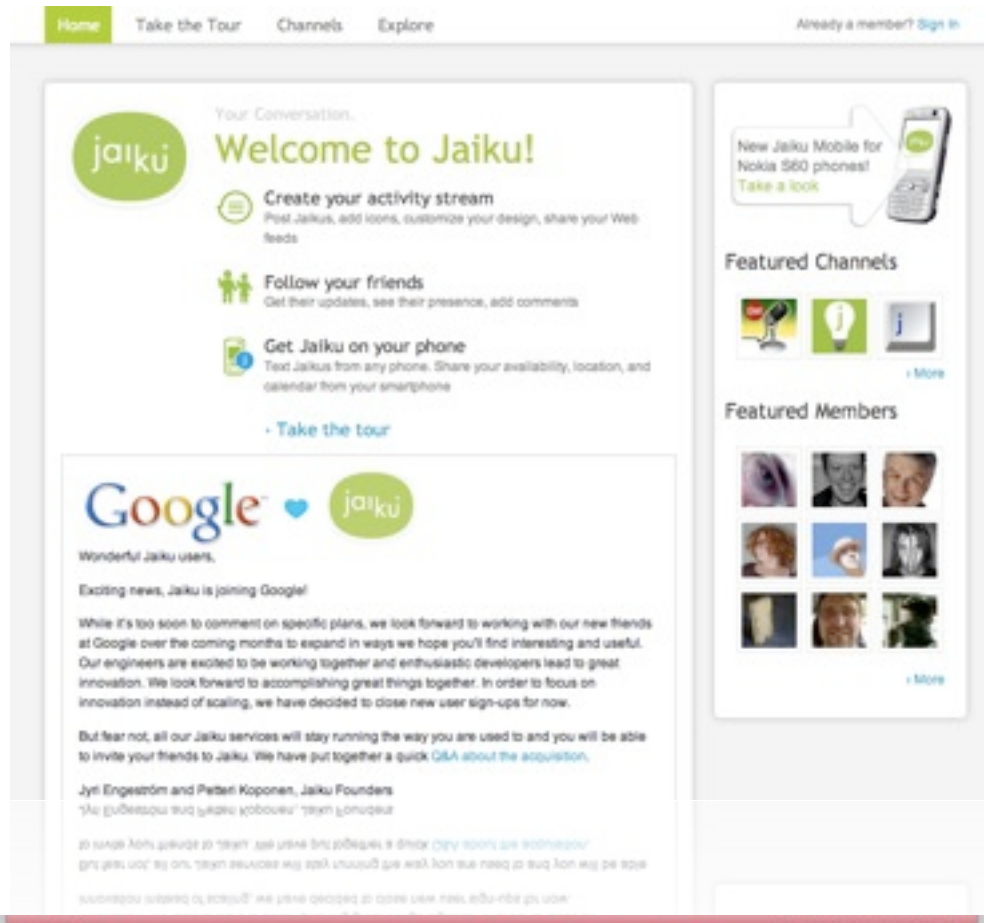


GuildCafe

Online games

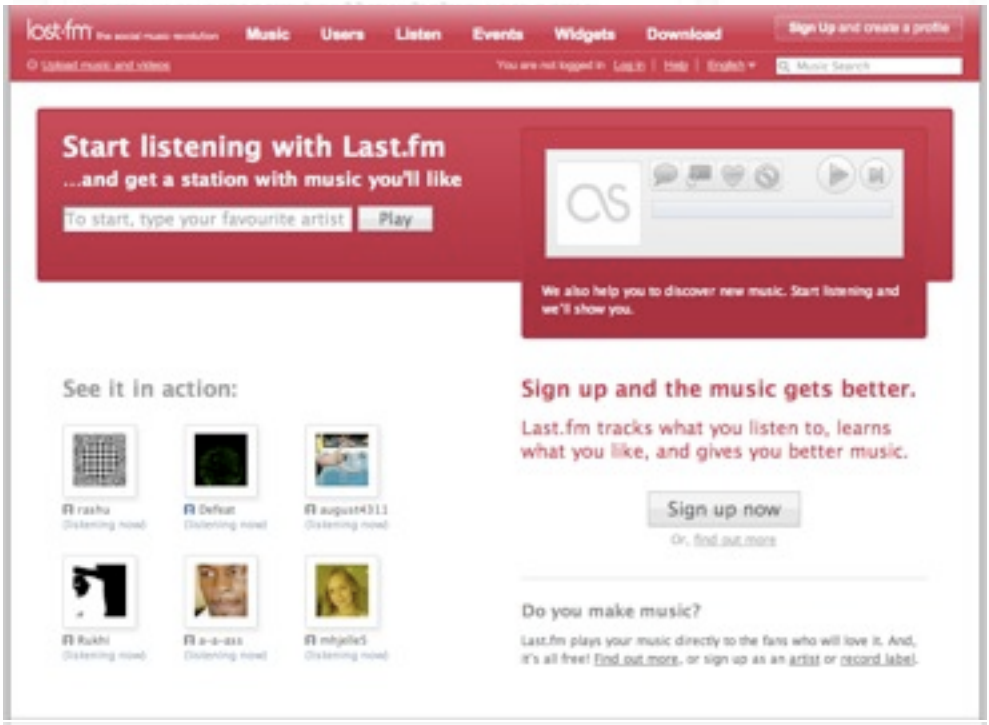
Jaiku

Update friends with your status through SMS, IM, web interfaces



Last.fm

Music



LibraryThing

Book lovers

LinkedIn

Business

LiveJournal

LunarStorm

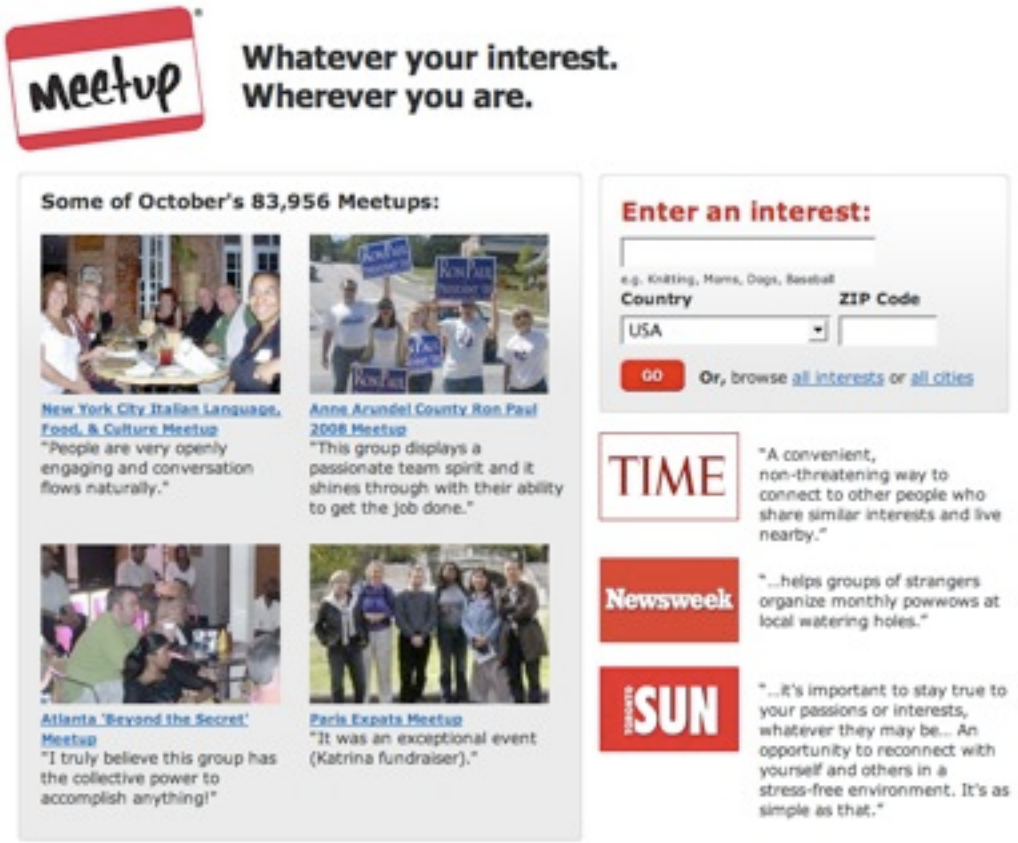
Sweden

MEETin

General

Meetup.com

General



MiGente.com

Latinos

Mixi

Japan

MOG

Music

Multiply

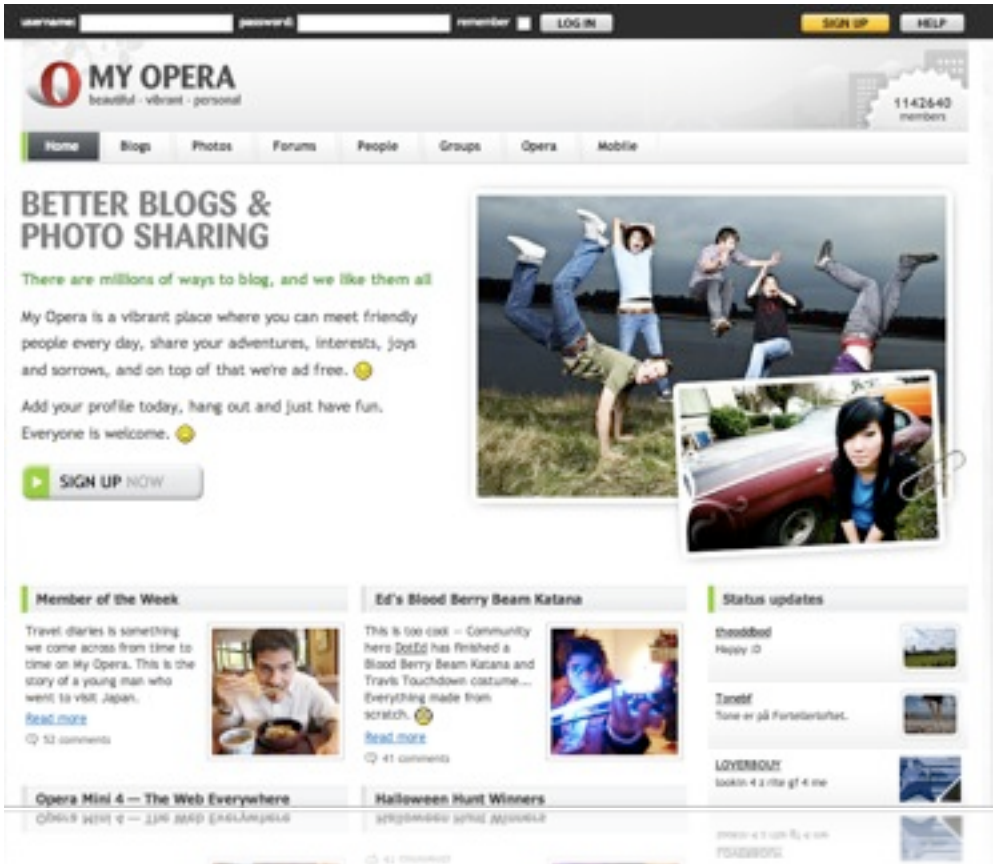
"Real world" relationships

MyChurch

Christian Churches

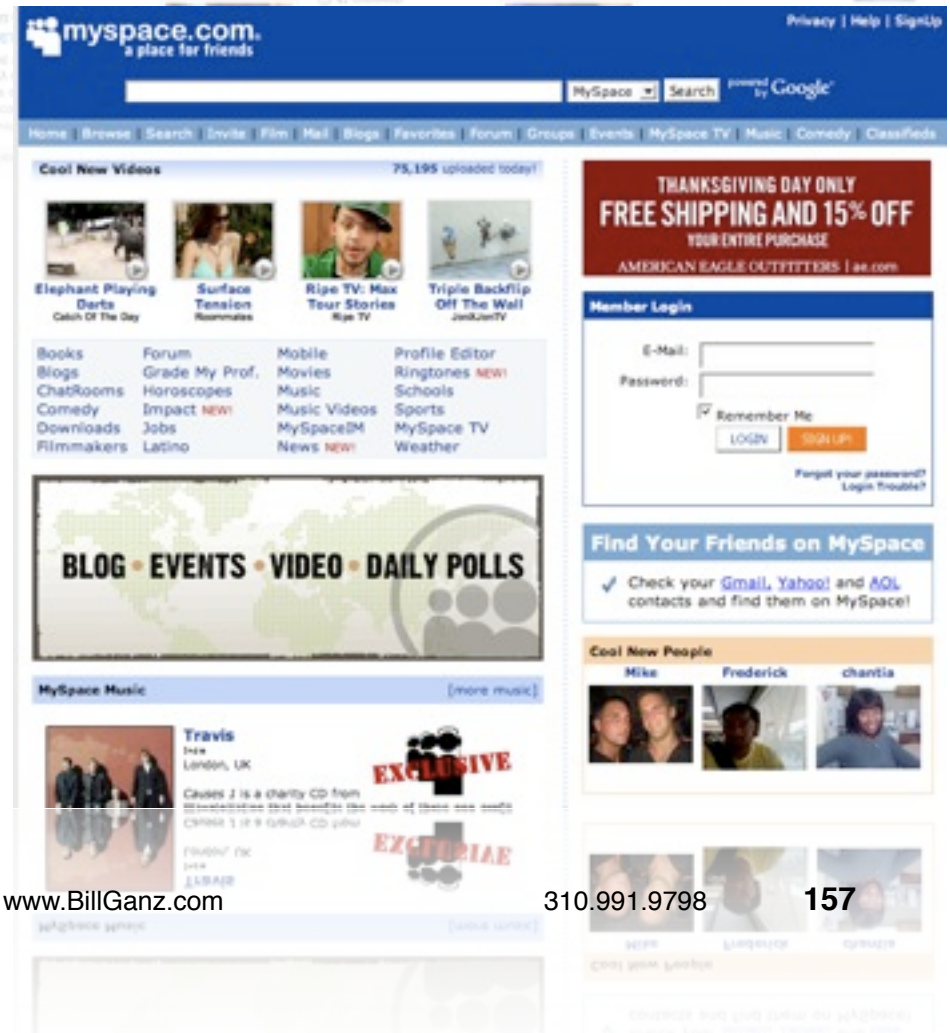
My Opera Community

General (blogs, photo albums, forums, groups, etc.)



MySpace

General



myYearbook

General

Netlog

Formerly known as Facebox.

Nexopia

Canada

Ning

Make your own social network

OkCupid

Dating

orkut

Owned by Google. Popular in Greenland, Brazil and India.

OUTeverywhere

Gay

Passado
General

Piczo

Teenagers, Canadians, photo sharing

Playahead

Swedish teenagers

ProfileHeaven

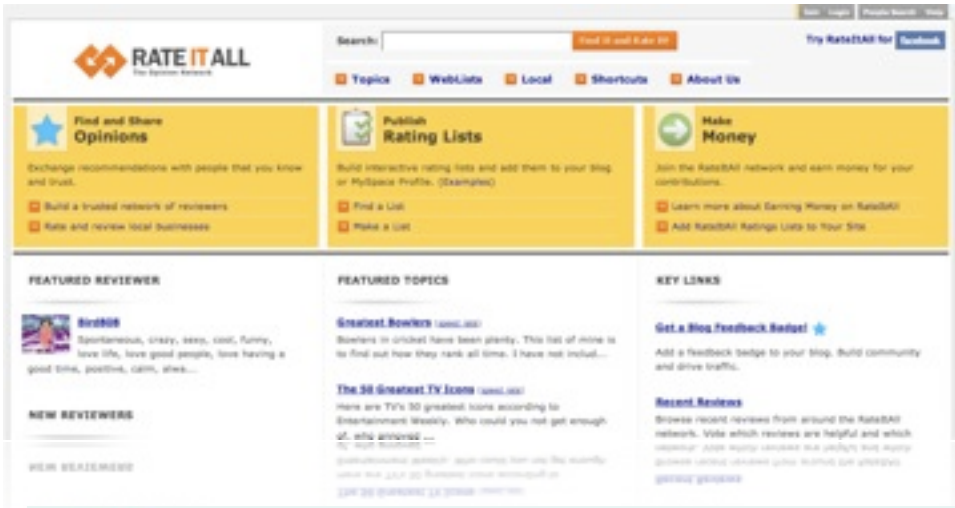
British teens

Pownce

moblog for websites, files, and short updates

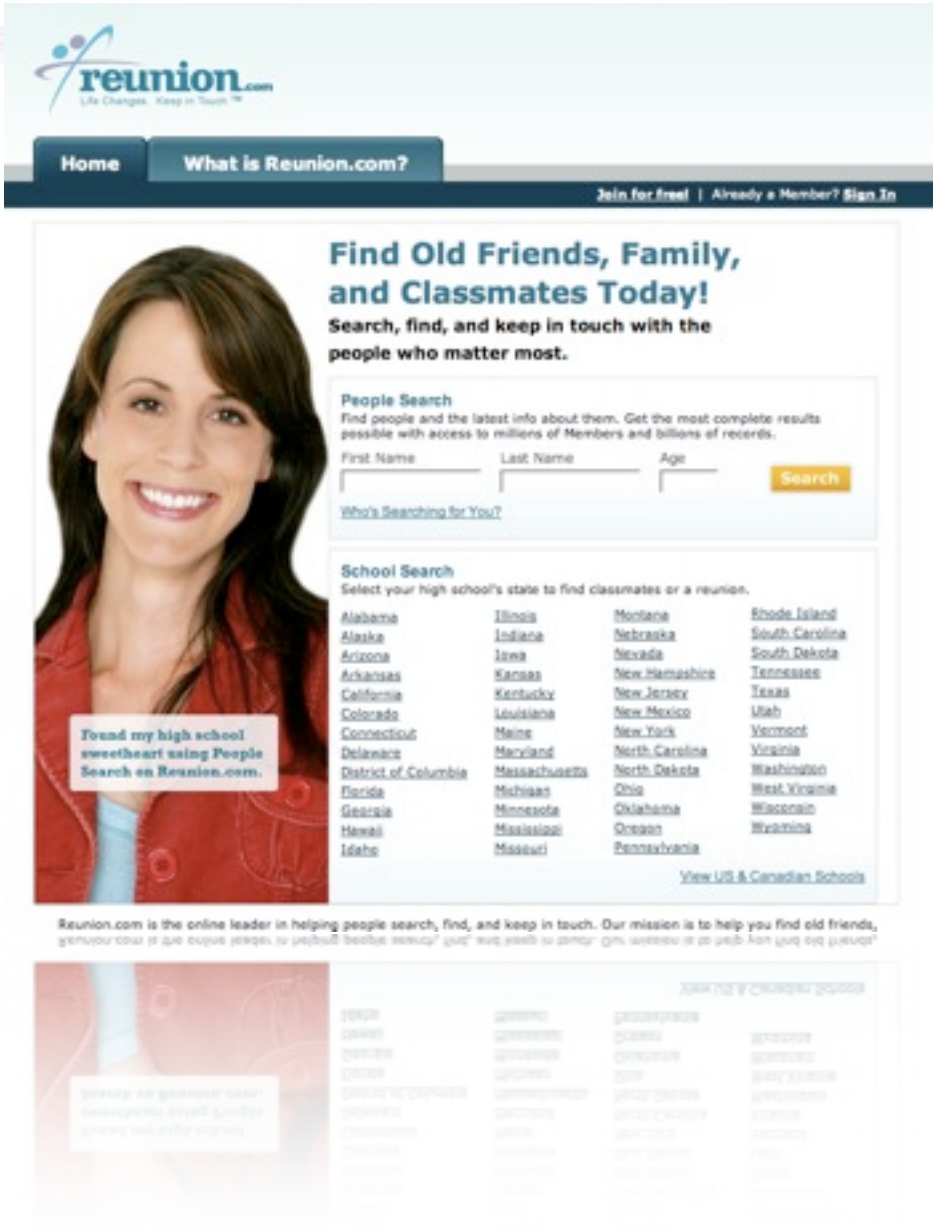
RateItAll

Consumer ratings + social networking



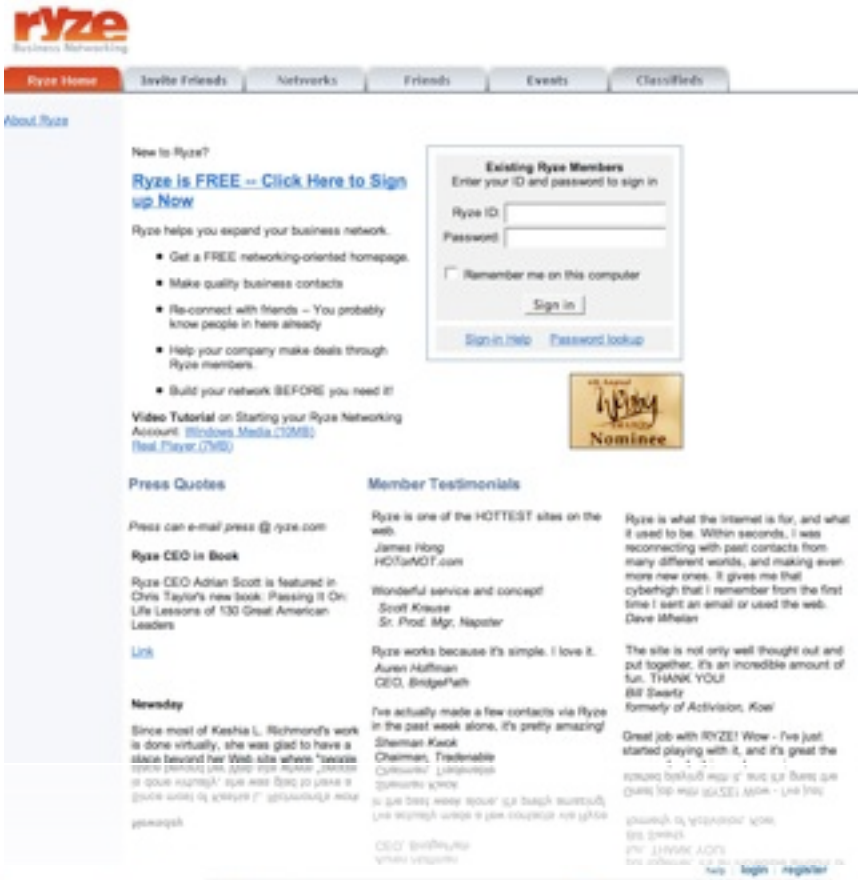
Reunion.com

Locating friends and family, keeping in touch



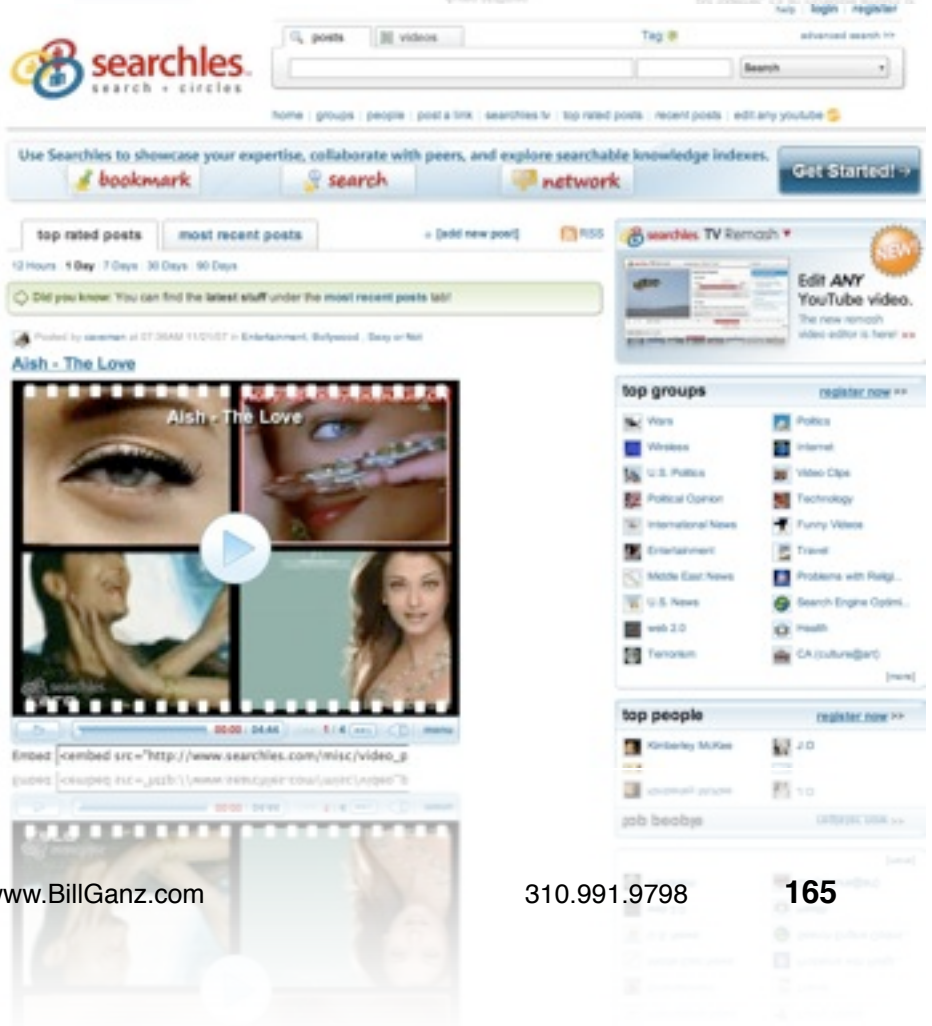
Ryze

Business



Searchles

Social Search + Social Networking (hybrid)

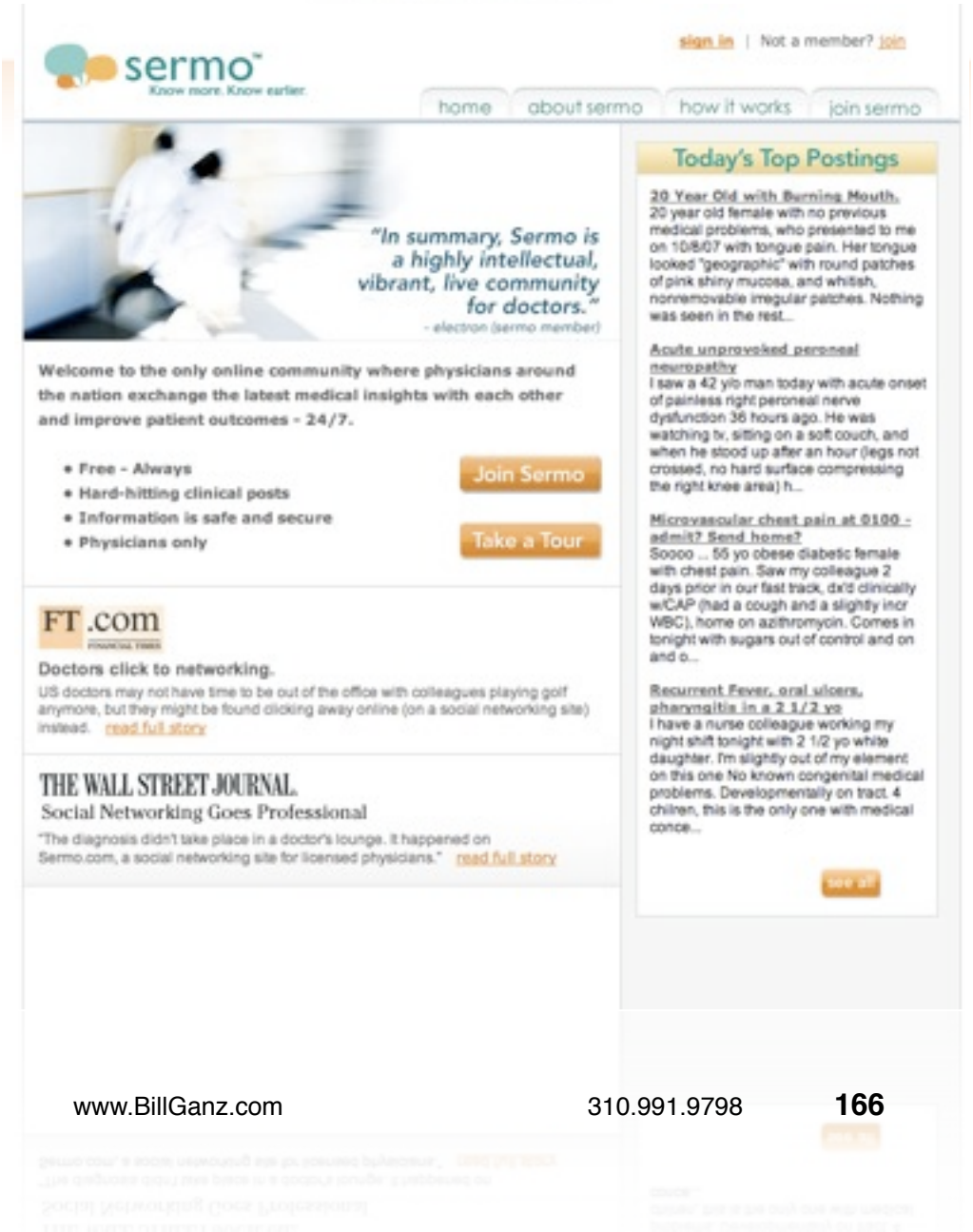


Sconex

American high schools

Sermo

Physicians



sexi

Japan (sexual networking site)

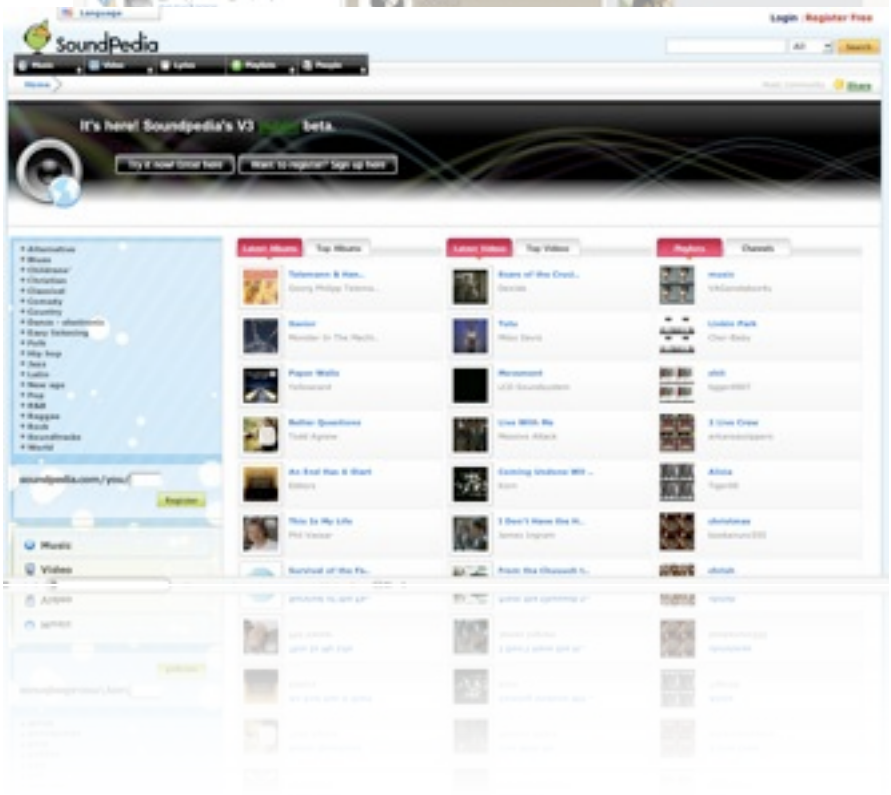
Shelfari

Online community for book lovers

Skyblog

France, Belgium, French Polynesia, Guadeloupe, Martinique, New Caledonia, Senegal

Soundpedia

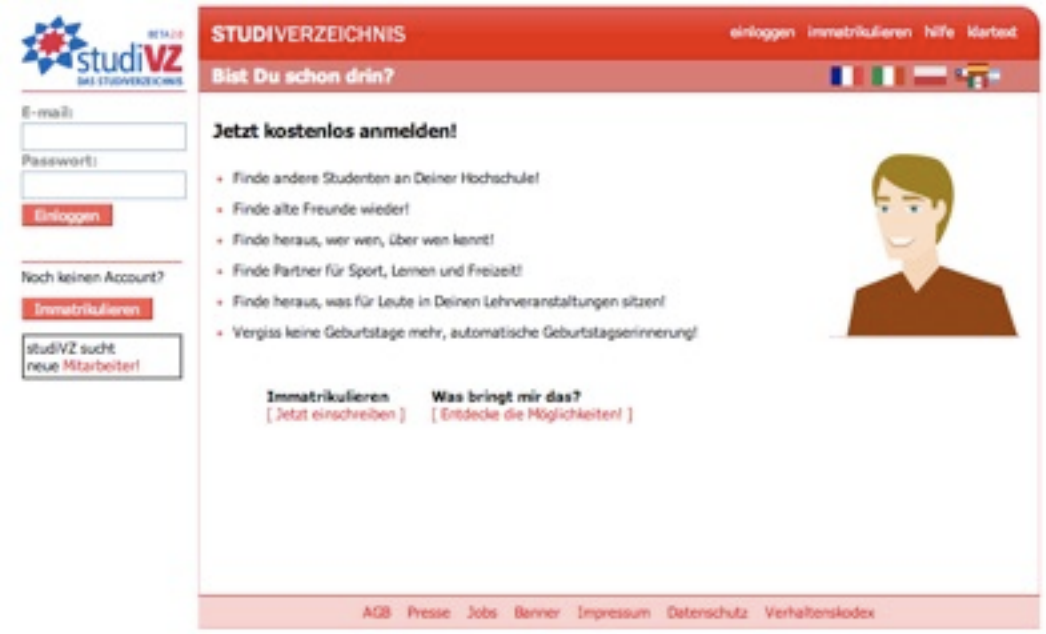


Sportsvite

Recreational Sports

Studivz

University students, mostly in the German-speaking countries

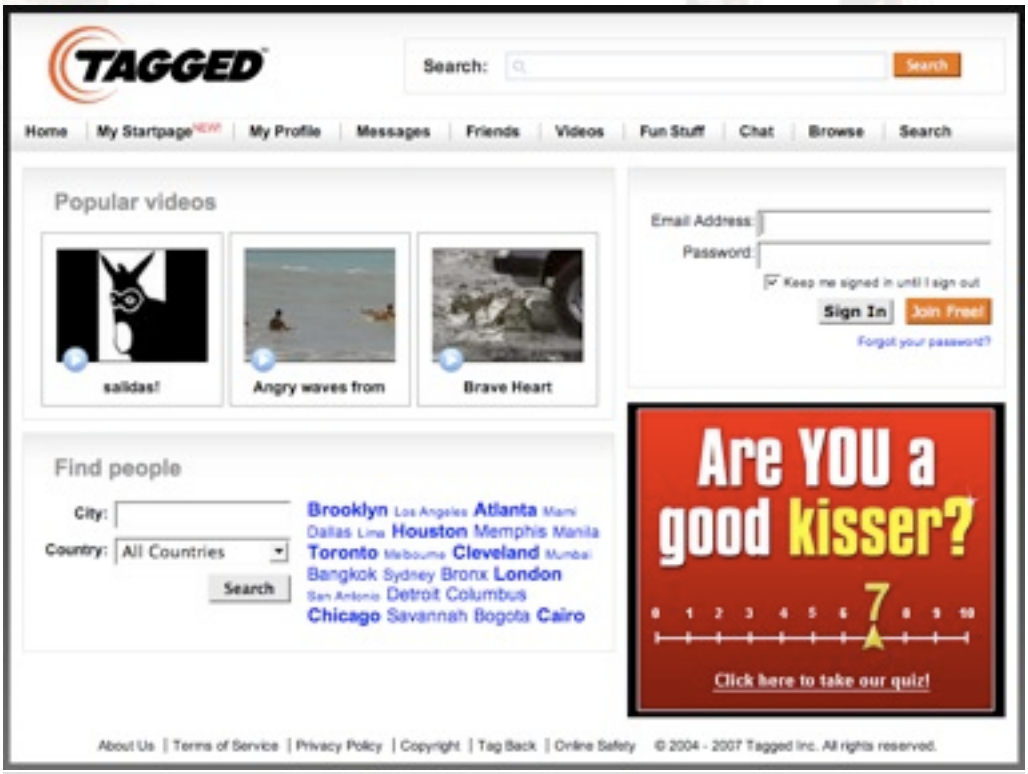


Stumbleupon

Websurfing

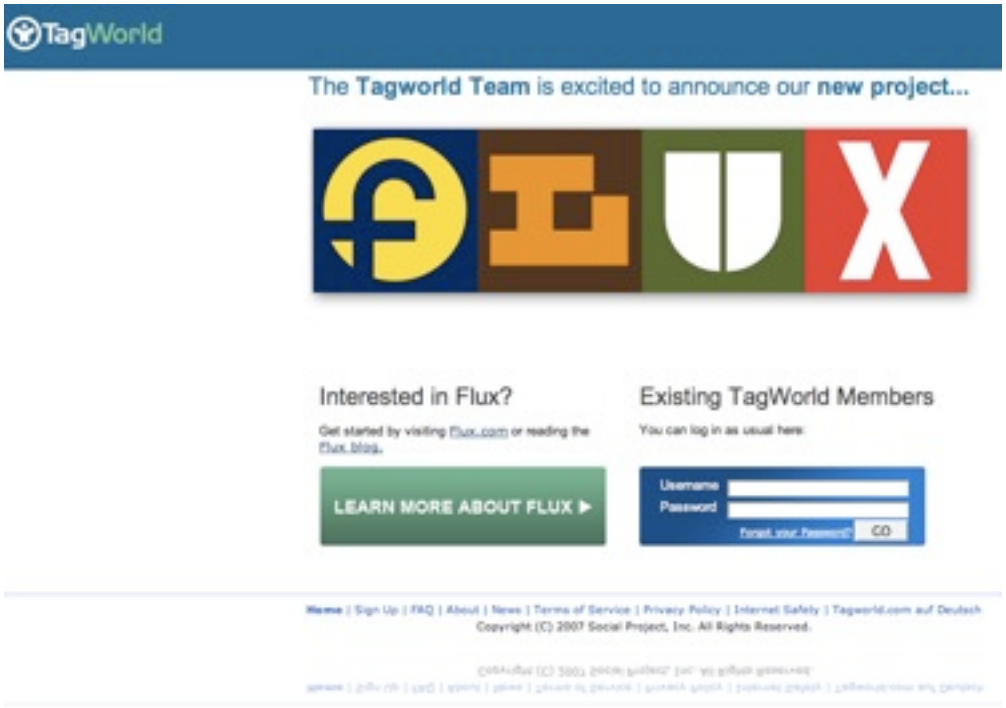
Tagged.com

Social Interaction



TagWorld

General (tagging)



TakingITGlobal

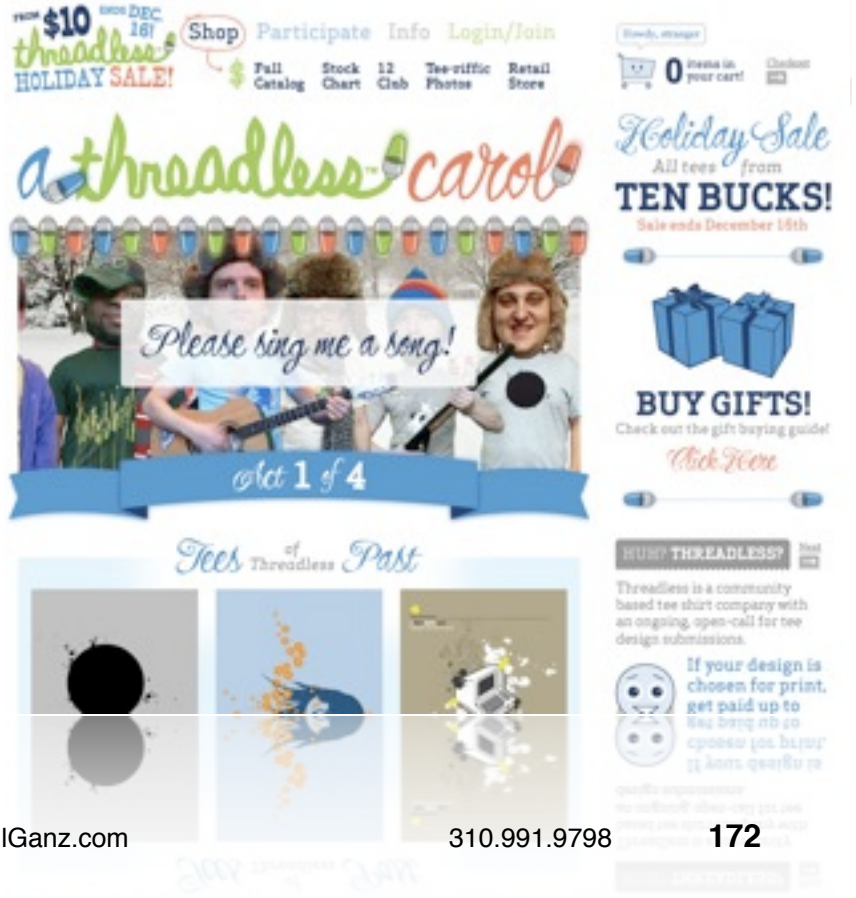
Social action

The Student Center

Teens and colleges

Threadless

Custom T-shirts

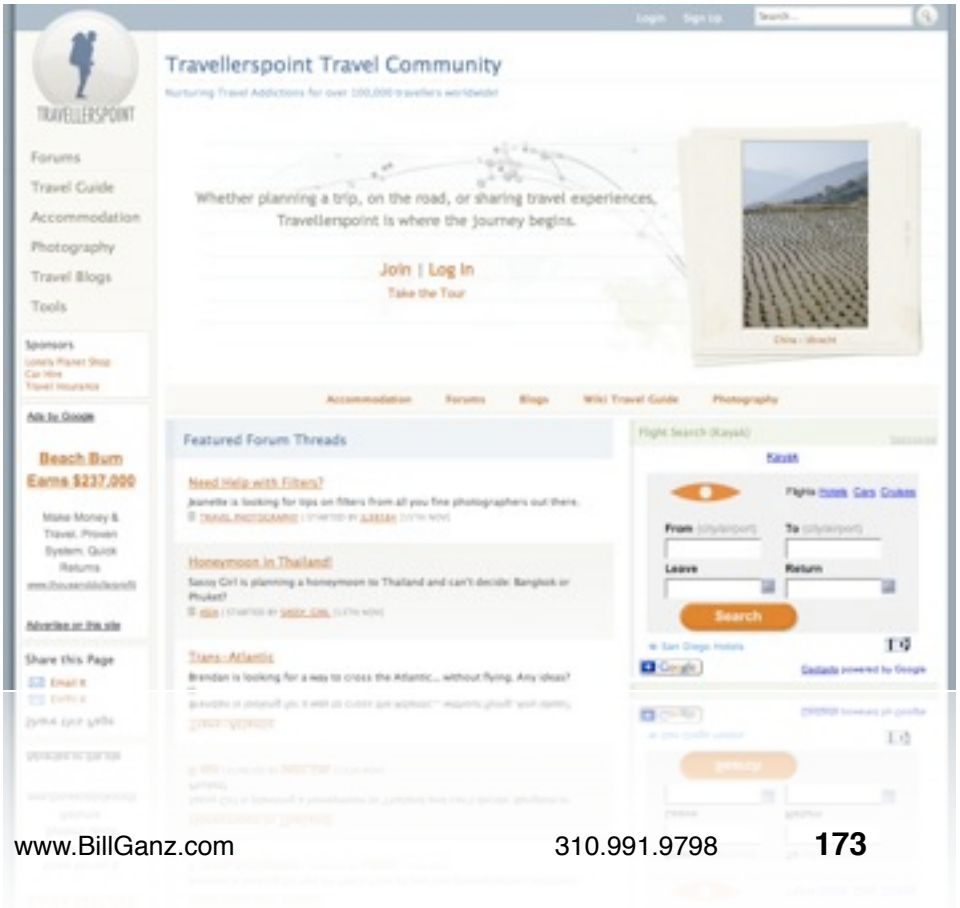


TravBuddy.com

Travel

Travellerspoint

Travel



Tribe.net

General

Twitter

Update friends with your status through SMS, IM, web interfaces

Vampire Freaks

Gothic industrial culture

Vox

Blogging

WAYN

Travel & Lifestyle

WebBiographies

Genealogy & Biography

WeeWorld

General (fun with cartoons)

Windows Live Spaces

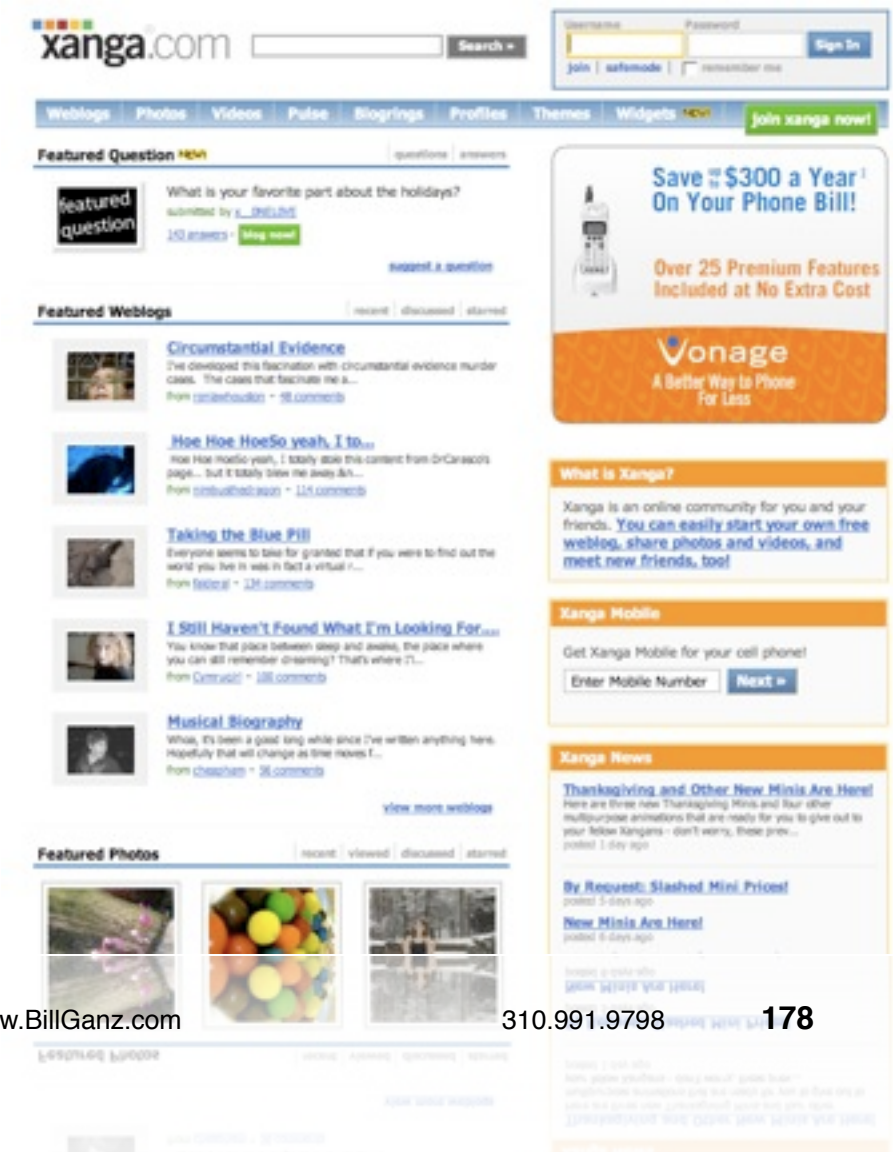
Blogging (formerly MSN Spaces)

Woophy

travel & photography, photo sharing website

Xanga

Blogs and "metro" areas

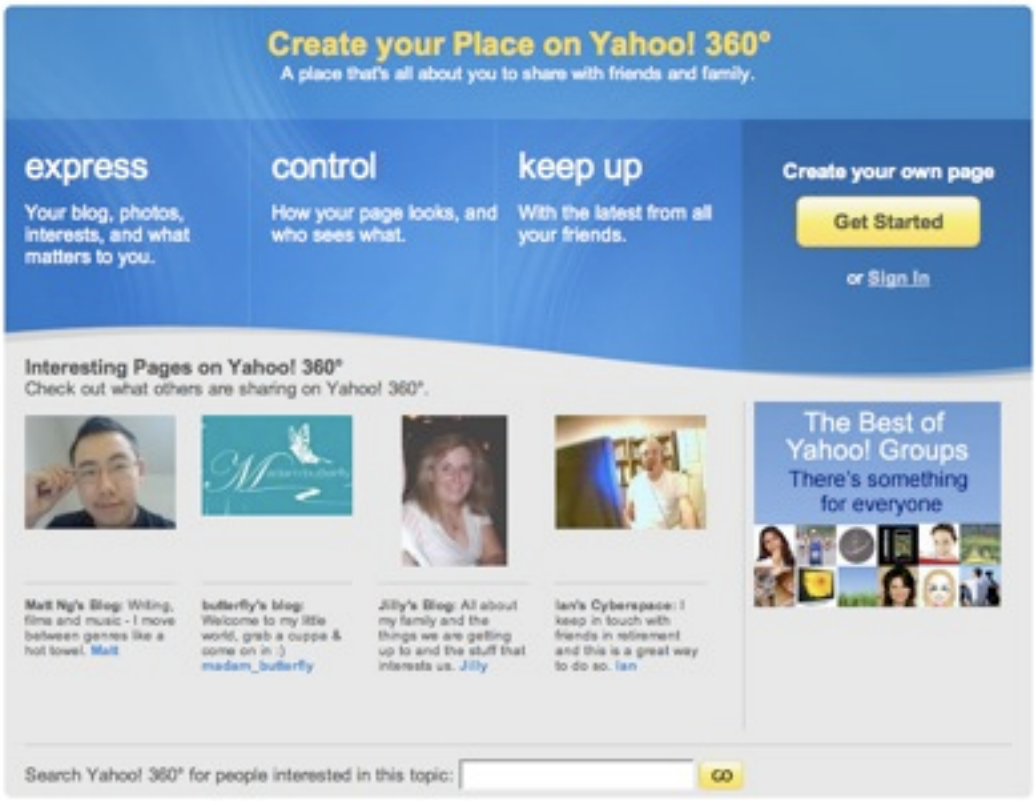


XING

Business

Yahoo! 360°

Linked to Yahoo! IDs



Zooomr


Sign-In
Sign-Up
Zooomr
Universally the best way to share, search, store, sort and sell your photos online.
Learn More
View more photos »

Notable Travel sites

1st Home Exchange http://www.1sthomeexchange.com/
BootsnAll http://www.bootsnall.com/
Cleartrip http://www.cleartrip.com/
Couchsurfing http://www.couchsurfing.com/
Farecast http://www.farecast.com/
Flyspy http://www.flyspy.com/
Groople http://www.groople.com/
Gusto http://www.gusto.com
ITA http://www.ita.hr
Kayak http://www.kayak.com/
MakeMyTrip www.makemytrip.com
Mobissimo http://www.mobissimo.com/
MP3Travel http://www.mp3travel.com/
Paguna https://www.paguna.com/
Pastigo pastigo.com
Quixo http://www.quixo.com/
Real Travel http://realtravel.com/
Rezgo http://www.rezgo.com/
SideStep http://www.sidestep.com/
SnapJot http://www.snapjot.com/snapjot/
Suggest for Travel http://suggest4travel.com/
Travelguru
TravelPost
TripCart http://www.tripcart.com/
TripConnect.com tripconnect.com
TripHub http://www.triphub.com/
Tripmojo http://tripmojo.com/
Tripology http://www.tripology.com/
TripTie http://triptie.com/
VCarious http://www.vcarious.com/
Viator
Virtual Tourist http://www.virtualtourist.com/
WAYN http://www.wayn.com/
Yatra

Section 3 - The best part is always in the back.

What's better then flipping to the end of the book to find the best part? Nothing! Here are 10 great stories that will light your eyes up.

Social Networks: Execs Use Them Too

Networking technology gives companies a new set of tools for recruiting and customer service—but privacy questions remain

by Rachael King
SPECIAL REPORT

Encover Chief Executive Officer Chip Overstreet was on the hunt for a new vice-president for sales. He had homed in on a promising candidate and dispensed with the glowing but unsurprising remarks from references. Now it was time to dig for any dirt. So he logged on to LinkedIn, an online business network. "I did 11 back-door checks on this guy and found people he had worked with at five of his last six companies," says Overstreet, whose firm sells and manages service contracts for manufacturers. "It was incredibly powerful."

So powerful, in fact, that more than a dozen sites like LinkedIn have cropped up in recent years. They're responding to a growing impulse among Web users to build ties, communities, and networks online, fueling the popularity of sites like News Corp.'s (NWS) MySpace (see BusinessWeek.com, 12/12/05 "The MySpace Generation"). As of April, the 10 biggest social-networking sites, including MySpace, reached a combined unique audience of 68.8 million users, drawing in 45% of active Web users, according to Nielsen/NetRatings.

Of course, corporations and smaller businesses haven't embraced online business networks with nearly the same abandon as teens and college students who have flocked to social sites. Yet companies are steadily overcoming reservations and using the sites and related technology to craft potentially powerful business tools.
PASSIVE SEARCH.

Recruiters at Microsoft (MSFT) and Starbucks (SBUX), for instance, troll online networks such as LinkedIn for potential job candidates. Goldman Sachs (GS) and Deloitte run their own online alumni networks for hiring back former workers and strengthening bonds with alumni-cum-possible clients. Boston Consulting Group and law firm Duane Morris deploy enterprise software that tracks employee communications to uncover useful connections

in other companies. And companies such as Intuit (INTU) and MINI USA have created customer networks to build brand loyalty.

Early adopters notwithstanding, many companies are leery of online networks. Executives don't have time to field the possible influx of requests from acquaintances on business networks. Employees may be dismayed to learn their workplace uses e-mail monitoring software to help sales associates' target pitches. Companies considering building online communities for advertising, branding, or marketing will need to cede some degree of control over content.

None of those concerns are holding back Carmen Hudson, manager of enterprise staffing at Starbucks, who says she swears by LinkedIn. "It's one of the best things for finding mid-level executives," she says.

The Holy Grail in recruiting is finding so-called passive candidates, people who are happy and productive working for other companies. LinkedIn, with its 6.7 million members, is a virtual Rolodex of these types. Hudson says she has hired three or four people this year as a result of connections through LinkedIn. "We've started asking our hiring managers to sign up on LinkedIn and help introduce us to their contacts," she says. "People have concerns about privacy, but once we explain how we use it and how careful we would be with their contacts, they're usually willing to do it."
BOOMERANGS.

Headhunters and human-resources departments are taking note. "LinkedIn is a tremendous tool for recruiters," says Bill Vick, the author of LinkedIn for Recruiting. So are sites such as Ryze, Spoke, OpenBc, and Ecademy (see BusinessWeek.com, 2/20/04, "The Perils and Promise of Online Schmoozing").

Many companies are turning to social networks and related technology to stay in touch with former employees. Consulting firm Deloitte strives to maintain ties with ex-workers and has had a formal alumni-relations program for years. It bolstered those efforts earlier this year, tapping business networking services provider SelectMinds to launch an online alumni network.

Ex-Deloitte employees can go to the site to browse 900 postings for jobs at a range of companies. They can also peruse open positions at Deloitte. The online network is an extension of an offline program that includes networking receptions and seminars.

Deloitte makes no bones about its aim to use the network to lure back some former employees, or so-called boomerangs. "Last year, 20% of our experienced hires were boomerangs," says Karen Palvisak, a national leader of alumni relations for Deloitte.
MARKETING NETWORKS.

Boomerangs cost less to train than new hires and they tend to hit the ground running. As the labor market tightens, alumni become an increasingly attractive source of talent. Last year, 13% of employees who had previously been laid off were rehired by their former employers, according to a survey of more than 14,000 displaced employees at 4,900 organizations by Right Management Consultants.

Not only do business-oriented networks help executives find employees, they're increasingly useful in other areas, such as sales and marketing. When Campbell's Soup (CPB) asked independent location booker Marilyn Jenett to select a castle in Europe for a promotion, she put a note on business networking site Ryze, offering a finder's fee to anyone who could suggest the right place.

Jenett got seven responses, including one pointing her to Eastnor Castle. "It was the one castle that could suit us for everything which the others could not," she says, adding that she was so pleased with the location that she booked it again for another event. Jenett says Ryze also helped her develop another small business, a personal mentoring program called Feel Free to Prosper.

Social networks also help forge community with, and among, would-be customers. In August, a group of MINI Cooper owners joined the company for its two-week cross-country car rally. Participants took part in company-sponsored events, such as the official wrap party overlooking the Hudson River and the Manhattan skyline in New Jersey.
FREE HELP.

But they also planned their own side events along the way with the help of the community forums on the MINI Owner's Lounge site, sponsored by MINI USA. Each month, about 1,500 to 2,000 new owners become active in the community. "Our very best salespeople are MINI owners, and they like to talk about their cars," says Martha Crowley, director of consulting for Beam Interactive, which provides various Internet marketing services for MINI USA.

A handful of companies has found creative ways to harness social networks to provide customer service or conduct market research. Intuit tapped LiveWorld to start customer-service forums for its Quicken personal-finance software about a year ago. About 70% of

all questions on the Quicken forum are answered by other customers, rather than Intuit employees.

"The most pleasant surprise in the Quicken community has been the desire of the members to help others," says Scott Wilder, group manager of Intuit online communities. In November, Intuit plans to enhance member profiles and will add blogging and podcasting tools.

THE SECRET SNOOPER.

Social networking technology also can also help businesses search employee relationships for possible clients and other key contacts. Ed Schechter, chief marketing officer at Duane Morris, a law firm with 1,200 employees, estimates that about 75% to 80% of all employees' relationships with possible clients are never entered into a customer relationship management system.

Duane Morris saw this firsthand recently, after it began testing software from Contact Networks, which helps businesses study employee communications and other data to pinpoint relationships between staff and potential clients. Within a matter of days, the software uncovered a key connection that the existing CRM software had failed to capture. "It showed a senior relationship that existed in our firm with them," says Schechter. Duane Morris subsequently won the business, thanks in part to the Contact Networks discovery, Schechter says.

As helpful as they may be, networking tools like these can also reinforce executives' worst fears surrounding social networking technology in the workplace. Many employees will find themselves uncomfortable with bosses mining their e-mail and calendaring applications for potential ties.

SLOWER GROWTH.

Boston Consulting Group has gotten around potential problems by ratcheting up privacy settings. While the system still tracks individual e-mail communication, it doesn't automatically reveal the name of the contact. Instead it points employees to colleagues who may have a desired connection.

The group has been using the software since 2002, and now has about 200,000 contacts in the database. Analysts use those names to make contacts at other companies, primarily for trying to find out about certain industries. "We've done surveys where users say that over 50% of the time they find a useful contact," says Simon Trussler, director of knowledge management at Boston Consulting Group.

Other businesses don't find the issues quite so surmountable. Business networking sites have been much slower to gain members than social networks catering to a younger audience. LinkedIn was founded in May, 2003, two months before MySpace, but as of August, it had fewer than one-tenth the number of registered users. MySpace boasts more than 100 million member profiles. Other business networking sites—such as Ryze, OpenBC and Ecademy—all fell below the Nielsen/NetRatings reporting cutoff in July of 355,000 unique monthly visitors.

"ALWAYS AT WORK."

Some companies shun social networking sites and tools because, by encouraging user participation, they inevitably force executives to cede control over content. Not only do businesses shy away from creating their own sites, they also put constraints on employee use of non-work-related sites.

Last year, the Automobile Club of Southern California fired 27 employees for work-related messages they posted on MySpace after a colleague complained about harassment. Companies can mitigate risk by clearly communicating expectations for employee conduct online, says Scott Allen, co-author of The Virtual Handshake, a book about online business networking.

However clearly the expectations are spelled out, some employees will feel their privacy has been violated, especially if they're maintaining profiles on non-work-related sites on their own time and equipment. "A number of companies are using public social networks to spy on employees," says Danah Boyd, a social media researcher and graduate student fellow at USC Annenberg Center for Communication.

This is particularly a problem when it comes to social networks such as MySpace, where younger workers may spend quite a bit of personal time. "You have to act like you're always at work, and it doesn't necessarily make people happy nor does it necessarily make good workers," Boyd says.

FINDING BALANCE.

Executives' use of networks can backfire too. "I left LinkedIn because I found I was connected to people I didn't really know," says Richard Guha, a partner at The New England Consulting Group who estimates he was connected to 300 people. Guha later rejoined LinkedIn and is now linked to about 43 people, a number he considers much more manageable.

Encover's Overstreet is another executive who has found a way to make the most of networks. He says LinkedIn gives him a better picture of a job candidate and lessens the

likelihood a potential employee can hide past work experiences. The extra reference checks showed Overstreet that his vice-president for sales candidate was not only a great salesman, but that he also had outstanding character. When eight of the back-door references volunteered information that the candidate had high integrity, Overstreet knew he had found himself a new vice-president. Sometimes, online references pay off.

Rachael King is a writer for BusinessWeek.com in San Francisco.

Who's Harnessing Social Networks?

Companies are finding a host of ways to tap online communities for recruiting, sales, advertising and business development

By Rachael King

Social networks are changing how corporate America does business. For some companies, the millions of young people who flock to sites like MySpace and Facebook -- they now reach an estimated 45% of active Web users, according to Nielsen/NetRatings - are too tempting an audience to pass up. JP Morgan Chase is among companies targeting ads directly at the social networking set.

Other corporations use social networking sites and technology to recruit employees. Microsoft recruiters tap business networking sites such as LinkedIn and OpenBC to find candidates. Goldman Sachs and Deloitte are building their own alumni networks to entice former employees to jump back on board. Still other firms are installing social network analysis software to reveal relationships among employees with executives at other firms to help speed the sales process.

What Facebook Learned from Search

by David Berkowitz, Tuesday, Nov 20, 2007 1:45 PM ET

Imagine if Picasso painted a search engine results page from Google. It would probably wind up looking like Facebook, which continually draws inspiration from search engines as it rolls out its services for marketers.

What Facebook did was take the classic search channels of paid search, natural search, and paid inclusion and adapt them to its own platform. Compared to search, Facebook's ad targeting isn't quite as precise as advertising to people who explicitly express interest

with their queries. Yet compared to contextual advertising, Facebook offers the proposition of targeting to explicitly expressed interests on members' profiles, and marketing is further amplified with the web of member connections often described as the "social graph."

Natural Search: News Feed

The News Feed on Facebook is the differentiator (for now) that makes Facebook best positioned to make great content go viral. In case you've avoided Facebook for fear of learning your colleagues are in relationship situations they can only describe as "it's complicated," the News Feed, which serves as the homepage when Facebook members log in, is an update of what a selection of your friends are doing on the site. You see notices when friends add other friends, post public messages, add or interact with applications, post photos, join groups, and engage in other activities.

The News Feed, updated with 40 to 60 listings per day, parallels search engines' natural search listings and always answers the query "What are my friends doing on Facebook today?" Facebook actually wants to take this a step further, retooling the question to "What are my friends doing online today?" That's the point of Beacon, one of Facebook's newest innovations where select publishers allow consumers to broadcast their actions on those sites to their Facebook profile. When you rent a movie at Blockbuster.com, for instance and you're also logged in to Facebook, you'll see an alert that your movie selection will be shared on Facebook, with an opt-out mechanism available. Some of your friends will then see that in your News Feed, and others will see it when they visit your profile page.

Beacon is one way that marketing messages can appear in the News Feed. Another is when a friend joins a marketer's Page, which marketers can set up for free, or add a marketer's application. The optimization isn't around the News Feed, though; it's around the content, which must be designed to go as viral as possible.

The most striking word that came up repeatedly when I heard someone from Facebook present was "algorithm." It's the algorithm that determines how many stories appear in the News Feed, which users members share connections with, and which types of actions are involved. It knows which friends you're most closely connected to, not just based on how you interact with them, but by factoring in when you and your friends independently interact with the same content. This algorithm might know who your friends are better than you do.

Paid Search: Ad Space

Facebook creatively refers to the area to the left of the News Feed (and any other page) as the Ad Space. The major difference between the Ad Space and paid search is that there's no mistaking that the Facebook ads there are in fact ads. Whether with search ads or even contextual links, it's sometimes hard for consumers to discern where the content ends and the ads begin. Few consumers should have any confusion on Facebook. For more on Facebook ads, see the previous columns on ad targeting by interest and member responses to targeting.

Paid Inclusion: Sponsored Stories

Paid inclusion has served as the hybrid blend of natural and paid search results. With search, paid inclusion links are never labeled as ads, as the engines that have offered this (Yahoo being the longest-standing advocate) have said sites only pay to get included, not to improve their ranking. With Facebook, Sponsored Stories appear in the News Feed and are clearly labeled as sponsored, but they reap many of the same benefits as "organic" News Feed stories. Sponsored Stories also include Social Ads, which appear when a member's friend interacts with an advertiser's Facebook Page or Application.

Now What?

One of the classic questions with search engine marketing is how to prioritize using natural and paid search. With Facebook, those questions are even more challenging, since it's harder to determine the return on investment (if you get 10,000 people to add your Facebook Page as a friend, what's that worth?) and best practices are just starting to emerge.

The cheapest options are the self-service ads, which can be tested on shoestring budgets, especially when limiting their placement to the Ad Space (running them as Sponsored Stories requires significantly higher bids) and Facebook Pages, which are available for free but must be promoted somehow (Facebook's preference: through advertising). Pages, if done well, also require development resources, just like Applications, and Pages require even more management resources in terms of monitoring comments and updating the page. The immediate goal is to attract more clicks by going viral and appearing in members' News Feeds. The process shares much in common with search engine optimization.

Facebook draws inspiration from search engines and how marketers use them, but Facebook's not trying to be Google. Google, after all, is best at sending its users to other sites. While Facebook can do that with Beacon, it is much more interested in drawing its members deeper into Facebook and emerging as the newest portal.

So who is Facebook trying to be? Can you think of any portals that became a major name in search while experimenting with their social media strategy, one that still offers paid inclusion, and one that, like Facebook, is repeatedly rumored as a takeover target for Microsoft? That's the company that needs to worry about getting outfoxed by Facebook's algorithm.

Digg Goes Deeper with Social Networking

With its audience expanding and interests diversifying, the popular site is launching new features to help users find like-minded friends

by Catherine Holahan

When Jay Adelson and Kevin Rose launched Digg three years ago, the Web site attracted a community of like-minded people. Digg users were technophiles, not unlike the company's founders. Rather than pay attention to the news dominating the national headlines, many early Digg users were more apt to respond to articles that Rose posted on new Web companies, open-source software, and even stories about mental illness that can haunt mathematicians after they solve complex puzzles.

But, with Digg's audience expanding to millions of monthly users worldwide, the techies have seen their preferred stories pushed from Digg's front page in favor of business news, sports write-ups, and bizarre comedic articles. This diversity of interest has led tech-minded Digg users to criticize the worthiness of popular articles and even accuse influential users of colluding to unfairly promote stories. "Now that nontech stories have exceeded the tech stories," says Adelson. "The challenge is on us to provide what our community needs."
Open for Discussion

What Digg's users need, says Adelson, are social-networking tools. On Sept. 19 the company is launching a host of new features that might seem more at home on Facebook or News Corp.'s (NWS) MySpace than on a Web site where users post links to online articles and other media. The intent is to make it easier for users to find others who share their passions by enabling them to form small groups of "friends" and create fuller personal profiles. "This is really the first time that we have enabled communications between users," says Rose.

Instead of submitting stories for review by the larger Digg community, users will be able to send—"shout" in Digg terms—story links along with messages to particular Digg friends.

Friends, or small groups of friends, also will be able to chat or discuss stories on their personal pages with posts to a message board, a feature akin to the "wall" on Facebook.
Stronger Identities

Digg's new emphasis on user profile pages is also designed to let users better define their presence on the site by posting multiple photos, personal interests, biographical information, and even links to a member's personal blog, social network profile, or Web page. With the addition of these features, it will also be possible to control whether that content can be viewed by all Digg users or just designated friends.

As before, the profile pages will still feature those stories that an individual user has submitted to Digg as well as the site's overall tally of how many users also "dug" that story. But in addition, readers will be able to view a history of an individual user's comments on stories. The new features are "going to give everyone a bit of an identity on the site," says Rose.
Community Engagement

The changes are just the first in a series of new features slated to debut by yearend. In October, Digg plans to add a section dedicated to images. The plans also call for a new function that will suggest stories, or potential Digg friends, to members based on the articles they have read. "There is going to be a section where you will see these suggestions of news items and pictures and videos based on what you have been looking at," says Rose. "It will find connections—people you constantly agree with and just don't know it."

Rose and Adelson hope the new social-networking capabilities will encourage users who only read articles on the site to become more engaged with the community. Currently, 15% to 20% of Digg's audience are registered users. The vast majority of the 20-million-plus users, by Digg's count, just read the posted stories. Adelson believes the ability to share information with a select group of people and craft a personal identity will encourage more passive users to get involved. "We are creating this in-between world for people who maybe don't want to share information with the whole planet," says Adelson. "We all have a short list of probably 5 to 10 people whom we feel compelled to share certain information with."
Microsoft Connection

For Digg, more registered users mean more people whose interests the company knows enough about to show them targeted advertising. In July, Digg announced that Microsoft (MSFT) will be the site's exclusive provider of targeted ads for three years

(BusinessWeek.com, 7/25/07). The deal came after a year of talks with various ad providers, says Adelson.

Of course, it's still an open question whether the site's new social-networking tools will prove popular with users. Digg knows better than most that, when dealing with communities, even slight changes can cause an uproar. But Rose says the community has been demanding more personalization and privacy for a while, even going so far as to build Digg applications for Facebook where they can discuss articles with smaller groups. Adelson and Rose first began discussing the features more than a year ago, but they decided to move slowly to ensure the applications would be robust enough to withstand the Digg community's well-worn reputation for overwhelming Web sites with traffic. "We have to build them to survive the Digg effect on themselves," says Rose.

Survey Studies Teen Social Networking

Survey Provides Glimpse of Young Social Networkers' Habits
By MARTHA IRVINE
The Associated Press

For 17-year-old Amanda Sanchez, social networking is an obsession, a distraction and when she moved to a new town last summer, it was her lifeline.

"Over the summer, MySpace was my best friend," says the high school junior, who lives in San Dimas, Calif. "I didn't know anybody after I moved, so I was on there all the time."

She usually checks her page a couple times a day and keeps in touch with old friends and those she's made at her new high school. So preferred is this form of communication among people her age that guys ask her for her MySpace address more often than her phone number.

It's pretty typical behavior, according to a new survey from the Pew Internet & American Life Project. The survey of 12- to 17-year-olds provides some of the first independent numbers on social networking for that age group and found that older girls, in particular, are the most likely to have used social networking sites, such as MySpace or Facebook.

The popular sites are among those that allow users to create profiles, swap messages and share photos and video clips, with the goal of expanding their circle of online friends.

The Pew survey, released Sunday, found that 70 percent of teen girls, ages 15 to 17, had profiles on social networking sites, compared with 57 percent of boys in that age bracket.

The numbers remained much the same across racial and economic lines.

"Most teens realize how much of social life is happening in these networks and that's something they often want to be a part of," says Amanda Lenhart, a senior research specialist at Pew.

The survey also found that MySpace was, by far, the most popular site. Of the youth who'd used social networking, 85 percent said they used MySpace, while 7 percent had done the same on Facebook and 1 percent on Xanga.

The survey of 935 U.S. youth, ages 12 to 17, was done by telephone in October and November. The results have a margin of sampling error of plus or minus 3.7 percentage points.

When looking at the entire age bracket 12 to 17 Lenhart and her colleagues found that 55 percent said they used social networking sites. Not surprisingly, she said, younger children in that age range were the least likely to do so, with just over a third of 12- and 13-year-olds saying they'd created a profile. Experts say this is partly due to the fact that sites such as MySpace require users to be 14 (though they can lie about their age to gain access).

Danah Boyd, a researcher at the University of Southern California, says the survey results largely match what she's found in the field when interviewing teens.

That includes findings that girls are most likely to use social networking as a way to maintain contact with current friends, as well as those they rarely see.

"Our brains are attuned to social data. We love gossip. We love details about one another," Boyd says. "In the process, we build friendships."

Meanwhile, the survey found that older boys who use social networking were more than twice as likely as older girls to say they use the sites to flirt 29 percent of older boys, compared with 13 percent of older girls.

"One of the things to take away from this report should be a sense of 'the kids are alright,' says Steve Jones, a communications professor at the University of Illinois at Chicago who studies new media. "It's clear that teens are not just willy-nilly using social networking sites and making themselves vulnerable to predators.

"That is not to say, of course, that there are not some who are careless or even some who seem to invite trouble," he adds, but says many young people appear to be aware of security.

In the survey, for instance, two-thirds of teens who've created profiles said only allowed friends they approved to access their profiles. And most teens knew the difference between a public and private profile.

About half said they used social networking to make new friends but Boyd says she's found that, in many instances, that means they're getting to know "friends of friends," not strangers.

Pew researchers say they will release more survey data on issues of privacy and security in the months to come.

While private messaging within social networks is common, the survey found that 84 percent of young social networkers also regularly post messages on friends' pages or on their "walls," as they're commonly known. Anyone with access to that page can view the messages, which could include anything from a teasing comment to plans to meet up.

In her research, Boyd has found that these public displays of conversation "are genuinely unique to this age group."

"They're looking for validation from their peer group but aren't we all?" she says.

Still, not everyone is convinced that the social networking trend is a good one.

"Each year, incoming students are more distracted than ever," says Michael Bugeja, director of Iowa State University's journalism school and author of the book "Interpersonal Divide: The Search for Community in a Technological Age."

"These data from the Pew survey verify what we already know that the situation will get worse before it improves."

On the Net:

Pew: http://www.pewinternet.org/

Martha Irvine is a national writer specializing in coverage of people in their 20s and younger. She can be reached at mirvine(at)ap.org

IBM's Social Networking Push

With collaboration software called Lotus Connections, Big Blue competes with Microsoft as Web 2.0 expands into the business world

by Steve Hamm

In the earlier days of computing, innovations that were created for corporations gradually seeped into consumer products. But now, the traffic is going both ways—and moving quickly. The most significant example of this trend is the social networking phenomenon. Web sites like MySpace, YouTube, and Flickr have seen their popularity boom with quick and easy technologies for doing everything from creating blogs and forming communities to posting photos and videos on the Web. Now these technologies are starting to arrive in packages designed specifically for large companies. Ready or not, MySpace is coming to the enterprise.

A major advance came Jan. 22 with IBM's announcement of a new product called Lotus Connections. It wraps five social networking technologies up into one integrated package—similar to what Microsoft's Office does for traditional desktop productivity software such as Word and Excel. And, if IBM handles this right, its package could rapidly spread the use of so-called Web 2.0 applications in the business world. "While social computing software is perceived as being at the fringe of most large businesses, it's actually moving to the center fast—because it's about how the next generation of employees communicate, and create and share ideas," says Franks Gens, senior vice-president for research at tech market research IDC.

The IBM package includes five applications: profiles, where employees post information about their expertise and interests; communities, which are formed and managed by people with common interests; activities, which are used to manage group projects; bookmarks, where people share documents and Web sites with others; and blogs, where people post ongoing commentaries. "The business market is showing a lot of interest in using social networking tools to improve productivity. It's about helping people find experts and the information they need to get their jobs done," says Steve Mills, the general manager of the software group at IBM (IBM). The commercial version of the package is to be delivered in the second quarter.

Other Collaborative Products

Up until now, companies experimenting with social networking software picked among a wide variety of individual programs, most of which were created with the consumer—

rather than the corporate user—in mind. "IBM's is the first and only suite that brings together all these capabilities in a single package," says analyst Mark Levitt of IDC. In addition, Lotus Connections offers security, access control, and review features that are important to corporations.

The Lotus Connections introduction is part of a renewed push by IBM in collaboration software. At IBM's annual Lotusphere user conference on Jan. 22, the company announced several products, including the public beta test version of its next update for its Notes e-mail and collaboration software, which will go on sale in the first half of the year; and a new package, called Lotus Quickr, which provides software connectors to link popular desktop applications including Microsoft Office to blogs, wikis, and other social networking programs.

The announcements come at a time when IBM's $18 billion software group is on a tear. Software revenues increased 14% to $5.6 billion in the fourth quarter, and revenues in the Lotus division, where IBM's collaboration software is produced, grew by more than 30%—powered in part by a new release of the company's Lotus Sametime instant-messaging package.

Rivals' Distinct Offerings

IBM is in fierce competition with Microsoft (MSFT) in the markets for communications and collaboration software, and the Lotus Connections offering could give it a leg up—at least temporarily. Last November, Microsoft introduced a new version of its collaboration software, Microsoft SharePoint Server 2007, which includes some basic social networking technologies, including blogs and wikis.

However, analysts say Lotus Connections offers richer functions than SharePoint and it's easier for workers to get going with the IBM product. "Ventura (the code name for Lotus Connections) is a more sophisticated social computing platform than what you get with Microsoft," says analyst Erica Driver of market researcher Forrester Research.

Unlike IBM, however, Microsoft added the social networking functions as features of its already-existing product rather than making it a separate package. "Having all of this stuff on the same infrastructure is very powerful," says Kirk Koenigsbauer, the general manager of SharePoint. For instance, the new release has a search function that allows users to find sharable content within any of SharePoint's programs, including its content management and business intelligence data. So, for corporate buyers, the choice will be between one large, multipurpose program and a slimmer, more focused one.

IBM has more than 20 corporations testing Lotus Connections, but, in fact, the software is already battle-tested. Most of the applications have been used inside IBM for months or years. For instance, with IBM's internal "blue pages" program, employees can search through the entire staff of more than 340,000 people for those with just the expertise they need to answer a question. The company decided just nine months ago to fold those technologies together and turn them into commercial products. "We were hearing so much marketplace buzz and so much was going on in Web 2.0, and it was clear we had an opportunity to build something for the enterprise," says Jeff Schick, vice-president, social computing for IBM's Lotus division.

Testers' Rave Reviews

During an IBM demonstration of Lotus Connections, it was clear that the product is easy to use and potentially powerful. Rather than relying on employees to load their work files into an old-fashioned knowledge management program, the new technology allows them to quickly attach electronic tags to important documents and interesting Web pages, and have them collected and updated behind the scenes by the software.

Some of the beta test customers are raving about it. The Film Foundation in Los Angeles has been using the activities application in Lotus Connections to help manage one of its major projects: The Story of Movies, an arts-appreciation program for high schools and middle schools. A widely scattered ad hoc team of about 60 researchers, writers, editors, designers, teachers, and movie creators are preparing educational materials to support teaching around The Day the Earth Stood Still, the 1951 sci-fi classic. Rather than using e-mail and sending paper documents around, they're using the IBM software to brainstorm, review each other's work, and get alerts when something new comes in to review.

The project is off to a smooth start, and Jennifer Ahn, managing director of the foundation, expects it to take about six months to complete—compared with 18 months for previous similar projects. "I'm sure we'll start doing more with IBM software, too," says Ahn. "The activities piece has been so successful for us, and I'd love to see what else the program can do."

Web 2.0 Has Corporate America Spinning

What every CEO needs to know about the array of new tools that foster online collaboration -- and could revolutionize business

Silicon Valley loves its buzzwords, and there's none more popular today than Web 2.0. Unless you're a diehard techie, though, good luck figuring out what it means. Web 2.0 technologies bear strange names like wikis, blogs, RSS, AJAX, and mashups. And the startups hawking them -- Renkoo, Gahbunga, Ning, Squidoo -- sound like Star Wars characters George Lucas left on the cutting-room floor.

But behind the peculiarities, Web 2.0 portends a real sea change on the Internet. If there's one thing they have in common, it's what they're not. Web 2.0 sites are not online places to visit so much as services to get something done -- usually with other people. From Yahoo!'s (YHOO) photo-sharing site Flickr and the group-edited online reference source Wikipedia to the teen hangout MySpace, and even search giant Google (GOOG), they all virtually demand active participation and social interaction (see BW Online, 9/26/05, "It's A Whole New Web"). If these Web 2.0 folks weren't so geeky, they might call it the Live Web.

And though these Web 2.0 services have succeeded in luring millions of consumers to their shores, they haven't had much to offer the vast world of business. Until now. Slowly but surely they're scaling corporate walls. "All these things that are thought to be consumer services are coming into the enterprise," says Ray Lane, former Oracle (ORCL) president and now a general partner at the venture capital firm Kleiner Perkins Caufield & Byers (see BW Online, 6/5/06, "A VC's View of Web 2.0").

CORPORATE BLOGGERS. For all its appeal to the young and the wired, Web 2.0 may end up making its greatest impact in business. And that could usher in more changes in corporations, already in the throes of such tech-driven transformations as globalization and outsourcing. Indeed, what some are calling Enterprise 2.0 could flatten a raft of organizational boundaries -- between managers and employees and between the company and its partners and customers. Says Don Tapscott, CEO of the Toronto tech think tank New Paradigm and co-author of The Naked Corporation: "It's the biggest change in the organization of the corporation in a century."

Early signs of the shift abound. Walt Disney (DIS), investment bank Dresdner Kleinwort Wasserstein, and scores of other companies use wikis, or group-editable Web pages, to turbo-charge collaboration. Other firms are using button-down social-networking services

such as LinkedIn and Visible Path to dig up sales leads and hiring prospects from the collective contacts of colleagues. Corporate blogging is becoming nearly a cliché, as executives from Sun Microsystems(SUNW) chief executive Jonathan Schwartz to General Motors (GM) Vice-Chairman Bob Lutz post on their own blogs to communicate directly with customers.

Just as the personal computer sneaked its way into companies through the back door, so it's going with Web 2.0 services. When Rod Smith, IBM's (IBM) vice-president for emerging Internet technologies, told the information technology chief at Royal Bank of Scotland about wikis last year, the exec shook his head and said the bank didn't use them. But when Smith looked at the other participants in the meeting, 30 of them were nodding their heads. They use wikis indeed. "Enterprises have been ringing our phones off the hook to ask us about Web 2.0," says Smith.

ONE GIANT COMPUTER. Also just like the PC, Web 2.0's essential appeal is empowerment. Increasing computer power, nearly ubiquitous high-speed Internet connections, and ever-easier Web 2.0 services give users unprecedented power to do it themselves. It doesn't hurt that many of these services are free, supported by ads, or at their most expensive still cost less than cable. "All the powerful trends in technology have been do-it-yourself," notes Joe Kraus, CEO of wiki supplier JotSpot.

In essence, these services are coalescing into one giant computer that almost anyone can use, from anywhere in the world. When you do a Google search, for instance, you're actually setting in motion an array of programs and databases distributed around the globe on computer hard drives. Not only that, people who tap services such as MySpace, eBay (EBAY), and the Internet phone service Skype actually are improving the tools by the very act of using them. MySpace, for instance, becomes more useful with each new contact or piece of content added.

The collective actions, contacts, and talent of people using services such as MySpace, eBay, and Skype essentially improve those services constantly (see BW Online, 6/20/05, "The Power Of Us"). "We're shifting from a presentation medium to a programming platform," says Tapscott. "Every time we go on these sites, we're programming the Web."

PROBLEM SOLVING. Not surprisingly, a lot of executives remain skeptical. For some, it's hard to imagine the same technology that spawns a racy MySpace page also yielding a new corporate collaboration service. "There's a big cultural difference between the Web 2.0 people and the IT department," notes consultant John Hagel, author of several books on technology and business. More than that, information technology managers naturally

don't want people using these services willy-nilly, because they're often not secure from hackers or rivals.

Nonetheless, the notions behind Web 2.0 clearly hold great potential for businesses -- and peril for those that ignore them. Potentially, these Web 2.0 services could help solve some vexing problems for corporations that current software and online services have yet to tackle.

For one, companies are struggling to overcome problems with current online communications, whether it's e-mail spam or the costs of maintaining company intranets that few employees use. So they're now starting to experiment with a growing array of collaborative services, such as wikis. Says Ross Mayfield, CEO of the corporate wiki firm Socialtext: "Now, most everybody I talk to knows what Wikipedia is -- and it's not a stretch for them to imagine a company Wikipedia."

MORE FLEXIBLE. And not just imagine -- Dresdner Kleinwort Wasserstein, for instance, uses a Socialtext wiki instead of e-mail to create meeting agendas and post training videos for new hires. Six months after launching it, traffic on the 2,000-page wiki, used by a quarter of the bank's workforce, already has surpassed that of the company's intranet (see BW Online, 11/24/05, "E-Mail Is So Five Minutes Ago").

Corporations also are balking at installing big, multimillion dollar software programs that can take years to roll out -- and then aren't flexible enough to adapt to new business needs. "They're clunky and awkward and don't encourage participation," grumbles Dion Hinchcliffe, chief technology officer of Washington, D.C. tech consultant Sphere of Influence.

That's why companies are warming to the idea of opening their information-technology systems to do-it-yourselfers. And they spy an intriguing way to do that with what are known as mash-ups, or combinations of simple Web 2.0 services with each other into a new service (see BW Online, 7/25/05, "Mix, Match, and Mutate").The big advantage: They can be done very quickly with existing Web services.

BUSINESS NETWORKS. IBM, for instance, last year helped the U.S. Chamber of Commerce Center for Corporate Citizenship mash together a one-stop shop for people displaced by Hurricane Katrina to find jobs. People type into one box the kind of job they're seeking, and the site searches more than 1,000 job boards, then shows their location on a Google Map. "This [mashups] could be a way to provide solutions to customers within hours instead of months," says IBM's Smith.

Companies are starting to take a page from MySpace, Facebook, and other social-networking services. The reason: As appealing as that social aspect is for teens and anyone else who wants to stay in closer touch with friends, it's even more useful in business. After all, businesses in one sense are social networks formed to make or sell something.

So it's no surprise that corporate-oriented social networks are gaining a toehold. LinkedIn, an online service for people to post career profiles and find prospective employees, is the recruiting tool of choice for a number of companies. "In 2003, people thought of us as a weird form of social networking," notes LinkedIn CEO Reid Hoffman. "Now, people are saying, 'Oh, I get it, it's a business tool.'" (see BW Online, 4/10/06, "How LinkedIn Broke Through").

STAYING YOUNG. Despite all the activity so far, it's still early days for this phenomenon some techies (who can't help themselves) call Enterprise 2.0. For now, the key challenge for executives is learning about the vast array of Web 2.0 services. And that requires more than simply checking in with the premier Web 2.0 blog, TechCrunch (see BW Online, 6/2/06, "Tip Sheet: Harnessing Web 2.0").

Where to start? Watch what kids are doing. If they use e-mail at all, it's a distant fourth to instant messaging, personal blogs, and the social networking sites, because they're much easier to use for what matters to them: staying in touch with friends. Companies need to provide more compelling ways for this highly connected bunch as they move into the workforce, bringing their valuable contacts in tow. "Young people are not going to go to companies where they can't use these new tools," says Lane. "They'll say, 'Why would I want to work here?'"

It's also critical for executives to try out these services themselves: Create a MySpace page. Open a Flickr account and upload a few photos. Write a Wikipedia entry. Create a mashup at Ning.com. "The essence of Web 2.0 is experimentation, so they should try things out," says venture capitalist Peter Rip of Leapfrog Ventures, an investor in several Web 2.0 startups.

FREE P.R. Then there's blogging. It's worthwhile to spend considerable time reading some popular blogs, which you can find at Technorati.com, to get a feel for how online conversation works. Only then should execs try their hand at blogging -- and perhaps first inside their companies before going public. Thick skin is a requirement, since the "blogosphere" can be brutal on anything that sounds like spin.

But the payoff can be substantial, if hard to quantify. Genial Microsoft (MSFT) blogger Robert Scoble, for instance, is credited by many Redmond watchers with doing more to improve the company's image than millions of dollars in public relations. In no small part that's because he has shown a willingness to criticize his company at times.

And companies should to provide open forums for their customers to express themselves. That can mean critical, even vicious comments. One Boeing (BA) exec who started a blog, for instance, was told early on: "Take down your blog. You embarrass us (see BW Online, 5/22/06, "Into The Wild Blog Yonder")."

NEW MANAGEMENT. But the upside can be a brand to which people feel a stronger emotional tie. Says Forrester Research analyst Chris Charron: "In the end, the brand is owned not just by the people who create it, but by the people who use it."

All that's going to require more than slick technology. Executives, long used to ruling from the top of the corporate hierarchy, will have to learn a new skill: humility. "Companies that are extremely hierarchical have trouble adapting," says Tim O'Reilly, CEO of tech book publisher O'Reilly Media, which runs the annual Web 2.0 Conference "They'll be outperformed by companies that don't work that way." Ultimately, taking full advantage of Web 2.0 may require -- get ready -- Management 2.0

Coming at you, and real soon, Web 3.0

And just when you thought you were grasping Web 2.0 Now 3.0…

By Heidi Dawley
Nov 1, 2007

It seems only a blink in time ago that Web 2.0 was being talked about, though just what it was remained, and still remains, something of a mystery, being one of those internet terms whose meaning shifts depending on who's talking, and at what conference of internet seers.

But boiled off to its essence, Web 2.0, an idea dating back to 2004, meant and means an internet of zippy connections where surfers can actually interact with one another, the epitome being, of course, YouTube or MySpace.

That's opposed to what came before, Web 1.0, if you will, though no one calls it that, in which folks were happy to read content and send emails.

Now comes Web. 3. 0. It's a term heard more and more these days as the new, different thing, a huge advance on 2.0.

And, as with 2.0, the term is more disputed than discussed, with all manner of definitions being tossed about.

In some ways that make sense. Looked at broadly, Web 3.0 is everything the internet will become once it achieves Web 2.0. Describing Web 3.0 is like describing the house of the future or the car of the future. It's whatever the speaker wants it to be.

Which is why a lot of internet people back off from the discussion entirely.

"Web 2.0 is a goal that we haven't even come close to reaching yet," says Richard Townsend, digital media strategist for Circus Street Communications in London. "For marketers to start to think about Web 3.0 would be misleading."

Yet that said, there is a growing consensus of what Web 3.0 will be, and perhaps the best way to describe it is as an intelligent internet universe. Think of it as a seamless network of databases that interact with great fluidity and have the capacity to not just crunch data but to interpret it.

Imagine databases that can learn, computers that can read web pages and understand them.

It's what folks are calling the semantic web (from the Greek sémantikós, to have meaning).

But there are many other notions floating about regarding Web 3.0.

"Masses of people, including vendors, technology proponents, analysts, bloggers and authors, are trying to use the Web 3.0 term to suit their needs and visions," observes the Gartner Group, the consulting outfit. So far, it counts at least five different ideas out there. More are expected.

"The name Web 3.0 is just a holding page for the technologies to come," says Jean-Paul Edwards, head of media futures at OMD UK Group. "We will never get to Web 3.0 because when the development comes, we will call them something else."

What are advertisers to make of this?

As Edwards sees it, the next big thing will be predictive targeting. “Ultimately the advertising in Web 3.0 will be for things that you don’t realize you want yet,” he explains.

Agrees Emily Riley, advertising analyst at Jupiter Research: “Behavioral targeting exists today, but it will continue to evolve. This could include some form of predictive modelling, which is something that agencies are modelling today.”

In essence, predictive targeting would be about gathering information on where a person goes online and analyzing it to the end of anticipating that person's likely next purchases. For instance, a person visiting parenting sites could become a target for new car ads. After all, a growing family might need a bigger car.

As Townsend explains it, it would be like the second or third generation of the way sites like Amazon now make individual recommendations based on what the consumer has viewed in the past. “Ultimately it is about integrating information more easily,” he says.

But in Web 3.0 it could also happen that advertisers turn to targeting machines, rather than people.

Why machines? Because, as Edwards explains, it may come to pass that people begin assigning some of their purchasing decisions to their computers.

For instance, they could entrust a computer avatar to scout the net for the best deal on all the household cleaning products and then have the avatar negotiate the price and make the buy.

Indeed, Edwards sees brands potentially spending significant portions of their ad budgets targeting these avatars. “For marketers there will be enormous changes.”

Another big change to come for advertisers is how they go about finding their audiences, and it promises to be a great deal trickier than today.

Consumers are going to be viewing the world across three screens – the mobile, TV and computer. And they are going to be watching what they want, where they want.

Content creators will attach sponsorship or advertising to the actual show, rather than to a particular channel. Says Riley: “They’ll need the right ad for the right piece for the right person."

Readers Validate the Company as First Runner-Up, Regional (North American) Content Delivery Network, second only to RealNetworks.

New FaceBook feature challenges LinkedIn

Professionals are flocking to Facebook ,and soon they'll be able to divide their business life from their social life.

By Lindsay Blakely, Fortune
October 2 2007: 10:19 AM EDT

(Fortune) -- A seemingly innocuous change is coming to Facebook that could pose a threat to business networking site LinkedIn: the ability to separate your work "friends" from your social ones.

This may not sound significant, but as Facebook's appeal spreads beyond college students, professionals are joining the social networking site to keep in touch with colleagues and business contacts. Facebook, which already hosts networks for employees of companies from Apple (Charts, Fortune 500) to Zales (Charts), says the new feature "is in the works."

"They've got to see this as a major threat," says Jupiter media analyst Barry Parr. "At some point people are going to want to simplify" their networking activities. "The open question that no one is really prepared to answer yet is how many networks do you really want to belong to?"

Facebook and LinkedIn haven't competed head-on because they both promised different value for their members. Facebook was for communicating with friends; LinkedIn was the place for making and keeping business contacts.

LinkedIn is betting that distinction will remain clear. "We consider ourselves a professional network," says LinkedIn communications director Kay Luo. "The thing about Facebook that prevents it from being useful the way that LinkedIn is useful is the search capabilities." A search on LinkedIn will reveal some resume information. (For instance, a search for Mark Zuckerberg shows his current position as CEO of Facebook and his education history -- he quit Harvard to work on Facebook.)

Though Facebook recently decided to allow the public to search its member database, privacy controls mean that the results are usually limited and not as useful for, say, recruiters or job-seekers.

"Facebook has historically been more about privacy," says Jeremy Liew, a partner at Lightspeed Ventures and an investor in startups like widget company RockYou. "It would be odd to open it up to messaging from people who don't know you. Even if this capability appeared, it might not be culturally accepted by Facebook users."

Professional Discussion Groups And ESP Reviews

by Melinda Krueger , Tuesday, December 11, 2007

Dear Email Diva,

In your response to Mr. Einstein last week , who was searching for an Email Service Provider, you tell him to "look to professional discussion groups" for recommendations. Where can I find such groups? In the six months I've been involved in email marketing, I have yet to find groups other than insiders groups (like Email Insiders and Old Timers), which don't offer membership to newbies like me.

Chris Harris
Email Services Specialist
Blackbaud, Inc.

Dear Chris,

Thanks to social networking sites, everyone can be part of an insider or professional discussion group.

LinkedIn has an "Answers" section. Members can post a question or answer. A search for Email Service Providers turned up twelve recommendations . One can rate an answerer on the value of the content posted and view all answers posted by an individual, establishing the professional reputation of the member.

General Q&A features are available on Amazon's Askville and Yahoo Answers], but, unlike LinkedIn, the site caters to a broad audience rather than a business-oriented audience.

Plaxo has groups that members can join and post messages to those within the group. There is a group called "@ Email Marketing @." Members can post on any topic, so the interaction is less focused than a Q&A section, but could be of value to you as well.

Facebook also has groups that facilitate posts to members on any topic. The Email Experience Council has the "The 'unofficial' Email Experience Council Group" network at your disposal.

Tamara Gielen created the Email Marketer's Club on Ning.com, which has an international audience and a presence on Facebook as well. One has to be approved to join -- but since the Email Diva got in, the membership requirements do not appear to be too stringent.

My only question is: how do people find time to participate in all these great networking/ show-off-your-expertise opportunities?

Correction on last week's article from Nancy Darish, director of marketing at eDialog: "JupiterResearch last published their E-mail Marketing Buyer's Guide in 2006, not 2005 as noted. This report does in fact contain information for small and mid-sized businesses. Jupiter publishes this report every year, and the 2007 ESP Buyer's Guide will be out the week of Dec. 17."

Thanks, Nancy. May we all have colleagues who have "got our backs" and take the time to share, via email, blogs and social networks.

Good Luck!

The Most Exclusive Social Networks

As Facebook and MySpace continue to welcome a wider and wider array of members, some people are turning to more discriminating social sites

By Douglas MacMillan and Paula Lehman

Facebook began as a private online network of Harvard students, but quickly became one of the most trafficked public forums on the Internet. In September, 2006, after expanding over two years to include all college students, select high school students, and employees

at some large companies, Facebook opened its doors to the general public. That sparked a flood of new members from previously untapped demographics including networking professionals and retired baby boomers. But many original members grumbled that the new open-door policy betrayed the tight-knit community of the original network.

As Facebook and other large networks, such as rival MySpace, expand their memberships, some of their erstwhile members have migrated to sites that offer exclusivity. Such "gated" social networks aim to keep out the riffraff by demanding credentials at the virtual door—be they job description, attractiveness, or IQ.

Business Goes Straight to Video

A growing number of companies turn to online video, and the word of mouth that accompanies it, for everything from advertising to recruiting

Blendtec Chief Executive Tom Dickson had an unorthodox method for testing his company's blenders: He used them to pulverize two-by-fours. His marketing director, George Wright, decided to videotape the exploits, adding other objects, from marbles to rake handles. Then they posted the clips to the Web.

The rest, as they say, is marketing history. Starting with an initial investment of about $50 for supplies, the pair since November has created and posted more than 25 low-budget videos, fielding hundreds of requests to grind up everything from an Apple (AAPL) iPod to a grandmother's false teeth. Dickson even appeared on the Today Show, where he pureed an entire rotisserie chicken, bones and all, with a can of Coke.

"Really our whole intent is brand awareness and market awareness," says Blendtec's Wright. "People will remember that there's a blender that will blend marbles if their blender isn't blending ice very well." He says Blendtec videos have been viewed more than 17 million times.

Cheaper by the Million

Dickson and Wright owe their newfound fame to the power of online video, which is exploding along with the proliferation of high-speed Internet connections and the growing popularity of video-sharing Web sites like Google's (GOOG) YouTube. The number of U.S. video viewers is expected to surge to 157 million in 2010, from 107.7 million in 2006, according to eMarketer. The consulting firm estimates that more than one-third of the U.S.

population, aged 3 and older, viewed videos on the Internet at least once a month in 2006.

Numbers like that aren't lost on Madison Avenue. Major brands such as Coca-Cola (KO), Diageo's (DEO) Smirnoff, and Unilever's (UL) Dove are creating online video campaigns that rely on word of mouth, often generating millions of views—for far less than it costs to place ads on TV (see BusinessWeek.com, 7/23/06, "Raising the Bar on Viral Web Ads").

Corporations are using Web-based video in other ways, too. Tech companies such as IBM (IBM) and Microsoft (MSFT) use customer testimonial videos in pitches to prospective clients.

Enterprise Rent-A-Car, Google, and Nordstrom (JWN) post videos on their Web sites to help recruit new workers. Corporate bloggers are experimenting with video to give audiences behind-the-scenes glimpses of the inner workings of companies like Microsoft, while companies such as Deloitte and American Express (AXP) use video to enhance training.

Calculated Risks

One of the most common uses for online video is as a low-priced marketing tool. PepsiCo's (PEP) Frito-Lay unit is harnessing the homemade video craze to promote its Doritos brand at this year's Super Bowl. Frito-Lay will award $10,000 and a trip to Miami for a Super Bowl viewing party to each of the five finalists in a competition to produce the best homemade commercial.

It's a risky move, considering that other companies can spend as much as $2 million producing a Super Bowl ad and millions more for air time. "We talked about the risks but we also understood that if you want big rewards you have to take big risks," says Ann Mukherjee, vice-president for marketing at Frito-Lay.

But the risks are calculated. According to a recent survey conducted by Burst Media, an online media and technology company, 56.3% of online video viewers recall seeing advertisements in content they have watched.

Circuit City has gone to social media to encourage social networking among consumers / How long before Santa jumps on the social media bandwagon?

If you doubt the power of social media, consider what one major retailer is doing to boost sales, gain customer loyalty, and grab attention this holiday season.

Black Friday (the day after Thanksgiving Day) is one of the most competitive and profitable shopping days for retailers each year.

Check out what Circuit City is doing to build buzz within its retail community of consumer electronics shoppers…

Circuit City has gone to social media to encourage social networking among consumers about the products they are shopping for this holiday season.

CityCenter Community, a social networking destination on CircuitCity.com, has added blogs, personal consumer profiles, and photo galleries for members of the Circuit City online community.

The idea is for shoppers to share their ratings and reviews about popular products, such as flat-panel TVs and computers, home theater systems, digital cameras, and other items.

Circuit City hopes to monitor customer demand for key items and adjust its inventories accordingly in response to the social media-driven conversations in CityCenter.

It's an organic way for Circuit City to connect with its customers and encourage them to participate in the shopping experience beyond just consumer spending.

Circuit City customers can interact directly with one another, sharing their opinions about the products and support issues. This kind of openness should lead to better and more direct customer service for Circuit City, which should lead to improved customer loyalty and more informed buying decisions.

Is this the future of online commerce? What do you think?

Additional Information

For additional information to the concepts, resources, and materials found in this book see these sites.

http://www.articulate.com/

http://www.membershipsiteowner.com/

http://www.5minutemedia.com/

http://www.ibusinesspromoter.com/index.htm (SEO software)

http://billganz.yelp.com

www.slipstreamvideo.com

http://www.techmastiff.com/index.html

Appendix A - References

References 1

Barnes, J. A. "Class and Committees in a Norwegian Island Parish", *Human Relations* 7:39-58

Berkowitz, S. D. 1982. *An Introduction to Structural Analysis: The Network Approach to Social Research.* Toronto: Butterworth.

Brandes, Ulrik, and Thomas Erlebach (Eds.). 2005. *Network Analysis: Methodological Foundations* Berlin, Heidelberg: Springer-Verlag.

Breiger, Ronald L. 2004. "The Analysis of Social Networks." Pp. 505-526 in *Handbook of Data Analysis,* edited by Melissa Hardy and Alan Bryman. London: Sage Publications. *Excerpts in pdf format*

Burt, Ronald S. (1992). *Structural Holes: The Structure of Competition.* Cambridge, MA: Harvard University Press.

Carrington, Peter J., John Scott and Stanley Wasserman (Eds.). 2005. *Models and Methods in Social Network Analysis.* New York: Cambridge University Press.

Christakis, Nicholas and James H. Fowler "The Spread of Obesity in a Large Social Network Over 32 Years," *New England Journal of Medicine* 357 (4): 370-379 (26 July 2007)
Doreian, Patrick, Vladimir Batagelj, and Anuska Ferligoj. (2005). Generalized Blockmodeling. Cambridge: Cambridge University Press.
Freeman, Linton C. (2004) *The Development of Social Network Analysis: A Study in the Sociology of Science.* Vancouver: Empirical Press.
Hill, R. and Dunbar, R. 2002. "Social Network Size in Humans." Human Nature, Vol. 14, No. 1, pp. 53-72.Google
Jackson, Matthew O. (2003). "A Strategic Model of Social and Economic Networks". *Journal of Economic Theory* **71**: 44-74. pdf
Huisman, M. and Van Duijn, M. A. J. (2005). Software for Social Network Analysis. In P J. Carrington, J. Scott, & S. Wasserman (Editors), *Models and Methods in Social Network Analysis* (pp. 270-316). New York: Cambridge University Press.
Krebs, Valdis (2006) Social Network Analysis, A Brief Introduction. (Includes a list of recent SNA applications Web Reference.)
Lin, Nan, Ronald S. Burt and Karen Cook, eds. (2001). *Social Capital: Theory and Research.* New York: Aldine de Gruyter.
Mullins, Nicholas. 1973. *Theories and Theory Groups in Contemporary American Sociology.* New York: Harper and Row.
Müller-Prothmann, Tobias (2006): Leveraging Knowledge Communication for Innovation. Framework, Methods and Applications of Social Network Analysis in Research and Development, Frankfurt a. M. et al.: Peter Lang, ISBN 0-8204-9889-0.
Manski, Charles F. (2000). "Economic Analysis of Social Interactions". *Journal of Economic Perspectives* 14: 115-36. [9] via JSTOR
Moody, James, and Douglas R. White (2003). "Structural Cohesion and Embeddedness: A Hierarchical Concept of Social Groups." *American Sociological Review* 68(1):103-127. [10]
Newman, Mark (2003). "The Structure and Function of Complex Networks". *SIAM Review* 56: 167-256. pdf
Nohria, Nitin and Robert Eccles (1992). *Networks in Organizations.* second ed. Boston: Harvard Business Press.
Nooy, Wouter d., A. Mrvar and Vladimir Batagelj. (2005). *Exploratory Social Network Analysis with Pajek.* Cambridge: Cambridge University Press.
Scott, John. (2000). *Social Network Analysis: A Handbook.* 2nd Ed. Newberry Park, CA: Sage.
Tilly, Charles. (2005). *Identities, Boundaries, and Social Ties.* Boulder, CO: Paradigm press.
Valente, Thomas. (1995). *Network Models of the Diffusion of Innovation.* Cresskill, NJ: Hampton Press.

Wasserman, Stanley, & Faust, Katherine. (1994). *Social Networks Analysis: Methods and Applications.* Cambridge: Cambridge University Press.
Watkins, Susan Cott. (2003). "Social Networks." Pp. 909-910 in *Encyclopedia of Population.* rev. ed. Edited by Paul Demeny and Geoffrey McNicoll. New York: Macmillan Reference.
Watts, Duncan. (2003). *Small Worlds: The Dynamics of Networks between Order and Randomness.* Princeton: Princeton University Press.
Watts, Duncan. (2004). *Six Degrees: The Science of a Connected Age.* W. W. Norton & Company.
Wellman, Barry (1999). *Networks in the Global Village.* Boulder, CO: Westview Press.
Wellman, Barry. 2001. "Physical Place and Cyber-Place: Changing Portals and the Rise of Networked Individualism." *International Journal for Urban and Regional Research* 25 (2): 227-52.
Wellman, Barry and Berkowitz, S.D. (1988). *Social Structures: A Network Approach.* Cambridge: Cambridge University Press.
Weng, M. (2007). *A Multimedia Social-Networking Community for Mobile Devices* Interactive Telecommunications Program, Tisch School of the Arts/ New York University
White, Harrison, Scott Boorman and Ronald Breiger. 1976. "Social Structure from Multiple Networks: I Blockmodels of Roles and Positions." *American Journal of Sociology* 81: 730-80.

Internet

Vancouver: Empirical Press
A.R. Radcliffe-Brown, "On Social Structure," *Journal of the Royal Anthropological Institute:* 70 (1940): 1-12.
[Nadel, SF. 1957. *The Theory of Social Structure.* London: Cohen and West.
Mark Granovetter, "Introduction for the French Reader," *Sociologica* 2 (2007): 1-8;
Wellman, Barry. 1988. "Structural Analysis: From Method and Metaphor to Theory and Substance." Pp. 19-61 in *Social Structures: A Network Approach*, edited by Barry Wellman and S.D. Berkowitz. Cambridge: Cambridge University Press.
Mark Granovetter, "Introduction for the French Reader," *Sociologica* 2 (2007): 1-8;
Wellman, Barry. 1988. "Structural Analysis: From Method and Metaphor to Theory and Substance." Pp. 19-61 in *Social Structures: A Network Approach*, edited by Barry Wellman and S.D. Berkowitz. Cambridge: Cambridge University Press. (see also Scott, 2000 and Freeman, 2004).
Barry Wellman, Wenhong Chen and Dong Weizhen. “Networking Guanxi." Pp. 221-41 in Social Connections in China: Institutions, Culture and the Changing Nature of Guanxi,

edited by Thomas Gold, Douglas Guthrie and David Wank. Cambridge University Press, 2002.
Could It Be A Big World After All?: Judith Kleinfeld article.
Electronic Small World Experiment: Columbia.edu website.
Moody, James, and Douglas R. White (2003). "Structural Cohesion and Embeddedness: A Hierarchical Concept of Social Groups." *American Sociological Review* 68(1):103-127. [1]
Netwiki: accessed through The University of North Carolina website.

References 2

Guide to E-Commerce Technology 2007-08 Edition by Internet Retailer
Jason Olim, Matthew Olim and Peter Kent, "The Cdnow Story: Rags to Riches on the Internet", Top Floor Publishing, January 1999 ISBN 0-9661-0326-2
a b Shawn Collins (November 10, 2000), History of Affiliate Marketing, ClickZ Network, retrieved October 15, 2007
Frank Fiore and Shawn Collins, "Successful Affiliate Marketing for Merchants" , from pages 12,13 and 14. QUE Publishing, April 2001 ISBN 0-7897-2525-8
Daniel Gray, "The Complete Guide to Associate and Affiliate Programs on the Net", McGraw-Hill Trade, November 30, 1999 ISBN 0-0713-5310-0
October 2006, Affiliate Marketing Networks Buyer's Guide (2006), Page 6, e-Consultancy.com, retrieved June 25, 2007
Anne Holland, publisher (January 11 2006), Affiliate Summit 2006 Wrap-Up Report -- Commissions to Reach $6.5 Billion in 2006, MarketingSherpa, retrieved on May 17 2007
a b c February 2007, Internet Statistics Compendium 2007, Pages 149-150, e-Consultancy, retrieved June 25, 2007
Dion Hinchcliff (15.July, 2006),Web 2.0's Real Secret Sauce: Network Effects,SOA Web Services Journal, retrieved on 14.May, 2007
Dion Hinchcliff (29.January, 2007), Social Media Goes Mainstream, SOA Web Services Journal, retrieved on 14.May, 2007
AffStat Report 2007. Based on survey responses from almost 200 affiliate managers from a cross-section of the industry
March 3, 2007, Pay-per-action beta test introduction, Google's Inside AdWords Blog, retrieved June 25, 2007
May 3, 1999, Internet Advertising Revenue more than double in 1998, IAB - Interactive Advertising Bureau, retrieved June 25, 2007
September 25, 2006, IAB/PwC Release First Half 2006 Internet Ad Revenue Figures, IAB - Interactive Advertising Bureau, retrieved June 25, 2007

IAB/PwC Ad Revenue Reports, industry stats and figures since 1996, IAB - Interactive Advertising Bureau, retrieved June 25, 2007
CellarStone Inc. (2006), Sales Commission, QCommission.com, retrieved June 25, 2007
Tom Taulli (09.November,2005), Creating A Virtual Sales Force, Forbes.com Business,Retrieved May 14, 2007
Danny Sullivan (June 27 2006), The Daily SearchCast News from June 27 2006, WebmasterRadio.fm, retrieved May 17 2007
Wayne Porter (September 06 2006), NEW FIRST: LinkShare- Lands' End Versus The Affiliate on Typosquatting, ReveNews.com, retrieved on May 17 2007
Jennifer D. Meacham (July/August 2006),Going Out Is In, Revenue Magazine, published by Montgomery Research Inc, Issue 12., Page 36
Ryan Singel (October 02 2005), Shady Web of Affiliate Marketing, Wired.com, retrieved May 17 2007
Spam Recognition Guide for Raters (Word document) supposedly leaked out from Google in 2005. The authenticity of the document was neither acknowledged nor challenged by Google.
December 10, 2002, Online Marketing Service Providers Announce Web Publisher Code of Conduct (contains original CoC text), CJ.com, retrieved June 26, 2007
December 12, 2002, LinkShare's Anti-Predatory Advertising Addendum, LinkShare.com, retrieved June 26, 2007
ShareASale Affiliate Service Agreement, ShareASale.com, retrieved June 26, 2007
April 20, 2007, AdWare Class Action Lawsuit against - ValueClick, Commission Junction and BeFree, Law Firms of Nassiri & Jung LLP and Hagens Berman, retrieved from CJClassAction.com on June 26, 2007
Carsten Cumbrowski (November 04 2006),Affiliate Marketing Organization Initiative Vol.2 - We are back to Step 0, Reve News, retrieved May 17 2007
May 2006, New Javascript Links? main discussion thread to CJ's LMI, ABestWeb, retrieved on May 17 2007
Affiliate Manager Training Courses, Affiliate Bootcamps and Self Learning, Cumbrowski.com, retrieved June 26, 2007
a b Alexandra Wharton (March/April 2007), Learning Outside the Box, Revenue Magazine, Issue: March/April 2007, Page 58, link to online version retrieved June 26, 2007
Shawn Collins (June 9, 2007), Affiliate Millions - Book Report, AffiliateTip Blog, retrieved June 26, 2007
March/April 2007, How Do Companies Train Affiliate Managers? (Web Extra), RevenueToday.com, retrieved June 26, 2007
April 10, 2006, UM Announces $50K Business Plan Competition Winners, University of Maryland

Jeff Molander (November 15, 2006), Are CJ and Linkshare Worth Their Salt?, CostPerNews.com, retrieved May 17 2007
November 17 2006, Affiliate Networks vs CPA Networks- Official statements to CostPerNews.com post from 11/15/2006 and comments, CostPerNews.com, retrieved May 17 2007
January 2006, There Must Be a Better Way - Thread at ABestWeb affiliate marketing forums, ABestWeb, retrieved May 17 2007
Vinny Lingham (11.October, 2005), Profit Sharing - The Performance Marketing Model of the Future,Vinny Lingham's Blog, retrieved on 14.May, 2007
Jim Kukral (18.November, 2006), Affiliate Marketing Lacks A Brand - Needs A New Name, Reve News, retrieved on 14.May, 2007
Danny Sullivan (5.November, 2001), Congratulations! You're A Search Engine Marketer!, Search Engine Watch, retrieved on 14.May, 2007
Danny Sullivan (3.December, 2001), Search Engine Marketing: You Like It, You Really Like It, Search Engine Watch, retrieved on 14.May, 2007

References 3

Saltzer, J. H., Reed, D. P., Clark, D. D.: “End-to-End Arguments in System Design,” ACM Transactions on Communications, 2(4), 1984
Hofmann, Markus; Leland R. Beaumont (2005). Content Networking: Architecture, Protocols, and Practice. Morgan Kaufmann Publisher. ISBN 1-55860-834-6
RFC 3568 Barbir, A., Cain, B., Nair, R., Spatscheck, O.: "Known Content Network (CN) Request-Routing Mechanisms," July 2003
RFC 1546 Partridge, C., Mendez, T., Milliken, W.: "Host Anycasting Services," November 1993.
RFC 3507 Elson, J., Cerpa, A.: "Internet Content Adaptation Protocol (ICAP)," April 2003. ICAP Forum
RFC 3835 Barbir, A., Penno, R., Chen, R., Hofmann, M., and Orman, H.: "An Architecture for Open Pluggable Edge Services (OPES)," August 2004.

References 4

1. ^ Markus Angermeier : Web 2.0 Mindmap Translated versions
2. ^ a b c Paul Graham (November 2005). Web 2.0. Retrieved on 2006-08-02. “"I first heard the phrase 'Web 2.0' in the name of the Web 2.0 conference in 2004."”
3. ^ Tim O'Reilly (2005-09-30). What Is Web 2.0. O'Reilly Network. Retrieved on 2006-08-06.
4. ^ Tim O'Reilly (2006-12-10). Web 2.0 Compact Definition: Trying Again. Retrieved on 2007-01-20.
5. ^ a b developerWorks Interviews: Tim Berners-Lee (7-28-2006). Retrieved on 2007-02-07.

6. ^ Nate Anderson (2006-09-01). Tim Berners-Lee on Web 2.0: "nobody even knows what it means". arstechnica.com. Retrieved on 2006-09-05.
7. ^ Stephen Fry: Web 2.0 (Video interview (Adobe Flash)). Retrieved on 2007-07-26.
8. ^ Web 2.0 Conference. conferences.oreillynet.com. Retrieved on 2007-11-08.
9. ^ Tim O'Reilly (2006-07-17). Levels of the Game: The Hierarchy of Web 2.0 Applications. O'Reilly radar. Retrieved on 2006-08-08.
10. ^ a b c d e Tim O'Reilly (2005-09-30). What Is Web 2.0. O'Reilly Network. Retrieved on 2006-08-06.
11. ^ a b Dion Hinchcliffe (2006-04-02). The State of Web 2.0. Web Services Journal. Retrieved on 2006-08-06.
12. ^ Bart Decrem (2006-06-13). Introducing Flock Beta 1. Flock official blog. Retrieved on 2007-01-13.
13. ^ Gerald Marwell and Ruth E. Ames: "Experiments on the Provision of Public Goods. I. Resources, Interest, Group Size, and the Free-Rider Problem". The American Journal of Sociology, Vol. 84, No. 6 (May, 1979), pp. 1335-1360
14. ^ Tapscott, Don and Anthony D. Williams. 2007. Wikinomics: How Mass Collaboration Changes Everything. New York: Penguin. pp. 289sq.
15. ^ Tapscott, Don and Anthony D. Williams. 2007. Wikinomics: How Mass Collaboration Changes Everything. New York: Penguin. p. 14.
16. ^ Tapscott, Don and Anthony D. Williams. 2007. Wikinomics: How Mass Collaboration Changes Everything. New York: Penguin. p. 55.
17. ^ Terranova, Tiziana. 2000. "Free Labor: Producing Culture for the Digital Economy". Social Text 18(2): 33-57.
18. ^ Tim O'Reilly (2002-06-18). Amazon Web Services API. O'Reilly Network. Retrieved on 2006-05-27.
19. ^ Bubble 2.0. The Economist (2005-12-22). Retrieved on 2006-12-20.
20. ^ Josh Kopelman (2006-05-11). 53,651. Redeye VC. Retrieved on 2006-12-21.
21. ^ USPTO serial number 78322306
22. ^ O'Reilly and CMP Exercise Trademark on 'Web 2.0'. Slashdot (2006-05-26). Retrieved on 2006-05-27.
23. ^ Nathan Torkington (2006-05-26). O'Reilly's coverage of Web 2.0 as a service mark. O'Reilly Radar. Retrieved on 2006-06-01.

References 5

DMA: "The Power of Direct Marketing: ROI, Sales, Expenditures and Employment in the U.S., 2006-2007 Edition", Direct Marketing Association, October 2006
Brownlow, M: "Why do email marketing?", Email Marketing Reports, July 2007
Pew Internet & American Life Project, "Tracking surveys", March 2000 – December 2006
The CAN-SPAM Act of 2003 online at ftc.gov or PDF Version
Fairhead, N. (2003) “All hail the brave new world of permission marketing via email” (Media 16, August 2003)
O'Brian J. & Montazemia, A. (2004) Management Information Systems (Canada: McGraw-Hill Ryerson Ltd.)
Marketing Sherpa (Jul 29, 2004), The Ultimate Email Glossary: 178 Common Terms Defined, Marketing Sherpa retrieved on September 4, 2007

References 6

Brian Pinkerton. Finding What People Want: Experiences with the WebCrawler (PDF). The Second International WWW Conference Chicago, USA, October 17–20, 1994. Retrieved on 2007-05-07.

Danny Sullivan (June 14, 2004). Who Invented the Term "Search Engine Optimization"?. Search Engine Watch. Retrieved on 2007-05-14.

Cory Doctorow (August 26, 2001). Metacrap: Putting the torch to seven straw-men of the meta-utopia. e-LearningGuru. Retrieved on 2007-05-08.

Pringle, G., Allison, L., and Dowe, D. (April 1998). What is a tall poppy among web pages?. Proc. 7th Int. World Wide Web Conference. Retrieved on 2007-05-08.

Brin, Sergey and Page, Larry (1998). The Anatomy of a Large-Scale Hypertextual Web Search Engine. Proceedings of the seventh international conference on World Wide Web. Retrieved on 2007-05-08.

Thompson, Bill (December 19, 2003). Is Google good for you?. BBC News. Retrieved on 2007-05-16.

Zoltan Gyongyi and Hector Garcia-Molina (2005). Link Spam Alliances (PDF). Proceedings of the 31st VLDB Conference, Trondheim, Norway. Retrieved on 2007-05-08.

Google Keeps Tweaking Its Search Engine. New York Times (June 3, 2007). Retrieved on 2007-06-06.

Danny Sullivan (September 29, 2005). Rundown On Search Ranking Factors. Search Engine Watch. Retrieved on 2007-05-08.

Search Engine Ranking Factors V2. SEOmoz.org (April 2, 2007). Retrieved on 2007-05-14.

Christine Churchill (November 23, 2005). Understanding Search Engine Patents. Search Engine Watch. Retrieved on 2007-05-08.

Laurie J. Flynn (November 11, 1996). Desperately Seeking Surfers. New York Times. Retrieved on 2007-05-09.

AIRWeb. Adversarial Information Retrieval on the Web, annual conference. Retrieved on 2007-05-09.

David Kesmodel (September 9, 2005). 'Optimize' Rankings At Your Own Risk. Startup Journal (Wall Street Journal). Retrieved on 2007-05-09.

Adam L. Penenberg (September 8, 2005). Legal Showdown in Search Fracas. Wired Magazine. Retrieved on 2007-05-09.

Matt Cutts (February 2, 2006). Confirming a penalty. mattcutts.com/blog. Retrieved on 2007-05-09.

a b Google's Guidelines on Site Design. google.com. Retrieved on 2007-04-18.

a b Site Owner Help: MSN Search Web Crawler and Site Indexing. msn.com. Retrieved on 2007-04-18.
a b Yahoo! Search Content Quality Guidelines. help.yahoo.com. Retrieved on 2007-04-18.
Google Webmaster Tools. google.com. Retrieved on 2007-05-09.
Yahoo! Site Explorer. yahoo.com. Retrieved on 2007-05-09.
Submitting To Search Crawlers: Google, Yahoo, Ask & Microsoft's Live Search. Search Engine Watch (2007-03-12). Retrieved on 2007-05-15.
Search Submit. searchmarketing.yahoo.com. Retrieved on 2007-05-09.
Questionable Results at Revamped Yahoo. Washington Post (2004-03-11). Retrieved on 2007-05-23.
Submitting To Directories: Yahoo & The Open Directory. Search Engine Watch (2007-03-12). Retrieved on 2007-05-15.
What is a Sitemap file and why should I have one?. google.com. Retrieved on 2007-03-19.
Cho, J., Garcia-Molina, H. (1998). Efficient crawling through URL ordering. Proceedings of the seventh conference on World Wide Web, Brisbane, Australia. Retrieved on 2007-05-09.
Newspapers Amok! New York Times Spamming Google? LA Times Hijacking Cars.com?. Search Engine Land (May 8, 2007). Retrieved on 2007-05-09.
Andrew Goodman. Search Engine Showdown: Black hats vs. White hats at SES. SearchEngineWatch. Retrieved on 2007-05-09.
Jill Whalen (November 16, 2004). Black Hat/White Hat Search Engine Optimization. searchengineguide.com. Retrieved on 2007-05-09.
What's an SEO? Does Google recommend working with companies that offer to make my site Google-friendly?. google.com. Retrieved on 2007-04-18.
Andy Hagans (November 08, 2005). High Accessibility Is Effective Search Engine Optimization. A List Apart. Retrieved on 2007-05-09.
Matt Cutts (February 4, 2006). Ramping up on international webspam. mattcutts.com/blog. Retrieved on 2007-05-09.
Matt Cutts (February 7, 2006). Recent reinclusions. mattcutts.com/blog. Retrieved on 2007-05-09.
A New F-Word for Google Search Results. Search Engine Watch (March 8, 2005). Retrieved on 2007-05-16.
What SEO Isn't. blog.v7n.com (June 24, 2006). Retrieved on 2007-05-16.
Melissa Burdon (March 13, 2007). The Battle Between Search Engine Optimization and Conversion: Who Wins?. Grok.com. Retrieved on 2007-05-09.
Andy Greenberg (April 30, 2007). Condemned To Google Hell. Forbes. Retrieved on 2007-05-09.

Jakob Nielsen (January 9, 2006). Search Engines as Leeches on the Web. useit.com. Retrieved on 2007-05-14.
SEOmoz: Best SEO Blog of 2006. searchenginejournal.com (January 3, 2007). Retrieved on 2007-05-31.
A survey of 25 blogs in the search space comparing external metrics to visitor tracking data. seomoz.org. Retrieved on 2007-05-31.
"The search engine that could", USA Today, 2003-08-26. Retrieved on 2007-05-15.
Stats Show Google Dominates the International Search Landscape. Search Engine Watch (2007-02-22). Retrieved on 2007-05-15.
a b c Mike Grehan (April 3, 2006). Search Engine Optimizing for Europe. Click. Retrieved on 2007-05-14.
Pfanner, Eric. "New to Russia, Google Struggles to Find Its Footing", New York Times, December 18, 2006. Retrieved on 2007-05-15.
Google Gaining, But Baidu Still Dominates In China. Search Engine Land (March 6, 2007). Retrieved on 2007-05-15.
Stefanie Olsen (May 30, 2003). Judge dismisses suit against Google. CNET. Retrieved on 2007-05-10.
KinderStart.com, LLC, et al v. Google, Inc., C 06-2057 RS (PDF). glawinfo.com (March 17, 2006). Retrieved on 2007-05-09.
Order Graning Motion to Dismiss, KinderStart.com LLC v. Google, Inc. (PDF). claranet.scu.edu (March 16, 2007). Retrieved on 2007-05-09.
Order Granting in Part and Denying in Part Motion for Sanctions, KinderStart.com LLC v. Google, Inc. (PDF). claranet.scu.edu (March 16, 2007). Retrieved on 2007-05-09.

References 7

a b The State of Search Engine Marketing 2006. Search Engine Land (February 8, 2007). Retrieved on 2007-06-07.
a b More Agencies Investing in Marketing With a Click. New York Times (March 14, 2006). Retrieved on 2007-06-07.
SEO Isn’t SEM. dmnews.com (December 5, 2005). Retrieved on 2007-06-07.
Engine sells results, draws fire. news.com.com (June 21, 1996). Retrieved on 2007-06-09.
GoTo Sells Positions. searchenginewatch.com (March 3, 1998). Retrieved on 2007-06-09.
GoTo gambles with new name. news.com.com (September 10, 2001). Retrieved on 2007-06-09.
Jansen, B. J. (May 2007). The Comparative Effectiveness of Sponsored and Nonsponsored Links for Web E-commerce Queries. ACM Transactions on the Web,. Retrieved on 2007-06-09.

Congratulations! You're A Search Engine Marketer!. searchenginewatch.com (November 5, 2001). Retrieved on 2007-06-09.
Is Search Engine Marketing Dying?. darin.cc (June 20, 2007). Retrieved on 2007-06-20.
False Oracles: Consumer Reaction to Learning the Truth About How Search Engines Work (Abstract). consumerwebwatch.org (June 30, 2003). Retrieved on 2007-06-09.
Searching for Disclosure: How Search Engines Alert Consumers to the Presence of Advertising in Search Results. consumerwebwatch.org (November 8, 2004). Retrieved on 2007-06-09.
Still in Search of Disclosure: Re-evaluating How Search Engines Explain the Presence of Advertising in Search Results. consumerwebwatch.org (June 9, 2005). Retrieved on 2007-06-09.
Re: Complaint Requesting Investigation of Various Internet Search Engine Companies for Paid Placement and Paid Inclusion Programs. ftc.gov (June 22, 2002). Retrieved on 2007-06-09.

References 8

Zawodny, Jeremy (2004-03-01). Defending Paid Inclusions.
Ulbrich, Chris. "Paid Inclusion Losing Charm?", Wired News, 2004-07-06.]
FAQ #18: How do I register my site/URL with Ask so that it will be indexed?. Ask.com. Retrieved on 2006-09-09.

Retrieved from "http://en.wikipedia.org/wiki/Paid_inclusion"

References 9

AffStat Report 2007. Based on survey responses from almost 200 affiliate managers from a cross-section of the industry

References 10

Website Traffic Yahoo! Search Marketing (formerly Overture) Yahoo Inc., Accessed June 12 2007
Shopping.com Merchant Enrollment Shopping.com, Accessed June 12 2007
Sell on Google Google Inc. Accessed June 12 2007
Overture and Google: Internet Pay Per Click (PPC) Advertising Auctions, London Business School, Accessed June 12 2007

References 11

Books:

Web Metrics, Proven Methods for Measuring Web Site Success by Jim Sterne, John Wiley & Sons (2002), ISBN 978-0471220725
Web Analytics Demystified by Eric T. Peterson, Celilo Group Media (2004), ISBN 0-9743584-2-8
Web Site Measurement Hacks by Eric T. Peterson, O'Reilly (2005), ISBN 0-596-00988-7
Actionable Web Analytics: Using Data to Make Smart Business Decisions by Jason Burby & Shane Atchison, Sybex (2007), ISBN 978-0470124741
Web Analytics: An Hour A Day by Avinash Kaushik, Sybex (2007), ISBN 978-0470130650
Web Analytics Strategies by G. Fragola, L. Paxia, ICC (2007), ISBN 978-88-902809-0-0 (In Italian)

Online Videos:

Customer Centric Web Decision Making by Avinash Kaushik

Retrieved from "http://en.wikipedia.org/wiki/Web_analytics"

References 12

Hughes, J. & Lang, K. (2006). "Transmutability: Digital Decontextualization, Manipulation, and Recontextualization as a New Source of Value in the Production and Consumption of Culture Products." In Proceedings of the 39th Annual Hawaii International Conference on System Sciences - Volume 08.

Jenkins, H. (2003). "Quentin Tarantino's Star Wars? Digital Cinema, Media Convergence and Participatory Culture," in Rethinking Media Change, Thornburn, D. and Jenkins, H., eds., MIT Press: Cambridge. e.

Z-Trip (2004). "DJ Z-Trip", interview online , October 19.