

## Web 2.0: Technologies & Opportunities

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# 1 Executive Summary

Web 2.0 technologies have created a buzz in the last few years encompassing both the general public and private enterprise. Following the dot-com bubble burst in the fall of 2001, a study of the surviving web-based companies showed the idea of harnessing people and networks; in short, what Tim O'Reilly, president of O'Reilly Media coined, "collective intelligence."

This paper includes feedback from visitors to Napster, Yahoo! Google, Google Groups, and Amazon, who compared these search engines to innovative online entities such as Wikipedia, Flickr, Second life, Inkling.com, and their underlying use of social networks and collaborative methods to create content.

Use of social networks and online collaboration are further seen as useful in the business sector since companies are currently incorporating the concepts within various functions of their own communication and technology infrastructures.

Table 1 below gives a broad view of new online capabilities and workplace applications in general and within specific functions.

**Table 1**

<b><i>Technologies</i></b>	<b><i>Key Capabilities</i></b>	<b><i>Applications</i></b>
Wikis	<ul style="list-style-type: none"><li>• Visibility</li><li>• Version Control</li><li>• Large scale/controlled access(depending on use)</li><li>• Integration of content</li></ul>	<ul style="list-style-type: none"><li>• Knowledge management</li><li>• Meeting agendas</li></ul>
Prediction Markets	<ul style="list-style-type: none"><li>• Use knowledge of users</li><li>• Use play money to create incentives to invest in the future of the decision/prediction.</li></ul>	<ul style="list-style-type: none"><li>• Predicting product launch date</li><li>• Predicting market success of project/product</li></ul>
Online Virtual World	<ul style="list-style-type: none"><li>• Social Networking / Community gathering</li><li>• Collaborating and communicating</li><li>• Presenting, promoting, and selling content</li></ul>	<ul style="list-style-type: none"><li>• Community building</li><li>• Virtual meeting</li><li>• Product demo</li><li>• Campaign/Promotion</li><li>• Customer Support</li></ul>
Blog, Vlogs, Web feeds	<ul style="list-style-type: none"><li>• “Online diaries”.</li><li>• Combine text, images, links to other blogs, web pages.</li></ul>	<ul style="list-style-type: none"><li>• Product information</li><li>• Company trends</li></ul>
Collective: Tag, Meme, Digg	<ul style="list-style-type: none"><li>• Ability to record the actions/thoughts/ preferences of the crowd to give collective reasoning.</li></ul>	<ul style="list-style-type: none"><li>• Gathering market interest and intelligence</li></ul>
Social Networking	<ul style="list-style-type: none"><li>• Category of sites, containing people profiles, public commentary on profiles and map of social relations between profiles</li></ul>	<ul style="list-style-type: none"><li>• Advertising</li><li>• Appeal to specific target audiences</li><li>• Selling items to user base (monetizing the user base)</li></ul>

## 2 Case Study: Web 2.0 Technology

### a. An Overview

Web 2.0, a phrase coined by O'Reilly Media in 2004,<sup>1</sup> refers to a perceived or proposed second generation of Web-based services—such as social networking sites, wikis, communication tools, and folksonomies—that emphasize online collaboration and sharing among users.

Web 2.0 “tagged” sites today allow users to create their own worlds, take over control of the “look and feel,” of the site, contribute content, participate socially, even fundamentally shape the site itself.

Much of the success of these web sites is attributable to the motivation of the users to continue to be a part of the website and consequently to its success. Earlier uses of the Internet for social interaction, as well as intellectual and economic purposes, have given rise to the use of virtual networks by the public in general. These networks have many forms: some are social networks, some are company and professional networks, and yet others are the networks created by F/OSS for their communication and collaborative activities (Butler et al, 2002).

Private sector enterprises have begun using these virtual environments/worlds and collaborative structures within and external to their websites and intranets. Software companies are also introducing Web 2.0 technologies in their enterprise packages. In each of the technologies outlined below, there are associated benefits and risks.

### b. Social Networks

#### Definition

Social networks are a category of Internet sites and applications that contain profiles, semi-persistent public commentary on profiles, and a traversable publicly articulated navigation of the network displayed in relation to other profiles.

#### History

Social networking began in a rudimentary form in 1988 with AOL's launching of “buddy lists” that were searchable based on common interests of two network users. The first true social networking site, classmates.com, was launched in 1995. South Korean social network leader, Cyworld, was launched in 1999 as a forum, otherwise known as a message board. In 2001, Cyworld implemented

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<sup>1</sup> As on the Wikipedia and O'Reilly site.

features most commonly associated with the site. Market leader Myspace was launched in 2003, along with LinkedIn, the most widely used social network among business people. College student-oriented Facebook launched in 2004. Several smaller social network sites have opened, closed and merged during the 2000s; the rise and fall of Friendster is one of the most prominent examples of a popular social networking site.

## **Features**

Profiles contain either real names or pseudonyms that represent a way for users to identify themselves. Profiles typically contain demographic information (age, sex and location), along with personal or business-related information, such as hobbies or occupation. Profiles often have photos of the individual and may be reached directly via a web browser with a unique URL.

Publicly articulated social networks allow users to connect with other profiles via a “friend” list or similarly-named method. Depending on the social network, recipients of “friend” requests may or may not be required to reciprocate in order to complete the social connection. Participants in the network are able to traverse the network by clicking on profiles of friends of friends of friends, operating on the “six degrees of separation” idea, which is the concept that one person is only six profiles from connecting with any other user on the social network.

Comments: Social network sites contain a section of a profile where users can leave comments within a profile viewable by other users of the network or Internet wide. The lifespan of comments varies depending on sites: they are considered semi-persistent because they can be removed by the creator of the profile, or automatically archived after a specified period of time by a user or administrator of the social network.

## **Capabilities**

Social networks facilitate consumers to consumer, business-to-business, and business-to-consumer communication. For example, corporations increase their visibility by creating pages within a social network and becoming “friends” with users on the social network. Businesses can also market products or services to other businesses by creating profiles on business social networks or with private social networks created for certain groups of businesses (i.e., trade show social networks). Relationships can also be formed between users by traversing profiles based on common interest, location, age, etc.

## **Examples / Demographics of Social Network Sites**

Myspace is leader in user base size among social networks with 155 million registered users. Within the UK market, Bebo, which attracts 22 million users, has gained a large user base, nearly surpassing Myspace as the market leader in the UK. Hi5 is the leading social networking site in India with 41 million users.

In South Korea, Cyworld, the most popular social network with 15 million registered users, recently launched its brand in both the U.S. and Europe.

Table 2 gives a sampling of usage among specific age groups for a group of social networks:

<b>Table 2</b>					
<b>Demographic Profile of Visitors to Select Social Networking Sites</b>					
	<b>Percent (%) Composition of Unique Visitors</b>				
	<b>Total Internet</b>	<b>MySpace.com</b>	<b>Facebook.com</b>	<b>Friendster.com</b>	<b>Xanga.com</b>
<i>Unique Visitors (000)</i>	173,407	55,778	14,782	1,043	8,066
Total Audience	100.0	100.0	100.0	100.0	100.0
Persons: 12-17	9.6	11.9	14.0	10.6	20.3
Persons: 18-24	11.3	18.1	34.0	15.6	15.5
Persons: 25-34	14.5	16.7	8.6	28.2	11.0
Persons: 35-54	38.5	40.6	33.5	34.5	35.6
Persons: 55+	18.0	11.0	7.6	8.1	7.3

**Applications**

Internal uses:

- BDMetrics has created a technology to facilitate networking at trade shows by creating a private social network among participating members of trade shows.
- Intronetworks is a software provider that creates customizable social networks to accommodate internal communication between employees of corporations. Companies such as Google, Intel and Dow Jones, for instance, use this type of social network for uses such as sales force integration and research collaboration.

External uses:

- Cyworld is a platform for branded “items.” The site features “rooms” (see picture below) that can be “decorated” with items purchased by currency within the site known as *dotori*. The social network signs an agreement with an advertising agency (Double Fusion) to create branded content within the social network. For example, Microsoft launched Xbox360 that can be purchased with *dotori* and rooms can be decorated within Cyworld.
- Music distribution: Cyworld is the largest method of music sales distribution in South Korea for Universal Music. Songs are used differently than in the U.S.; rather than downloading songs for use on music players or other

devices, songs are played directly within Cyworld rooms creating an appropriate atmosphere for each user's space.

- Product promotion: Companies have used several social networks to promote products and generate awareness for recently launched or to-be-launched products. Examples include Myspace used to promote pages for musicians, Wendy's hamburgers, and the release of upcoming movies. LinkedIn has been used for promotion of business services, legal services, consulting services, etc. It is also used extensively as a platform for HR departments seeking additional candidates for employment opportunities.



## Trends

Social networks are employing other Internet technologies outside of simple communication. Many sites are integrating traditional messaging and web page sharing with site-specific content. A primary example of this is Cyworld, which contains rooms known as “minihompies” (pictured above). These rooms are customized and decorated with content purchased with a currency. Other users are invited to socialize in friends' rooms. Additionally, Cyworld integrates the site with mobile phones, allowing users to check their messages and rooms via their cellular phones. Another site successful at monetizing its user base is Faceparty, which has created its own currency and sells items to users designed to enhance user's parties within the site and provide an additional revenue generating model for the site itself.

New entrants to the market are differentiating themselves by appealing to specific target audiences. This takes three primary forms: geography, age and interest. Nike and Google, for instance, launched Joga in 2006, a website designed to target soccer fans, in addition to promoting Nike's brand and

connecting with customers on a long-term basis. Some have criticized this site as simply a new method for large corporations to market their products. The site has used current employees and sponsored athletes as building blocks for marketing to its user base.

Internationally, many sites outside of the U.S. have gained significant market share; for example, Bebo is close to becoming the market leader in the UK over titan Myspace. A site named XuQa was launched to target a similar age demographic to Facebook, but using more risqué, controversial content and attracting a user base that fits the said model.

## c. Blogs

### 1. Introduction

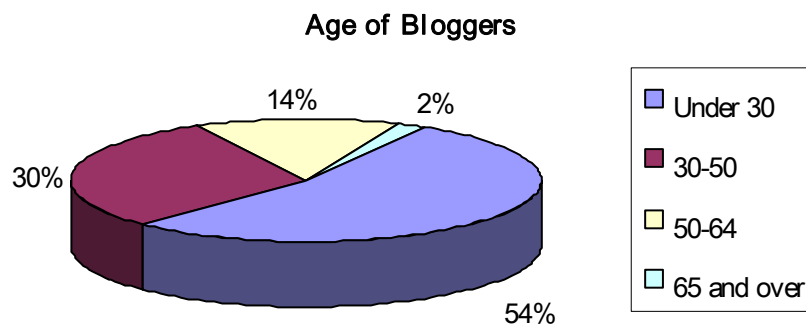
#### Definition:

The term "blog" is derived from "Web log". A blog contains on-line diaries, which combine text, images, and links to other blogs, web pages, and other media related to its topic. The ability for readers to leave comments in an interactive format is an important part of many blogs.

#### Demographic:

- 147 million American adults use the Internet
- 12 million American adults keep blog.
- 57 million American adults read blogs.

#### Age



#### Features:

##### a. Permalinks

A permalink is a URL that points to a specific blogging entry even after the entry has passed from the front page into the blog archives.

A permalink can avoid link rot. Permalinks frequently consist of a string of characters which represent the date and time of posting, and an identifier which denotes the author who initially authored the item or its subject. Crucially, if an item is changed, renamed, or moved within the internal database, its permalink remains unaltered, as it functions as a magic cookie which references an internal database identifier. If an item is deleted altogether, its permalink can frequently not be reused.

### **b. Blogrolls**

A blog roll is a collection of links to other weblogs and is often found on the front page sidebar of most weblogs.

### **c. TrackBacks**

A Trackback is one of three types of Linkbacks, methods for Web authors to request notification when somebody links to one of their documents. This enables authors to keep track of who is linking to, or referring to their articles.

Trackbacks are used primarily to facilitate communication between blogs: if a blogger writes a new entry commenting on, or referring to, an entry found at another blog, and both blogging tools support the TrackBack protocol, then the commenting blogger can notify the other blog with a "TrackBack ping"; the receiving blog will typically display summaries of, and links to, all the commenting entries below the original entry. This allows for conversations spanning several blogs that readers can easily follow.

## **Alternative Approaches:**

### **a. User-Hosted**

Software packages installed by weblog authors to run on their own systems

### **b. Free/Libre/Open-Source Software**

Free for everyone to use and commercial support contracts are often available.

Examples: Apache Roller, bBlog, blosxom, Dotclear, Drupal, Elgg, Geeklog, Greymatter, LifeType, Nucleus CMS, Pivotlog, Subtext, Textpattern, WordPress

### **c. Proprietary software**

These may require the purchase of a license key to use them. The specific licensing terms vary, but some are free for personal or non-commercial use

Examples: Community Server (also offered in developer-hosted form as communityserver.com), ExpressionEngine (formerly

pMachine), Movable Type (also offered in developer-hosted form as TypePad), Radio UserLand and Traction TeamPage

**d. Unknown license**

Examples: Battle Blog, Blogosphere

**e. Developer-hosted**

Software services operated by the developer, requiring no software installation for the weblog author:

Examples: Battle Blog, Blog.com, Blogger, Blue Kaffee, DeadJournal, GreatestJournal, LiveJournal, MySpace, NewBlog.com, Open Diary, TypePad, Typo ,Windows Live Spaces, Wordpress.com, Xanga, Vox, Weblogs.com

**Representative Blogs:**

**a. Personal**

- LiveJournal
- My Space
- Blogger.com: Launched by Evan Williams and Meg Hourihan (Pyra Labs) in August 1999 and purchased by Google in February 2003.
- Xanga: Launched in 1996, it had only 100 diaries by 1997, but had hosted more than 20 million as of Dec.2005.
- FrontPage

**b. Corporate**

- Sun Microsystems, <http://blogs.sun.com/> is a blog for Sun employees to share their opinions and talk about their jobs. It uses Roller Weblogger as its web server.
- GM, <http://www.gmblogs.com/>
  - There are three different blogs in GMblog.
    - FastLane blog is all about the cars and trucks. GM influencers discuss all aspects of their vehicles.
    - FYI.gmblogs.com is a blog for GM news, information and opinion. It is written by GM employees and others.
    - Cadillac Drivers' Log is the story of two engineers who test drive the new Cadillac CTS all over the world
- Microsoft, <http://blogs.msdn.com/default.aspx>
  - Microsoft blogs talk about Microsoft technologies and are written by Microsoft employees. These blogs provide

insight and opinions about using Microsoft technologies and software.

### c. Commerce

#### Marketing Campaigns

Dove:

- <http://www.campaignforrealbeauty.com/help/boards.asp>

NikeWomen- iStories:

- <http://www.nikewomen.com.tw/> (Taiwan)
- <http://www.nikewomen.com.sg/> (Australia, Sigapore...)
- <http://www.nike.jp/women/index.html> (Japan)

Women online community

- iVillage.com: <http://www.ivillage.com> was acquired by NBC Universal, Inc. in May, 2006.

## 2. Web Feeds

Overview:

Web feeds are used by the weblog community to share the latest entries' headlines or their full text, even attached multimedia files. There are two formats of webfeeds, one is RSS, the other, Atom.

### RSS

RSS stands for Really Simple Syndication. RSS delivers its information as an XML file called an "RSS feed," "webfeed," "RSS stream", or "RSS channel." RSS feeds allow a subscribed user to receive news and content as it is published. It also provides the ability to view dozens of headlines at once.

### Atom

The development of Atom was motivated by the existence of many incompatible versions of the RSS syndication format. The name Atom applies to a pair of related standards. The Atom Syndication Format is an XML language used for web feeds, while the Atom Publishing Protocol (APP for short) is a simple HTTP-based protocol for creating and updating Web resources.

Examples: Google news, GM Motors

## Newsreaders:

a. **Client Side Newsreaders** and aggregators are typically constructed as standalone programs or extensions to existing programs, such as web browsers and Email readers.

Examples: Mozilla Thunderbird or Forté Agent

b. **Web Based Newsreaders** require no software installation and make the user's "feeds" available on any computer with Web access.

Examples:      
   

## Feeds Goes Corporate:

### 1. Benefits

You can quickly and easily send messages to hundreds of thousands of employees, customers or partners.

MSN, Yahoo, Google, Amazon and AOL are all integrating RSS/Atom into their portals.

e.g.: Google news:

[http://news.google.com/intl/en\\_us/news\\_feed\\_terms.html](http://news.google.com/intl/en_us/news_feed_terms.html)

Microsoft IE7 includes RSS/Atom support.

### 2. Areas

External use

- On-line press room
- e.g.: Cape Clear Software, IBM, Intel, USA Cycling
- Inform customers
- Inform partners

Internal use

- KM/Internal communication
- e.g.: Dykema
- Use NewsGator Enterprise Server to circulate news and recent reports among employees.

## Recommendation:

RSS is an easy and convenient way to keep in touch with stakeholders. But understanding how to attract readers to subscribe to RSS feed and provide a variety of content will be critical issues. Try to avoid information overload to subscribers since it will cause a negative effect.

### **3. Vlog**

#### **Definition**

Videoblog (Vlog, in short) is a blog that includes video.

#### **Features**

Regular entries are typically presented in reverse chronological order and often combine embedded video or a video link with supporting text, images, and other metadata.

Vlogs often take advantage of web syndication to allow for the distribution of video over the Internet using either the RSS or Atom syndication formats for automatic aggregation and playback on mobile devices and personal computers.

Though many vlogs are collaborative efforts, the majority of vlogs and vlog entries are authored by individuals.

#### **Capabilities**

Video blog, as the platform to disseminate the multimedia (video) content, provides the blogger a lively and more effective way to deliver the message to the target audience.

The visual format can deliver more clear and understandable messages to the target audience. Therefore, it can be used for education purposes. It can also cultivate a close relationship between the blogger, the audience and the image building purpose.

#### **History**

Vlogging saw a strong increase in popularity beginning in the year 2005. The Yahoo! Videoblogging Group saw its membership increase dramatically in that same year.

In 2005, the first video blogger annual conference was held in New York City. Business Week commends it as "... compelling in the creativity they're unleashing and the changes they could bring to the media status quo."

#### **Who they are**

There are lots of blog websites, which are only for the video blogs, or video blog is one of its key categories. They are Myspace, YouTube, Yahoo!, Google, etc.

#### **How to evaluate the Vlog**

Vlog websites have their own systems to evaluate the Video blog and the video entry. But generally, the basic ideas are the same.

In this blog:

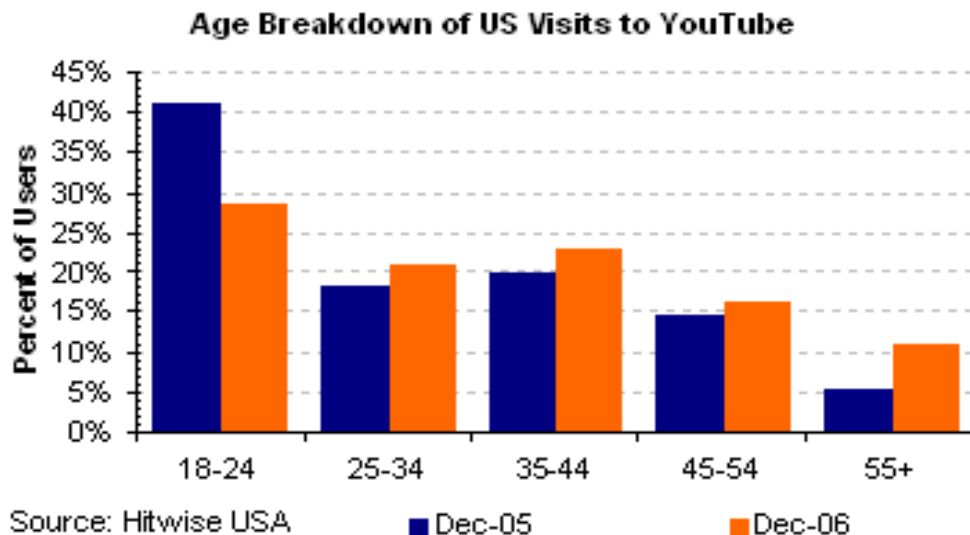
- Views: reflect the number of times that this video has been watched.
- Ratings: reflect the rates from the registered bloggers
- Comments: reflect the comments from the registered bloggers
- Subscribers: reflect the popularity of the blogger and the videos
- External communities:
- Linkage: the more the linkage, the greater popularity of this video
- Comments: the topic may link the video to other topics.

### Example of Vlog ----- YouTube

Why YouTube?

According to Hitwise, a leading online competitive intelligence service, on January 27<sup>th</sup>, 2007, YouTube's market share rose to 0.64% for all site visits in the U.S., which closes to 45% of all visits to the Entertainment - Multimedia category.

A comparison of Hitwise demographic data from December 2006 versus December 2005 reveals that visitors to YouTube's user base grew older as its traffic grew. It represents the trend that the video blog is becoming part of the lives of people of an older age group.



How can a business leverage YouTube?

Besides paying for the banner and link advertising on YouTube, the company right now has two other options to leverage YouTube to promote its business.

### **Participatory Video Ads: Encouraging Engagement and Participation**

The new Participatory Video Ad is a user-initiated video advertisement with all of the YouTube community features enabled. Consumers can rate, share, comment, embed, and choose favorite advertising content that they find interesting, informative and entertaining. Rather than interrupt a consumer's experience, YouTube has created a model which encourages engagement and participation.

The YouTube community has been highly receptive of this new advertising experience and has propelled PVA videos to the top of the Most Viewed, Most Discussed and Top Favorite video rankings. Advertisers have the opportunity to participate and moderate discussions around their creativity.

Current clients have been mainly gaming vendors and movie studios, such as Weinstein Company for its feature film PULSE in 2006.

### **Brand Channels: Integrating Brands into the YouTube Community**

To help marketers create deeper, more brand-centric video experiences on YouTube, YouTube created an enhanced environment called a Brand Channel. Brand Channels provide advertisers a place to showcase video content on YouTube with a look and feel that is consistent with their brand imagery. This new concept helps brands connect and engage with their consumers around great video content.

Brand Channels include all standard community functionality helping brands become an organic part of the fabric of YouTube. Key aspects include:

- Marketers ability to customize the appearance of their channels through a self-service tool. Access to the exclusive enhanced design and channel functionality is free-of charge to advertisers who meet predetermined spending levels.
- Included in Brand Channel partnerships are special promotional and media opportunities crafted to help engage users with the marketer's channels and video content.
- YouTube "Subscriptions" provide brands a persistent way to stay connected with consumers engaged with their content. Whenever a brand adds new videos to their channel, subscribers are notified, helping the brand build an audience.
- Brand Channels includes an auto-play video on the main channel page. This video allows marketers to provide users with video content immediately upon visiting the channel.

- Contest functionality can be added to Brand Channels to allow marketers to host contests and encourage users to submit their own user-generated content.
- Now, there are some leading companies to use this service to promote their products or concept.

Here are some lists that can show how it works:

Nokia Design: <http://www.youtube.com/profile?user=NokiaDesign>  
 Name: A View of the Future  
 Content: Short videos from Nokia to explore how mobile phone design may change in the next three or four years.  
 Feature: Using new and cool video to educate and test the target audience.

Blendtec: <http://www.youtube.com/profile?user=Blendtec>  
 Name: Will it Blend?  
 Content: Short videos about what the Total Blender can do in the Blendtec test lab, as we ask the question, Will It Blend?  
 Feature: Using entertainment video to demonstrate the power of the product

#### d. Collective Systems

Collective effect is one of the key features of the web 2.0 application. It leverages the opinion of the public or communities.

There are several key technologies/tools/concepts used in Web 2.0

#### Tag

##### Definition

A tag is a (relevant) keyword or term associated with or assigned to a piece of information, such as a picture, an article, or a video clip. It describes the item and enabling keyword-based classification of information to which it is applied.

##### Features

Tags are usually chosen informally and personally by the author/creator of the item — i.e., not usually as part of some formally defined classification scheme. Tags are typically used in dynamic, flexible, automatically generated Internet taxonomies for online resources, such as computer files, web pages, digital images, and Internet bookmarks both in social bookmarking services, and in the current generation of web browsers - see Flock. For this reason, "**tagging**" has become associated with the Web 2.0 buzz.

## Capabilities

Due to its features, tagging allows social groups to form around similar interests and points of view. If one person is using the same tags as the other does, two of them probably share some deep commonalities. It helps to identify and network with the community of bloggers.

And the popularity of the tag can also be used to identify the current hot topic. It can be used to lead the trends or to monitor the trends.

Tagging can be viewed as one kind of collective opinion tools.

## Tag Cloud

One existing application of this capability is tag cloud, or weighted list in visual design. It is used as a visual depiction of content tags used on a website. (See below, Top Tags this hour and Top 100 Tags from Technorati, one of the leading Tag websites). Often, more frequently used tags are depicted in a larger font or otherwise emphasized, while the displayed order is generally alphabetical. Thus, both finding a tag alphabetically and by popularity is possible. Selecting a single tag within a tag cloud will generally lead to a collection of items that are associated with that tag.

## Top Tags This Hour

### Top Tags This Hour

american-idol american idol birthday britney-spears britney spears bush cat  
china christian education global-warming house ipod iran mac me money mp3  
my-life new qotd random-thoughts tags vista Web-20 web 2.0 windows  
wordpress yahoo youtube

## Top 100 Tags from Technorati

### Top 100 Tags from A to Z

(all languages)

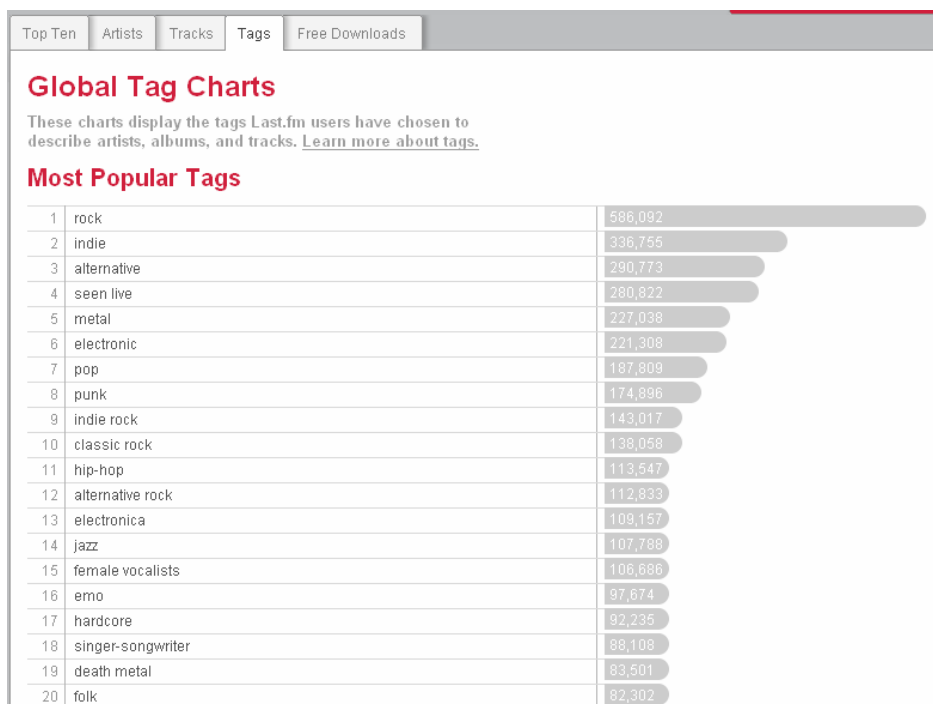
allgemein apple art art and photography articles automotive blog blogging blogs  
book books business computers and internet culture current affairs daily days design  
diary dreams and the supernatural empty entertainment entretenimento entretenimiento  
events family fashion, style, shopping film food food and drink friends fun funny  
games goals, plans, hopes google health and wellness hobbies humor internet jobs,  
work, careers journal life links linux love música marketing media misc  
miscellaneous moblog movie movies movies, tv, celebrities MUSIC musique my life  
myspace NEWS news and politics noticias parties and nightlife pasatiempos  
personal pets and animals photo photography photos podcast poetry politics quiz  
random religion religion and philosophy reviews ro romance and relationships school  
school, college, greek science software sport sports survey tech technology topics  
travel travel and places tv video videos web weblog weblogs work writing  
writing and poetry

There are two main types of tag cloud, distinguished by their meaning rather than their appearance:

For the first type, size represents the number of times that tag has been applied to a single item. This is useful as a means of displaying metadata about an item that has been democratically 'voted' on and where precise results are not desired. A good example of this is Last.fm, a social music platform, which uses this method as a means of displaying the genre with which an artist or track has been tagged. (Please see figure below: Most Popular Tags from Last.fm)

Therefore, it can be used to identify the public or experts opinion/view about one specific item.

### Most Popular Tags from Last.fm



In the second, more commonly used type, size represents the number of items to which a tag has been applied as a presentation of each tag's popularity. Examples of this type of tag cloud are used on the image-hosting service Flickr and the blog aggregator Technorati.

Therefore, it can be used to identify the community and to search related blogs.

### Who they are

Today, there are more than 80 million posts with tags or categories. Over 400,000 new tagged posts are created every day. Some famous tag websites are:

- Technorati: including the tag for blog, vlog, photo-blog, etc.  
<http://www.technorati.com/tag/>
- Del: including the tag for blog, vlog, photo-blog, etc.---  
<http://del.icio.us/tag/>
- Flickr: tag only for photos --- <http://www.flickr.com/photos/tags/>

## **How can business leverage Tagging?**

### **External:**

Adding tags to companies' press releases, white papers, and online materials will make it easier for interested parties to find information. It will also boost your search engine ranking and allow you to contribute to the buzz in the blogosphere. For many social media experts, social tagging represents the future of finding and publishing content on the Web. Therefore, for a company that wants to promote its new concept, or new idea, promoting tags related to the concept or idea will be a good channel/tool for this target audience of bloggers.

### **Internal: Collaboration**

IBM has come up with its Lotus Connections suite. Jeff Schick, vice president of social software at IBM, referred to it as "an enterprise-ready, social software platform offering built as loosely-coupled, extensible services that promise an integrated environment for collaboration."

It includes five basic components: Profiles, Communities, Dogear, Blogs and Activities.

The Profiles component shows basic contact information for employees, and includes communities to which they belong, and links to their bookmarked sites, blogs if they have one and activities they have in common with the searcher.

The Communities application allows employees to organize themselves by community of interest, and allows viewers to see the names of community members as well as their profiles and their bookmarks. Community members add comments about the subject around which the community has been formed and can reply to each others' comments.

The Dogear application is another collaborative way of finding information. Much like consumer tagging applications like Yahoo's del.icio.us, it is used to bookmark relevant Web sites; users can also subscribe to a given individual's dogears, much as they would subscribe to a blog, or they can view other sites which the same individual has dogeared.

The Activities application allows users to aggregate all the information about a project—including electronic correspondence, dog-eared Web

sites, and potential team members and subject-matter experts within the organization. It also allows users to save the activity once it has ended in order to replicate the same process for future projects.

In all, it not only emphasizes tagging but the other “social” networking concepts.

## **Digg**

### **Definition**

Digg is a community-based news website with an emphasis on technology and science articles, recently expanding to a variety of other categories such as politics and videos. It combines social bookmarking, blogging, and syndication with a form of non-hierarchical, democratic editorial control. News stories and websites are submitted by users, and then promoted to the front page through a user-based ranking system.

### **Features**

Digg differs from the hierarchical editorial system that many other news sites employ. Readers can view all of the stories that have been submitted by fellow users in the "digg/All/Upcoming" section of the site. Once a story has received enough "diggs", it appears on Digg's front page. Should the story not receive enough diggs, or if enough users report a problem with the submission, the story will remain in the "digg all" area, where it may eventually be removed.

Articles are short summaries of stories on other websites with links to the stories, and provisions for readers to comment on the story. All content and access to the site is free, but registration is compulsory for certain elements, such as promoting ("digging") stories, submitting stories and commenting on stories. Digg also allows for stories to be posted to a user's blog automatically when he or she diggs a story. For some websites, you even can dig someone's comment.

For example, on March 4, 2006, Digg.com switched to a new comment system. The new system allows users to reply to another user's comment, although replying to a reply of another comment is not possible. Digg users are able to rate other users' comments, which is designed so that spam and/or offensive comments stay hidden. User comments are under a 'digg' system much like the stories on the rest of the site. User comments can be 'dugg up,' making them more visible, or 'dugg down' until eventually they are 'buried,' making a comment hidden until the user clicks a "show comment" link.

### **Capabilities:**

Due to its features, Digg can be used to identify public opinion and interests.

For example, the *Friends Activity*: The friend's activity box below displays statistics of all Digg friends in the last 48 hours. This includes the number of Dugg stories, the number of Agreed On stories (2 or more friends have "dugg it"), the number of Dugg Upcoming stories, the number of Commented On stories and finally the number of Submitted articles.

Friends Activity stats box



Friends' Activity (48hr)	
Dugg	53
Agreed On	6
Dugg Upcoming	0
Commented On	0
Submitted	0

Add Friends

Digg can be viewed as one kind of opinion filtering and collection method by the public.

### Who they are

Here are some key dig websites:

- <http://digg.com>
- <http://reddit.com>
- <http://hugg.com>

### Issues

Digg has come under criticism in the media and in the blogosphere, for varying reasons.

- Most complaints are centered around the site's form of user-moderation: some feel the users have too much control over content, allowing sensationalism and misinformation to thrive;
- Others, mostly former and current users, have expressed outrage that the site's operators may exercise too much control over which articles appear on the front page.

### How can business leverage Digg?

- Monitoring the most Diggged news will assist the company in monitoring trends and public opinions.

- Identifying the relationship between hot topics and the company's messages will help leverage hot topics to promote the company's message to the public.
- Leveraging the public's interests will help influence the influencers.

## **Meme**

### **Definition**

A meme is defined as an idea, or a particular way of thinking about an idea. A meme is a unit of mental information in the same way that a gene is a unit of biological information. Memes compete to spread their information through a social population in the same ways genes compete to spread their information content through a biological population.

### **Features**

The key feature of Meme is that coverage is driven by a mix of influencers. For example, coverage of Techmeme is driven by industry insiders, passionate independents, and established journalists. This flow of information looks similar to the traditional media.

### **Capabilities**

Due to its features, Meme can be used to identify experts' opinions and interests. And it can also be leveraged to build the networks among the influencers for specific topics.

Meme can be viewed as one kind of opinion filtering and collection methods by influencers.

How do I get my blog to show up?

- Selectivity is important. Thousands of items are published to the web each day, so the trick is to pick and arrange a slice of them in a manner that's compelling to readers.
- First, focus on the content. Break news or write original analysis, and do so clearly and concisely, always careful to provide real value to new and existing readers. And use descriptive titles.
- Second, enable discovery of your post.

### **Who they are**

Here are some key Meme websites:

- <http://www.techmeme.com>
- <http://tailrank.com>
- <http://www.wesmirch.com>

### **How can business to leverage Meme**

- Meme is driven by the influencers. If the business can successfully have the messages to be Memed by the influencers, it will be more credible to the public.
- It's also one of the ways to build up or expand the business's connection with the industry influencers.

### **The difference between Digg and Meme**

- Meme is:
  - **Implicit**
  - **More focused**
  - **More expert/authority-driven**
  - **Better organized visually**
- Digg is:
  - **Explicit**
  - **Quirky**
  - **Developer orientated**
  - **Community focused**

## **e. Wikis**

### **Definition**

A wiki is a website that allows the visitors themselves to easily add, remove, and otherwise edit and change available content, typically without the need for registration. This ease of interaction and operation makes a wiki an effective tool for mass collaborative authoring. The term wiki also can refer to the collaborative software itself (wiki engine) that facilitates the operation of such a Web site, or to certain specific wiki sites, including the computer science site (the original wiki) WikiWikiWeb and on-line encyclopedias such as Wikipedia.

### **Features**

Conceptually, Wiki depends on the (1) knowledge and awareness of community members who will update /add/correct the information posted by another member, and (2) participation of its users for best and optimal results with respect to collaborative activities. More about this is given below.

The basic technical features of a wiki, according to Wikipedia are:

- The name of an article is embedded in the hyperlink.

- Articles can be created or edited at anytime by anyone with certain limitations for protected articles.
- Articles can be edited through the web browser.

Technically, the following functions are available for working with a wiki:

- Edit functions give the user the capability to edit the wiki. In public sites, the site is open to all, but moderated against vandalism. For corporate features, the required access provisions may need to be considered, depending on the use of the wiki by function, by project, etc.
- Hyper linking is purely a technical requirement. Camel font has been used in many wikis for the names of the documents to be hyperlinked through the wiki.
- Version history: The Wikis in Wikipedia have a versioning history by which changes to the versions are saved and all text is accessible. This is useful in the sense of the “radical trust” environment wherein the versions can be tracked and switched back if required.
- Discussion page: This is not mandatory since including one in a wiki would make it similar to a blog. A new technology that can be thought of then, is the Bliki.” If a discussion page is required, a “bliki” would be more useful to incorporate the functionalities/concept of both the blog and the wiki.

The key capabilities of the wiki include the following:

- Visibility: Information posted by a member is visible to all members of the community, whether the public or controlled access members.
- Simplicity in use and implementation: There are packages which make the installation simple. The process is also not “slow” for the users
- Access to version history
- Access can be modified for public use or internally
- Integration of content: Provides the capability to integrate the knowledge base.

### **Which websites are using wikis?**

- Wikipedia: The biggest multilingual free-content encyclopedia on the Internet. It has over two million articles and is still growing.”
- “Peanut butter wiki” and “wikispaces”
- Wiki creating and sharing system for educators, businesses and individuals in general.

## Which enterprises are using it, and how?

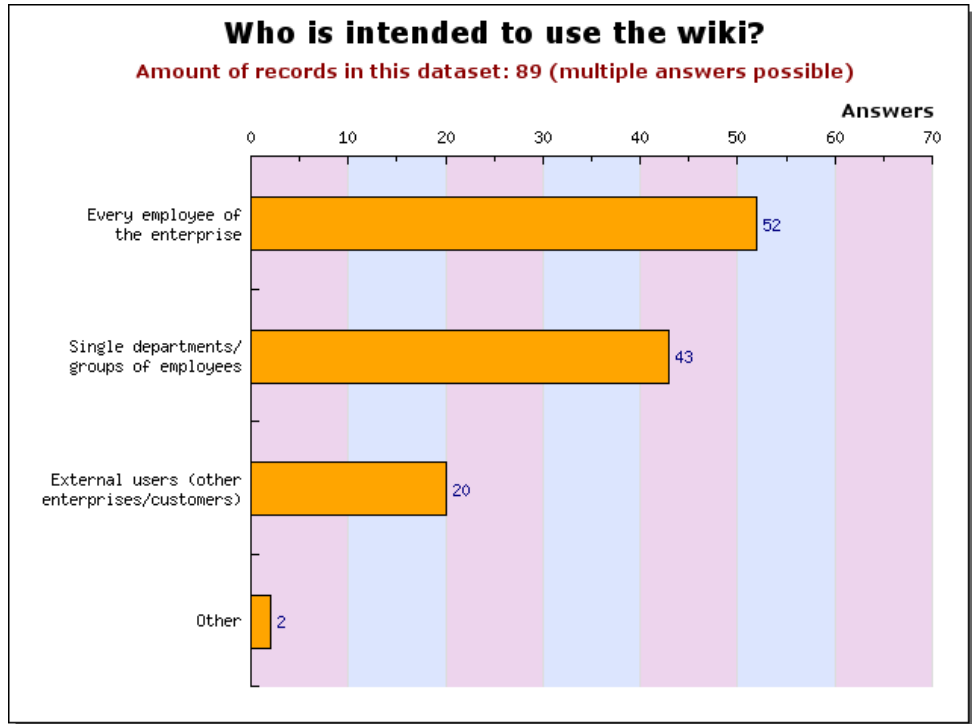
Going through the wikis features and their uses in the current public Internet web sites, we see that they are a powerful tool for communication, collaboration and providing visibility for what other people are thinking and doing.

Wikis are being used for the following applications:

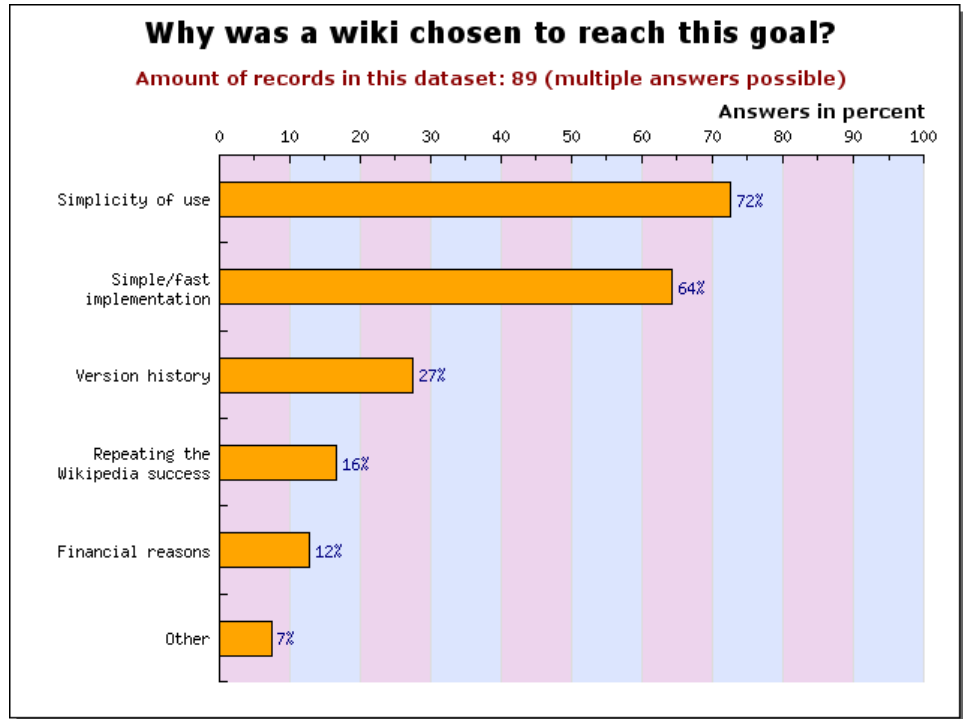
- Knowledge bases
- Encyclopedias
- Project management tools
- Agenda creation and tracking
- A communications tool for removing spam and long message-based conversations
- E-learning tools
- Investment bank Dresdner Kleinwort Wasserstein uses wikis for collaboration. Dresdner uses the wiki to create meeting agendas and post training videos for new hires.
- Intelpedia- an online, freely editable encyclopedia of terms and concepts specific to Intel employees (and accessible only on the company's intranet).
- Michael Idinopulos is a consultant and Director of Solution Design in McKinsey & Company's Knowledge Technology Group. He is responsible for McKinsey's internal knowledge technology portfolio, including search, document management, and recent experiments to stimulate sharing and collaboration through wiki technology.

An international survey of 120 participants conducted by the University of Cologne, gave the following partial results:

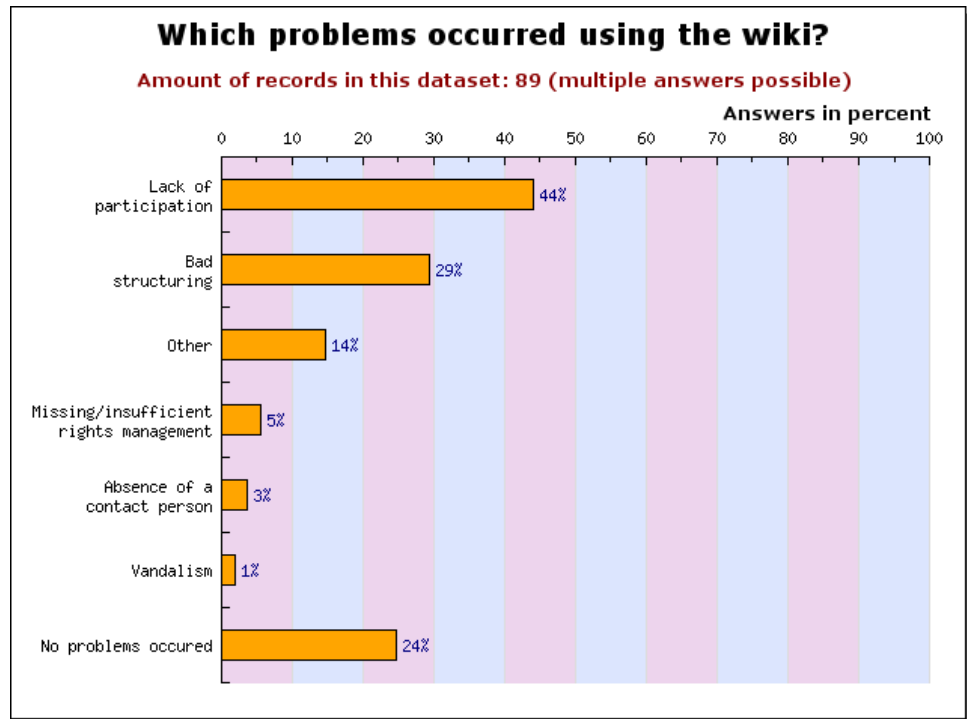
<http://wikipedistik.de/survey/results.html>).



Most enterprises use their wikis enterprise-wide contrary to the results of the German survey (but take in account that the international survey was answered by more small enterprises).



The main reason affecting the choice of a wiki clearly is the simplicity of use and implementation. The expense incurred is only a very small factor.



The main problem is lack of participation of intended users. Almost half of the participants had to deal with this problem, at least temporarily. Thus, encouraging employees is important for the success of the wiki. Vandalism is a negligible factor in enterprise wiki use.

## f. Prediction Markets

### Definition

Prediction markets are speculative markets created for the purpose of aggregating information and forecasting future events. Analytically, these are markets where participants trade in contracts whose payoff depends on unknown future events. Much of the enthusiasm for prediction markets derives from the efficient markets hypothesis. In a truly efficient prediction market, the market price will be the best predictor of the event, and no combination of available polls or other information can be used to improve on the market-generated forecasts. This statement does not require that all individuals in a market be rational, as long as the marginal trade in the market is motivated by rational traders. Of course, it is unlikely that prediction markets are literally efficient, but a number of successes in these markets, both with regard to public events like presidential elections and within firms, have generated substantial interest.

## Features

Prediction markets work like stock markets and can be used to forecast everything from who will win the Super Bowl to the outcome of a presidential election. Assets are created with a final cash value tied to a particular event (e.g., will the next US president be a Republican?) or parameter (e.g., total sales next quarter). The current market prices can then be interpreted as predictions of the probability of the event or the expected value of the parameter. Other names for prediction markets include information markets, decision markets, idea futures, and virtual markets.

## Which websites are using it?

- Inkling markets: <http://www.inklingmarkets.com/>
- Yahoo! Tech Buzz Game : <http://buzz.research.yahoo.com/bk/index.html>
- CrowdIQ:  
<http://www.crowdiq.com/opex/marketlistdisplay.do?exchangeid=1> (USA)
- PublicGyan : <http://www.publicgyan.com/> (India)

## Which enterprises are using it, and how?

- Hollywood Stock Exchange: <http://www.hsx.com/>  
The stock exchange players provide box office predictions for thousands of upcoming pictures. Movie studios like MGM and Lions Gate entertainment use information gleaned from this market to help make advertising and promotion decisions.
- Yahoo!  
Used it to predict the strength and competitiveness of innovative products which were suggested by its own employees
- Hewlett-Packard  
Ran a series of internal prediction markets to better forecast computer workstation sales in 1996-1999.
- Google  
Used it to forecast product launch dates. In the past 15 months, Google has run more than 130 markets on events, such as launch dates and new office openings.
- Public prediction markets: Intrade, Tradesports.com and HedgeStreet.

## **g. Online Virtual Worlds**

### **Definition**

An online virtual world is an Internet-based simulated environment where its users can inhabit and interact via avatars. This habitation usually is represented in the form of two or three-dimensional graphical representations of humanoids (or other graphical or text-based avatars). 3D graphical virtual worlds are now most common in multiplayer online games, particularly online role-playing games.

Although the origin of popularity of the online virtual world is game-oriented, some virtual worlds today have evolved into social networking oriented environments, which appear similar to the real world and enhance social networking or communication functions such as VoIP. Some virtual worlds provide advanced features, such as a currency system, and creation or outside connection capability. Please note that some website or software applications also use 3D avatar to enhance user experiences, but we excluded them from online virtual worlds due to the lack of a simulated environment for those applications.

### **Features**

Internet-based virtual worlds provide a cyber environment for users to interact with each other. To some extent, virtual worlds are another type of online community that aggregates people who have similar topics, interests, or sense of belonging.

First, compared to typical website-based online communities, virtual worlds have much more sophisticated interaction experiences which are similar to that in the real world.

Second, no matter what game or social-oriented virtual world, they all provide social networking features such as creating contacts, forming groups or communication.

Third, as mentioned above, some online virtual worlds now provide advanced features which include a currency system, creation, and outside connection. Second Life, one of the most famous virtual worlds, allows and encourages users to create virtual objects or even build a virtual world by programming one.

Many virtual worlds or multi player online games also have their own currency systems for users to trade their virtual items. Most of the virtual currency system is fixed in exchange for real currency, but some virtual worlds, such as Second Life, let virtual market users decide the exchange rate. Some virtual worlds,

such as Second Life, allow users to integrate links to web pages, video or other information sources outside the virtual world.

### Popular internet virtual worlds

- [Second Life](#)
- [Entropia Universe](#)
- [There](#)
- [DotSoul](#)
- [Active World](#)
- [Croquet Project](#)
- [RedLightCenter](#)
- [Habbo Hotel](#)
- Sim Online
- World of WarCraft

### Second Life

Due to the high participation of large corporations in Second Life, we selected Second Life as our main example in this white paper.

Total population: 4.03 Million (Feb 24)

#### 1. Demographic stats (Feb 2):

Age Band	% of Active
13-17 (Teen Grid)	1.24%
18-24	27.46%
25-34	38.78%
35-44	21.00%
45 +	11.52%

Average adult age: 33, Average teen age: 15  
Male: 58.89 %; Female: 41.11%

Country	% of Residents
<b>United States</b>	<b>31.19%</b>
<b>France</b>	<b>12.73%</b>
<b>Germany</b>	<b>10.46%</b>
<b>United Kingdom</b>	<b>8.09%</b>

Users by countries

## **2. Big names in Second Life**

IBM, Sun, Dell, Toyota, Nissan, GM, Reuters, CNET, American Apparel, MLB, Adidas, Sears

### **Capabilities**

- Entertainment (Gaming)
- Social Networking / Community gathering
- Collaborating and communicating in real time between multiple participants
- Presenting, promoting, and selling content ( Not in all virtual worlds )

### **Opportunities**

- Growing acceptance of online virtual worlds
  - A growing population of participants
  - Extending applications (gaming, social networking, business)
- A new marketing channel: Virtual worlds are considered an alternative channel for reaching customers.
- A potential market: Virtual worlds are regarded as an emerging market.