

TITLE

MySpace's impact on society based on its characteristics, development, and issues

ABSTRACT

MySpace is one of the largest social media in the world. This report explores the key characteristics of the service along with the viability of its income and the attraction to users. This report also grasps the technical issues such as the network traffic, which depends on the users using this service in different geographical areas. The network architecture is explored alongside the infrastructure of this service such as cloud computing for users to stream audio files that is stored in the cloud. Concerns regarding the use of MySpace are investigated base on the notion of security and privacy control. The outcome of this report will give understanding to the usability of this service along with the aspects surrounding the use of MySpace.

INTRODUCTION

Chris DeWolfe and Tom Anderson launched MySpace in July 2003. MySpace gained its popularity due to a decline in user for Friendster, which was underperforming. Slowly, users start altering their social media to MySpace. At the same time, DeWolfe and Anderson saw large number of famous artists and musicians using their service. With this opportunity, they created MySpace Music, which boosted MySpace popularity, as most users are fans of the artist using MySpace.¹

The service allows sharing of media such as audio files, images, and videos. MySpace was the largest social media in world. However, the users of MySpace are declining steadily. The impacts of MySpace varies between users and groupings whether it is positive or deterrent. Through the analytical reviews, MySpace provides a vast number of positive impacts to media, government, and businesses; although there are some negative impacts such as information leakages.²

CURRENT FEATURES AND CHARACTERISTICS

MySpace requires potential users to register in using this service. The service provided by MySpace includes customized profile options; MySpaceIM, MySpace Mobile and news, polls

¹ <http://computer.howstuffworks.com/internet/social-networking/networks/myspace2.htm>

² <http://techcrunch.com/2011/03/23/amazingly-myspaces-decline-is-accelerating>

and forums. The main features in MySpace include the ability to modify and build a user profile according to existing themes. The profile of the users within MySpace is emoticon enable to reflect different moods, “about me” sections are used to display the users profile with profile photo included which can be modified along with “who I’d like to meet”.³ An addition to the feature is the email attribute, which allows users to store unlimited files under @myspace.com. MySpace also features platform for third-party developers for application. Moreover, users are able to sign-in through Facebook and Twitter, which is an advantage in the ease of accessibility. Discover section in MySpace shows charts based on popularity along with the largest collection of music the world with about 40 million songs. This feature enhances the music industry, with songs that have a higher popularity will tend to have higher sales.

MySpaceIM is an instant messaging feature, which is utilized by MySpace users to communicate to each other. MySpace also enables users for video-sharing attributes under MySpaceTV. MySpace Mobile and News enables users to utilize the service from their mobile and news respectively. Karaoke section, polls and forums can be shared with other users.⁴ MySpace users have the ability to embed videos from YouTube into their page. The Music section in MySpace allows users to upload their work, which allows other users to access the file. SNOCP is used for users willing to sell their music, which is based on digital rights and content management service. MySpace Transmission is also an additional feature, which is a series of live-in-studio recordings by well-known artist. A well-defined feature among the Music section such as playlist and archives sections built by the users. There are also 14 available languages in MySpace.

GROWTH AND DEVELOPMENT

Initially, MySpace gained its first users from eUniverse 20 million subscribers. At the start, the domain was originally intended for data storage and sharing site, change occurred in 2004 into a social networking site. Within a year, MySpace had tripled in value. MySpace joined OpenSocial, which was intended to promote a common set of rules for software developers on writing program for social networks. By 2008, MySpace was the leading social networking site where in 2006; they have acquired 100 million subscribers.⁵ However, features are often buggy and slow as there was insufficient testing, measurement, iterating; implying that MySpace offered large number of features with low depth. In 2009, MySpace has attempted to redefine itself with more focus on medias such as music and videos along

³ http://www.diffen.com/difference/Facebook_vs_MySpace

⁴ *ibid*

⁵ <http://www.complex.com/pop-culture/2013/10/myspace-36-million-users>

with celebrities instead of a social networking website. MySpace did a re-launch in 2013 with several new features with an even greater emphasize on music as it was acquired by co-owner Justin Timberlake.⁶

MySpace used to have a feature called Bulletin, it is mainly used to contact an entire friends list without resorting to contact them individually.⁷ But, this feature is massive target for phishing; which leads to the deletion of this feature after ten days. The ability for YouTube user to embed videos in their MySpace account was deleted for several period as it was competing heavily with MySpace TV; but this feature went back after users protested against this banned.⁸ On March 2010, MySpace introduced extra security by enabling users to choose and classified content for different audiences. Additionally, after several redesigns; MySpace are aimed for younger audiences. These changes are brought upon to decrease the competition from other social media. MySpace relies on income gained by advertising, as its revenue model possessed no user-paid features. Through the website and the related ad networks, MySpace has a capacity to collect data about its users and thus enables behavioral targeting to determine the suitable advertisement for the users. MySpace received a deal with Google in terms of search facility and advertising such that feature is used in MySpace for a more dynamic advertising. Another form of income is the capital injections acquired from investors through the selling of the company's share prices.⁹

DISTRIBUTION AND TRAFFIC

MySpace current global rank is 1,568 according to Alexa ranks; this measurement was carried out relative to other sites. The demographic users varies among several countries, with the United States comprise 31.3% of its users, followed by India 18.1% and United Kingdom 4.2% along with a small number of percentage less than 5% in some European countries illustrated in figure 1. Based on the bounce rate of 56.3% of the visitors; users are more incline to abandon the site with only around 3.14 page views per visitor and 2:27 hours on the site. With search engine gaining popularity, MySpace only comprises of 2.26% of the most search website through a search engine such as Google with 25.4% of MySpace's visitors come from a search engine.¹⁰ In terms of pace, MySpace is relatively slow compared to other sites that are on average 76% faster than MySpace (2.23 seconds).

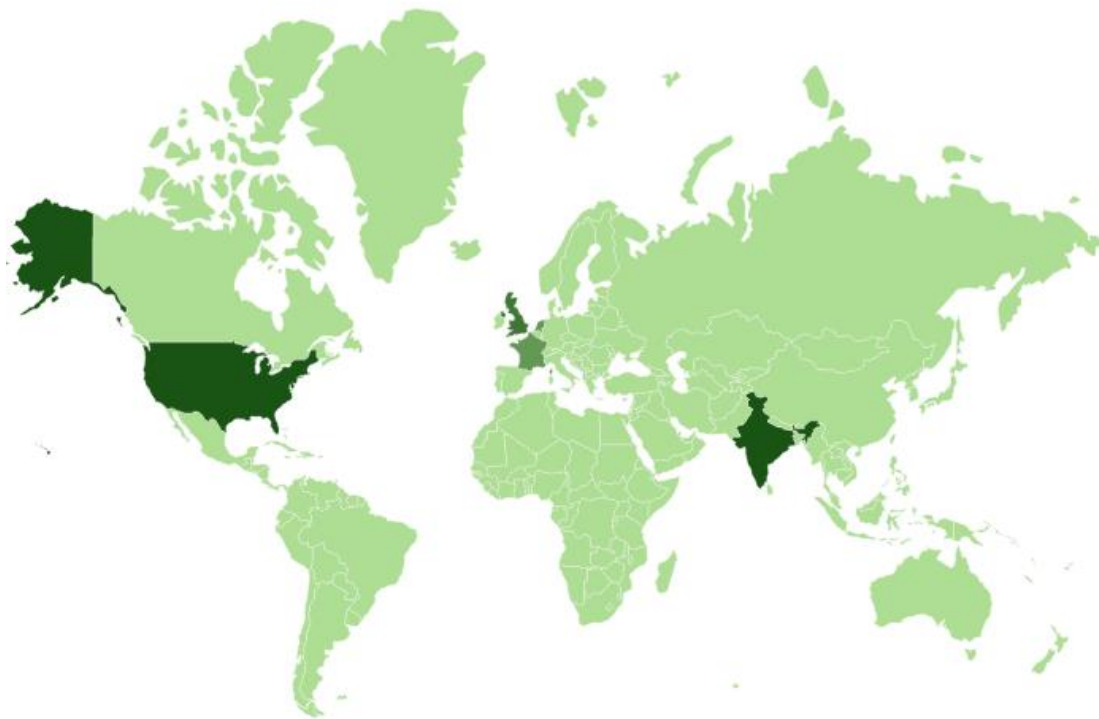
⁶ <http://en.wikipedia.org/wiki/Myspace>

⁷ <http://en.wikipedia.org/wiki/Myspace#Features>

⁸ *ibid*

⁹ <http://computer.howstuffworks.com/internet/social-networking/information/how-social-networking-sites-make-money.htm>

¹⁰ <http://www.alexa.com/siteinfo/myspace.com>



*Figure 1. Audience Geography*¹¹

The network traffic is also determined by other sites linking to MySpace with numbers up to 424,501; with the top linked sites such as amazon.com, youtube.com, and yahoo.com. In 2005 and 2008, MySpace is the most visited social media in the world; with 74.9 million users in the United States during its peak with a steady decline over the years after Google surpassed MySpace in 2008. Currently, according to Kaur's research there are 80.5 million users worldwide per month.¹² MySpace sends 100 gigabits data per second approximately to the Internet, with 10% was HTML content and the rest was media such as picture, videos, and music. During its peak, the site hands 1.5 billion page views per day along with another 2.3 million concurrent users in a day. MySpace is also blocked by governments in some countries; for instance, Turkey due to copyright infringement which violated their local terms.

NETWORK ARCHITECTURE AND INFRASTRUCTURE

In 2009, MySpace migrated from hard disk drive to solid-state drive with some of their servers in the aim to increase power and space efficiency. The server infrastructure itself comprise of over 4,500 web servers that run Windows server 2003, IIS 6.0, ASP.net and NET

¹¹ <http://www.alexa.com/siteinfo/myspace.com>

¹² <http://internationaljournalofresearch.org/index.php/ijr/article/view/1332>

Framework 3.5. There are also over 1,200 cache servers that run Windows server with 64-bit. Another 500 database servers also introduced in 2005 with specifications on Windows 64-bit and SQL server along with a custom distributed file system that runs on Gentoo Linux.¹³ The architecture has change as the number of accounts progresses. At 26 million accounts, they moved to a 64-bit SQL server to work around the memory issues, with a standard configuration of 64 GB of RAM. They also implemented horizontal federated database, which are partition, each partition is based on 1 million users that live in each database. Failure isolation is also introduced by segments which only allow only 7 threads per database, thus if the database is slow, only those threads will be affected with the other threads in normal performance.¹⁴

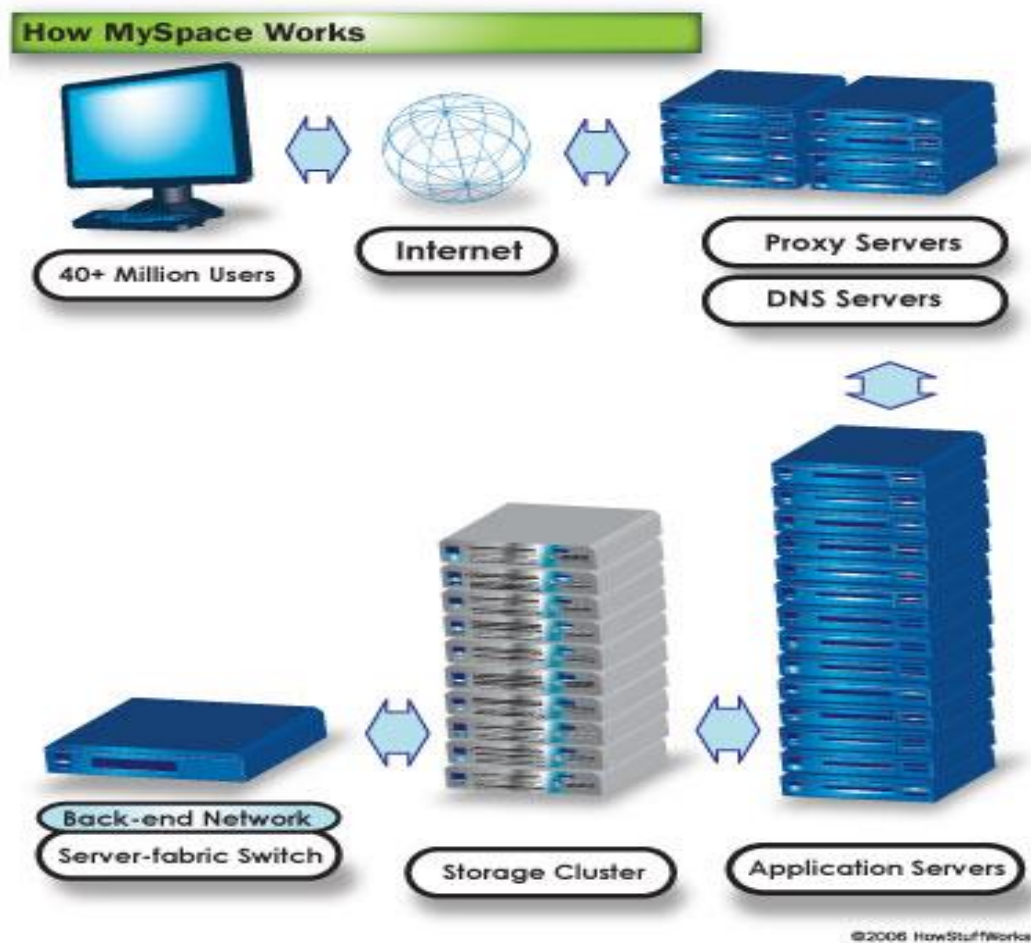


Figure 2. MySpace infrastructure and architecture¹⁵

Illustrated in Figure 2, the use of proxy servers between users and the main servers is allowing caching which reduces redundancies and congestion. They contact with servers on behalf of clients. The server infrastructure itself comprise of over 4,500 web servers that run

¹³ <http://highscalability.com/myspace-architecture>

¹⁴ *ibid*

¹⁵ <http://computer.howstuffworks.com/internet/social-networking/networks/myspace2.htm>

Windows server 2003, IIS 6.0, ASP.NET and NET Framework 3.5 which are mainly use for feature within MySpace such as MySpaceIM. In addition, the IP address is extracted as the website is requested from a DNS. MySpace uses UltraDNS instead of upholding its own DNS server. The DNS server used by MySpace then handles user IP request through a vast network server, which distribute the load based, on which the servers are available at a given time. In effect, it reduces bottleneck resulting in fewer lag and error during peak users time. As for database, Myspace needs a large-scale storage cluster because the users of Myspace often upload media files online, which are relatively large. MySpace owns a 20 Terabyte cluster to satisfy the requirement for rapidly developing data amount. An Infiniband server switch is used for MySpace's bank-end it promotes contact between numbers of servers on multiple platforms. The connection is mostly between all of the servers within and externally to deliver content to user. An Ethernet-based peering Equinix connects MySpace to the top-tier Internet backbones through unit hub. It travels content through Equinix network with the most efficient route in the aim to increase performance and users satisfaction.¹⁶

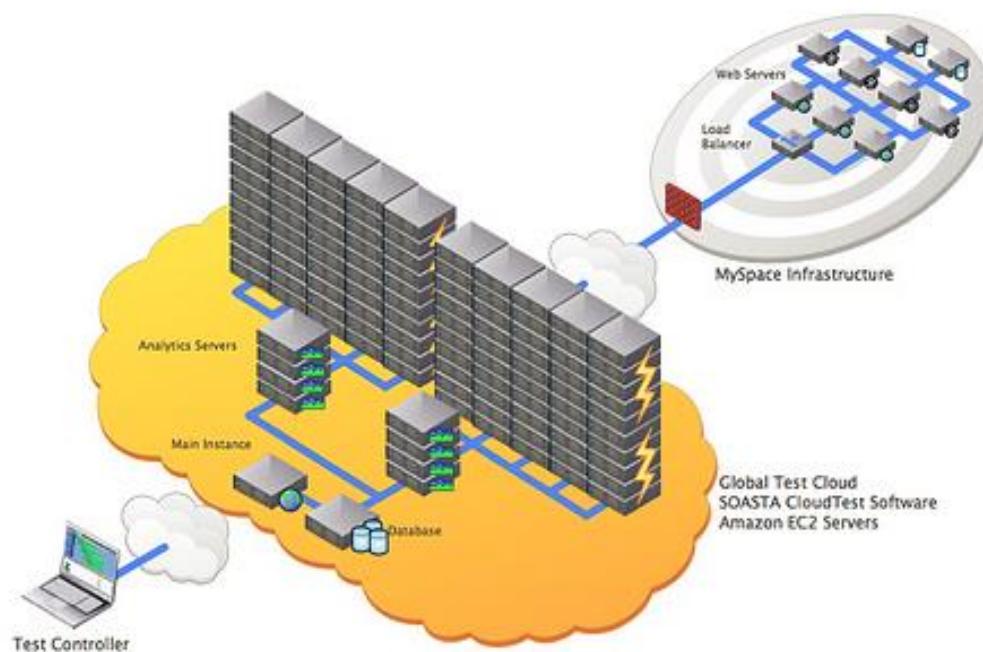


Figure 3 Cloud Test¹⁷

MySpace utilized cloud computing to test its new function, through creating 1 million virtual users. This cloud technology is used for the new wave of music and video streaming before they release it to the public. The architecture links MySpace infrastructure to global test cloud with a test controller on the other side demonstrated in Figure 3.

¹⁶ <http://computer.howstuffworks.com/internet/social-networking/networks/myspace2.htm>

¹⁷ <http://highscalability.com/blog/2010/3/4/how-myspace-tested-their-live-site-with-1-million-concurrent.html>

SECURITY AND PRIVACY

MySpace promised to keep and protect the users' personal information; they have failed to do so by giving personal information to advertisers without giving prior notice to the users. This personal information included full name, gender, profile picture and username. Thus, giving the advertisers the ability to track the users' profile. In essence, advertisers are able to gain a larger number of users from one user through their friend's list. As it is dangerous for personal information to be shared to the public; resulting in regular check-up by the Federal Trade Commission.¹⁸ Profile with ages set 13 to 15 will have their setting automatically private. Only if they are 16 they are able to choose. MySpace also deletes fake profiles if a victim verifies their identity and provides their profile through email. In July 2007, MySpace deleted a large number of users that are registered sex offenders. This is a positive attribute as they are trying to increase the users' safety.

Virus can spread through web scripts on MySpace. For instance, a virus called "Samy" was released and spread widely on MySpace. The virus forced users to add the author of the virus and over 1 million users were infected. To solve it, MySpace had to shut down the service for a couple of days.¹⁹ Since MySpace has many users, any virus released on it would cause a great influence. Another security issue is phishing; the Internet criminals will create a fake page which is extremely similar with MySpace, asking users to type their surname and password to steal their accounts. Spam is also a major security issue; with some users signing up accounts with the name of musicians before the actual musicians even sign up and sell promotions such as health-related food, thus decreasing the other users' satisfaction which was intended for music-related queries.

CONCLUSION

To conclude, MySpace, a music-oriented website, provides many services such as MySpace Music and MySpaceTV. MySpace's main feature allows great accessibility to the music industry and building connections between artists and fans. It also allows artists to sell their work, which is a benefit for smaller artists looking for an opportunity. MySpace's current development is not performing quite well, after its peak in 2008. In essence, the site is underperforming as discussed earlier in growth and development. MySpace also looks into advancement in terms of technology with changes happening overtime to increase user's utility. Although the number of users is declining, there are still substantial amounts

¹⁸ <https://www.ftc.gov/news-events/press-releases/2012/05/myspace-settles-ftc-charges-it-misled-millions-users-about>

¹⁹ <http://www.sciencedirect.com/science/article/pii/S1353485806704093>

particularly in the United States. However, MySpace also causes security and privacy issues such as spams, phishing and information leakage. An improvement in the security and privacy sector is needed. To an extent, the impact of MySpace varies between the users demographic with both positive and negative. Negative issues such as spam should be considered by people governing MySpace and between security restrictions to prevent information leakages. Users should be careful on what they put on their profile as well as look into more depth for the viability of another users profile to avoid phishing.

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