Innovation: Mobile Social Networking and Web 2.0 Online-Communities

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Abstract: Recently, an online social network phenomenon has swept over the Web and the signs say that Social Networking Sites (SNS) are growing in importance not just as places for individuals to communicate, network, and express themselves but also as advertising and marketing vehicles. Combining social networks to the mobile environment is a growing interest as it allows users to be in their online social community despite their mobility. To date, several surveys and studies have brought some insights into this field. However, methods are often not general or detailed enough for evaluation and comparison. In this study we highlight latest trends and evolution of Mobile Social Networking and Online-Communities. The existing research is reviewed and organized to summarize what we know about their usage. This paper concludes with discussion of new developments, challenges and opportunities. There are many opportunities for future research and organizational applications of SNS as SNS adoption grows at incredible rates. What we present in this study can be generalized for other enterprise-grade Social Networks, either for their own business purposes or as a contract job for another company.

Key-Words: Mobile, Social Networking, Web 2.0, E-Communities, Social Networks, Social Web

1 Introduction

The Web is no longer simply an online resource of information to be consulted, searched and acted upon. It has become a network of social communities and information databases that are constantly growing and improving as they continue to harness the collective intelligence of users. It could therefore be argued that whereas Web 1.0 served essentially as a broadcast medium (i.e. of information/knowledge) ‘Web 2.0’ takes the form of a platform whereby the creator of content, has become the focus. [24] The recent development of Web 2.0 has provided for an enormous increase in human interactions across all corners of the earth. One manifestation of this is the growth of computer mediated social networks. Many notable Web 2.0 applications such as Facebook, Myspace and LinkedIn are social networks [20]. Social relational networks are becoming an important technology in human behavioral modeling. [27]

In 2007 a third generation of mobile social networking emerged offering richer services predominantly based on Wireless Application Protocol (WAP 2.0) and Multimedia Messaging Service (MMS). In 2008 a fourth generation of MSN provides users with a high level of control over their information broadcast via their profiles or active handset services. Technologies such as Web 2.0 widgets, Flash Lite, Open Social and the OHA (Open Handset Alliance) operating system, coupled with advanced social media capture and transfer systems, has delivered a higher level of functionality to MSN. Recently, there has been growth in companies on the Internet which have focused on the development of virtual social networks. Such networks range in purpose from being purely social in nature to those which are commercially oriented.
with content development being a key purpose for these networks.

Online social networking has evolved into a social phenomenon on websites such as MySpace.com and Facebook.com, with More than 250 million active users; more than 120 million users log on to Facebook at least once each day; more than two-thirds of Facebook users are outside of college. Average user has 120 friends on the site. There are more than 30 million active users currently accessing Facebook through their mobile devices. People that use Facebook on their mobile devices are almost 50% more active on Facebook than non-mobile users. There are more than 150 mobile operators in 50 countries working to deploy and promote Facebook mobile products. The fastest growing demographic is those 35 years old and older on the sites [9]. Ryze and LinkedIn have enabled business users to establish networks of business associated and potential clients. While these virtual social networks are intrinsically interesting as places where young people socialize with one another in an online setting and are seen by marketers as a perfect target for advertising products and services designed specifically for this population [7], more importantly, they have become a new and fertile locus for innovation.

Mobile technology is shaping social networking and dating trends. Research firm eMarketer forecasts that over 800 million people worldwide will be participating in a social network via their mobile phones by 2012, up from 82 million in 2007. (See Fig. 1) [8]. By 2012 revenues generated from all business models in this industry is forecast to reach US$28.9 billion in the most conservative scenario and $52 billion in the high growth scenario. [23] The trend can be expected to spread into business applications of social networks, a market that Forrester Research expects will account for $4.6 billion in annual spending by 2012. Furthermore, Juniper Research has just released a new report that claims the value of the mobile dating and chatroom market will grow to nearly $1.4 billion by 2013, and also pegs the total UGC market to reach $7.3 billion by the same time. The estimate is up almost half from a report by the research agency that was presented in May 2008, which said revenues from mobile dating and chat services were expected to exceed $1 billion by 2010. [12]

The success of social networking sites and communication on such sites depends a lot on the innovation and adoption of such sites. With more and more businesses implementing these social networking sites, it becomes important to understand how and why people are deciding to use sites such as MySpace and Facebook. This paper will explore the development of mobile social networks, a subset of virtual social networks and online-communities. There are many opportunities for future research and organizational applications of SNS as SNS adoption grows at incredible rates. Our aim is to provide some perspective on the research from these literatures and concludes with discussion of new developments, challenges and opportunities. What we present in this study can be generalized for other enterprise-grade Social Networks, either for their own business purposes or as a contract job for another company.

2 Related Work

2.1 Online-communities

Online-communities offer professional content to embars and allow member (or visitor) dialogue. Online-communities are going to be an increasingly important digital only category for connecting with and maintaining some kind of relationship with your most valued customer groups. Sites like IBM.com, Cisco.com, Sun.com, Microsoft.com, and behospitalable.com (Hilton Hotels) are Online-communities. Hagel and Armstrong (1997) [10] propose four major types of online-communities based on people’s desire to meet basic human needs: interest, relationship, fantasy, and transaction. Jones and Rafaeli (2000) [14] further segment these communities by social structure, that is, communities formed based on social networks, for example, online voluntary associations, cyber inns, and so forth, and technology base, that is, types of technology platforms, for example, e-mail lists, Usenet groups, and so forth. Kozinets (2002) proposed the four types of communities as dungeons [15], that is, online environments where players interact, such as for online video games, circles, interest structured collection of common interests, rooms (computer-mediated environments where people interact socially in real time), and boards (online communities organized around interest specific bulletin boards). Kozinets (2002) [15] too delineates four kinds of online communities. These three typologies are reviewed, and a further popular typology of affinity groups proposed by Macchiette and Roy (1992) [1] as applied to the online environment is also proposed. Based on the above definitions the term may be simply defined as a group of individuals with common interests who interact with one another on the Internet.
Lastly, social network software provides social networking functions such as audio/video conferencing, IP telephony, desktop sharing, chat rooms, whiteboards, etc., for an online community to communicate and interact in a virtual environment. [3] It provides community-building functions such as an electronic portfolio, resume builder, and social networking, so that people can be connected together to form online communities to exchange and share knowledge. [22, 26]

2.2 Social networks
Social networks are the fabric of many of our interactions. Such networks include the relationships among friends and relatives with whom we share information and favors on a regular basis, and reach as far as influencing decisions by many of the world’s companies regarding whom and how they conduct their business. [11] In an initial study of online social networks [32], social networking companies were plotted along two matrices: technological and purpose (see Fig. 1).

2.3 Social Networking in a Mobile
More than 200 million people in the United States, and almost 3 billion people worldwide, are now using mobile Internet services on their mobile phones every day — in every way. According to data from mobile industry market research firm M:Metrics, there are 71.2 million users of mobile social networking services in the United States. [21] Examples are Plazes, Dodgeball, Jambo, Jaiku or Bluepulse. All of them build around the location awareness concept, which is typically combined with traditional social networking functionality, such as the centralized exploration of friendship links. Some of them, such as Jaiku also offer some Bluetooth based features. The power of such features has been recognized by the developers of mainly decentralized applications. Commercial examples are Nokia Sensor, or MobiLuck, which both offer profile-based matchmaking via Bluetooth. [18]

A majority of these mobile social-networking users are teens and college students using MySpace and Facebook. Virtually all popular social networking sites have opened their services for access by people using mobile phones to upload content, retrieve content, and communicate with their peers. Accessing social networking sites from mobile phones is becoming an integrated part of a kid’s cyber-lifestyle. [21]

3. New Developments, Challenges and Opportunities
3.1 Developments in SNS
Mobile access, via mobile phones, to SNS such as MySpace and Facebook is growing. Mobile social networking will help put users’ content into context since their social interactions will be able to occur in real time. [6] Mobile social networking systems are also developing that, among other things, allow users to be aware in real time of social activities. SNS are also evolving to attempt to offer more value to users. For example, MySpace is developing professional knowledge without ever leaving the comfort of their office. Yet, worldwide there are over 1.2 million professional conferences and events ea [19], adding up to a hundred billion dollar industry attends conferences for two reasons: to learn from others, and to form meaningful connections with clients and colleagues. As Nardi et al. [25] so aptly noted, in the modern world it is not what you know, it is who you know, that is most important in helping you get the job done.
a music service with Universal, Song BMG and Warner and is working with Merlin on future licencing arrangements. [4] SNS are spreading to new countries and cultures e.g., MySpace launched a dedicated community for Indian users. And given the high level of Facebook use in university settings, it is natural that educators are considering if and how to use Facebook as a learning tool. One developer recently received funding to work on a learning management system based on Facebook. Potential other applications include health care [31] where users can get personal health information from SNS like Facebook. [29]

3.2 Challenges
The challenges that need to be overcome for the successful adoption of social software include: (1) Security of public storage: concerns that resources will disappear as public sites disappear, (2) Privacy of organizations’ operational knowledge and students’ work [13] (3) Integrity of information available: learning to ‘know who to trust’ as reliable and valid sources, (4) Adaptation: managers, teachers and students are required to take on new roles within new learning communities. They are now creators and publishers, guides and scouts for new knowledge, moderators and teachers and learners, (5) Time: it takes time to learn and implement, (6) Usability is not enough: going beyond Usability: The need to design for persuasion, emotion, and trust (7) Bandwidth: in some rural communities or even in the major cities bandwidth is an issue with some social software tools, (8) OS Limitations: Although top-end mobile phones have good computational capability, often including multiple processors, they are limited in terms of the programmability and resource usage control offered to the developer, (9) API and Operational Limitations: These API limitations may not be resolved by the manufacturer because new models replace old models in quick succession. As a result, the programmer is forced to come up with creative solutions to API limitations, (10) Security Limitations: To protect the cellular network from malicious attacks and preserve the phone’s integrity, phone manufacturers and cellular network operators control access to critical components, including the APIs for access to the file system, Bluetooth, GPS, multimedia features, and communications via Wi-Fi or GPRS, through a rights management system. Properly signed keys from a Certificate Authority are needed to remove all restrictions on using these APIs, (11) In the online social networking space, there is clearly a large gap between the big two (MySpace and Facebook) social networks and the others. Consumers do not want to recreate entirely new and separate social networks for mobile. They would rather tap into their existing social network and have it go with them via the mobile phone.

3.3 Opportunities
From a marketer’s perspective, social networks offer two things: traditional media-buying and ad placement opportunities — let’s face it, getting your brand in front of a subscriber base of 200 million is worth something. At the same time, and growing in importance, is your forward-looking opportunity to develop non-interruptive, member-driven social campaigns. [5]

Market research firms are increasingly following individuals into virtual communities from large services such as Facebook and MySpace to simpler services such as Twitter and FriendFeed. By using online focus groups and questionnaires, they are able to get immediate feedback and make decisions about how best to target them in these environments. For example, at CC Metro, an imagined island on the Web, visitors can set up an “avatar” or a virtual alter ego, which can then shop and dance at the Coca Cola diner, visit a movie theater, as well as buy clothes and other accessories for their avatars, while surreptitiously being monitored by the firm. [17]

Some Social Networking Sites (SNS) are dedicated to particular topics, sharing knowledge, or purchases of products and services, transforming, for example, how users research, search and decide on travel plans. Yahoo’s Trip Planner, Google’s Co-Op, TripAdvisor’s Inside, VirtualTourist’s Trip Planner and others share travel journals, itineraries and photos. Similar social networking tools are used for real estate purchases. [28]

Social Networking, as exemplified in the ‘Web 2.0 concept’ by online applications such as MySpace, Facebook, Flickr, LinkedIn, Bebo, Hi5, Friendster, Gather, Friendster and more, have been making headlines in the national newspapers [16], not only for their high profile acquisition by major media companies, but also for their ability to potentially create a whole new revenue stream, or even to create a new exploitation route. However, the interesting question is whether these are the future of the Internet (as the Web 2.0 badge implies), or merely the latest ‘dot.com’ bomb.

There are many opportunities for companies to use SNS. Departments that should benefit from SNS include sales (identifying and engaging customers) and operations (so employees can help each other and find more effective ways of working). Research
4. Recommendations and Strategies

Social networks provide a means of making connections with people who have similar goals and interests. Those connections are the reason social networks are big and are continuing to grow. As more and more businesses are adopting the mobile Web, it is increasingly important for enterprises interested in mobile commerce to have a mobile storefront.

Social networks are not only for high school or college kids. LinkedIn, a social networking site for business and professional contacts, has over 46 million members in over 200 countries and territories around the world. Executives from all Fortune 500 companies are LinkedIn members. [30] People contribute to them to increase their intellectual, cultural and social capital. They provide a place for opinions to be heard, for achievements to be acknowledged, a place to stay connected, and a place for growth. We would recommend that advertisers create integrated campaigns that leverage the viral aspects of these social networking sites.

5. Future trend and Conclusion

Over the next few years mobile social networking will in turn become massive. On a more global level, mobile social networks can have a transformative effect on urban centers. While blogs have indeed transformed business, politics and publishing, online social networking at social networking sites such as MySpace, Facebook, and LinkedIn have impacted an even greater cross-section of businesses and people. Many businesses have also created social networking sites to encourage and support staff collaboration. The mobile becomes a research tool to give its user the capacity to collect and share information. Open information repositories can be created for advocacy work. One outcome is increasing transparency. Mobile phones can be a key for collectivity contributing to new information systems and receiving all sorts of information. With Web-enabled mobile phones touching one-third of the world’s population or twice as many as the number of Internet-connected PCs, mobile Web presence enables brands to reach a far greater audience with the content they want, when and where they want it. The mobile serves as a publishing and broadcasting tool. Text, audio and video is already possible – its contributions can support own communication channels and coincide with existing forms of citizen journalism. Another trend is about the potential for peer-to-peer networking. It is the convergence from the social web with the mobile. The mobile let you interact within a network in a highly contextual way.

When interactivity is combined with unified communications and location awareness, next-generation social networks will have significant business value. Businesses will be the most enthusiastic adopters of mobile social networks. They can build knowledge maps on a foundation of expertise contributed by employees and business partners, and enriched by data captured from projects, experiences and observations of others. Workforces will grow more distributed as the network replaces the office as the lifeline of information. Logistics will become more efficient, and group interactions faster and more flexible. We will come to expect information to be at our fingertips. Regardless of where information comes from, the mobile social networks of the future will give users nearly unlimited choice over how they choose to share and consume information. Businesses may learn eventually that the types of powerful communication tools now available for personal purposes on social-networking sites can be leveraged for perfectly appropriate and advantageous business uses. We provide some perspective on the research from these literatures, with a focus on the mobile social networks. These conclusions have implications for managers in technology-enabled organizations who wish to foster an innovative environment in their companies. This calls for more research that can improve our knowledge on the Mobile social networking strategies, system design requirements, business models and relevant technologies involved.

References


