

Challenges and Risks of Social Networking in Mobile Commerce

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Abstract

Mobile commerce is not limited to making transaction through mobiles. It has expanded its area to social networking and marketing. Google wallet and mobify are the types of support to mobile commerce. Social networking is the vast field where mobile commerce is growing its seeds. Research has shown that mobile commerce has used social networking as a traffic driver. People using e-commerce are also using mobile devices for making transaction. E-commerce can optimize the mobile usage by deploying responsive site designs paired with server based logic to minimize assets served to mobile user. So there is an immediate need to take care of mobile shoppers. Mobile devices due to its uniqueness, mobility and ease of availability are helping in growth of mobile commerce. It is a fact that social networking is also not limited to entertainment, but growing because of public interest in developing their business and business social network. Many challenges related to security, cloning of SIM, technical and non technical risks of mobile commerce are creating obstacles in optimal usage of social site in mobile commerce. This paper describes the key issues related to usage of social networking in mobile commerce and provides a solution to technical risks related to the same.

Keywords: E-Commerce, Mobile Commerce, SIM Cloning

Introduction

Mobile commerce or M-Commerce has expanded its region and is not limited to only making transactions. The scope of M-Commerce is now in sales, marketing, SCM and CRM. Mobile marketing will make the 30% of web traffic shown by executive at the end of 2013. M-Commerce is fulfilling the need of anytime anywhere shopping of customers. It accelerated the growth of smart phone market. The low cost of mobile phones increases the rate of penetration of M-Commerce which is different in different countries. It is expected that in 2013 people will buy more than 12 billion of mobile devices.

The mobile platform has expanded at rocket speed and expected that more than 70 billion of mobile application will be downloaded by 2014. Mobile applications are used for political, business, education and social network. The mobile applications act as central collection point for user's personal and social information.

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Mobile users are more social than the desktop user. One third of Facebook postings are through mobile phones. E-commerce sites and developers are also developing new application for mobile devices. Lowe's has optimized a new Facebook application for mobile devices.

The intersection of social media and M-Commerce is significant and has continuous growth. It helps the user to use M-Commerce within social space and not to be tethered to their desktops. Social media allows the M-Commerce users to create their own project. Social network need to keep focus on M-Commerce to generate revenues in the fast growing mobile world. Facebook facilitates the user to purchase credit with charges being reflected in mobile bill. Twitter has the "fast follow" tool to get SMS update from different brands. Foursquare allows the user to get deal and a chance to build reputation. It allows the brands to create pages and leave tips for the consumers of various locations. Groupon is more like a location layer on the user's deal model. It allows the user to see the deals in proximity to purchase right away. Google wallet is path breaking initiative that allows the user to transfer the money just by tap. The latest version plans to hold tickets, boarding passes and car keys.

The use of mobile commerce and social media in business is still in its early stage. Today only 9% of users follow different brands on social media and only 6% make a purchase. Research has shown that only 14% men and 8% women use their mobile phone applications that support shopping. 63% users shop or purchase by visiting brands or retailer's website whereas 6% make it through social media.

Gender, age group and educational level also divide social and mobile platform to put to good use by retailer to better target and engage their customers. ComScore (2012) showed that social networking is growing very fast within the age group of 18-29. There is a fundamental barrier in customers mind why they should communicate directly with brand or why brand need to communicate with them directly. Different customers today embrace the social media and both search for product information and make buying decision.

Impact of Social Networking on Mobile Commerce

Fred Cavazza (2012) in his paper has described six pillars to use social networking sites for mobile commerce; these are: Visibility, Proximity, Contextualization, Reputation, Recommendation, Customer care. Many retailers have launched their mobile optimized sites not only for their customers but for a payment gateway point of view also. Proviti (2011) proved that AsiaPay has also decided to utilize M-Commerce to serve better their customer. Its survey also showed that M-Commerce's security, policy and integration are among the top priorities.

Any company can retrieve the information about customer's location and their liking from their profile on social networking sites. If the customer is in the nearby location, they can offer him lucrative services by sending SMS. This way mobile devices offer companies the opportunity to conduct marketing campaigns that aim to drive the company's mobile, in-store traffic and sales. Retailers can send text alerts and digital coupons, product rating and reviews, locating stores, scanning barcodes. It has become a smart and emerging tool of marketing.

Nielsen (2007) stated that 75% of respondents from 47 markets across the world considered rated

recommendations from customers are most trusted and famous form of advertising. The user's interest to maintain their relationship on social networking sites by fulfilling the commitments such as adding new friends, updating the wall, uploading the liking comments with picture promote the business. Books and clothes are the most common items to be purchased through M-Commerce by this type of promotion.

Social networking help to build a good brand image because many people join online community and converse regularly. Domino's Pizza has built a great brand image using online community. Social networking sites shorten the distance between potential customers and the product. These sites ask the feedback to customers which allow the businesses to improve their product.

M-Commerce affects positively to retailer's business. But industry leading retailers are reluctant to share other side of story which shows slowing the growth, adoption and economic benefits can be experienced if customers accept the wireless in-store transaction as norms. Pelet (2011) poised that organizations need to develop highly technical expertise and business strategies for effective M-Commerce website.

Security Risk Involved in Using Mobile Commerce through Social Networking

Gururajan (2006) has categorised security risks into technical and non technical risk. The technical risks have more concern of sender and service. The security risk such as theft and loss of data is the primary concern to use M-Commerce. Security in the case of M-Commerce is more significant than a traditional E-Commerce as it is ease to eavesdrop into other's message with minimum difficulty in mobile environment. The small screen size of mobile and security issues of device are hurdles to adopt M-commerce. 6% of consumers believe that mobile website don't offer the same range of product as desktop sites. 41% of consumers feel it difficult to shop through mobile because of small screen. 39% of consumers are very much concerned about the security of mobile phone. 67% consumers have 3G mobile and 13% believes that 3G access is too slow for shopping.

The protection and privacy on device are the major issues for using M-Commerce effectively. Mobile security will be the major issue in 2013 as long as applications continue to access personal or device specific information without gaining proper informed consent. The largest remote attack surface of mobile device is mobile browser. These attacks may tether mobile application and make it a target for broad based attack.

INIT (2010) in its report said that trust to use M-Commerce through social networking is based on six factors that are: Site quality, Security of transaction, Communication, Social presence, Customer support and Online community. The higher risk of location based application is that it can be available through them to anyone.

Many brands do not have proper interface or API of their website to fit with mobile screen. Therefore, it is not easy to find customers based on product preference, with similar interest on the mobile web, directly linked to their browsing and purchasing history. Some problems like bandwidth limitations, payment protocol, quality of service and shipping delays also effect the growth of M-Commerce.

M-Commerce uses mobile device for payment in two different modes a. mobile as payment device to initiate payment by consumer b. mobile as acceptance device to accept payments by a merchant. Mobile is accepted as payment device everywhere from hawker to café. Customers can compare the prices and get benefit of promotional opportunities like digital coupons. Customer can store their payment card information in an easily accessible online location. Mobile payment in e-commerce environment and physical point of sale is defined as remote payment and proximity payment respectively. The proximity payments are intuitive and similar to today's payment method like contactless technology or NFC. NFC is backward compatible with existing payment and transit card. A short range radio signal is transmitted between phone and terminal to initiate the payment and process through card processing network and systems. New software allows the small merchant to subscribe the payment services and accepts the payment via key entered card data through magnetic stripe or chip reader to a mobile

phone. Card data is entered electronically as with a traditional POS device. Proximity payments use EMV standard to ensure mobile proximity payment and smartcard enabled payment delivers same end to end security. Standardization and integration are two main challenges for proximity contactless payment. Mobile devices are developed very fast with innovative techniques to access payment information stored on chip. Some times lack of technology and lack of coordination between card issuer and device manufacturer lead to more attacks. Remote payments are more susceptible to threats due to openness of mobile platform.

The world of e-commerce is using standard web software like Windows, Linux operating systems, whereas mobile platforms are facing frequent changes to operating systems and a wide variety of underlying hardware architecture. The risk of attack in e-commerce is low as it will work on internet when it is on but mobile phones are on even when we sleep. The other prone area of attack is Smishing i.e. SMS text phishing and Vising i.e. voice phishing, as the data can be sent through voice and text on mobile phones. Include mobile security software as default suite of application. Mobile phones should be certified for proximity payments. Payment related security standards should be reviewed and revised timely. The user should continuously check and update the certificate of third party application and device. Vendors those provide mobile payment space should encrypt sensitive data without relying on mobile protocols like GSM and CDMA. End to end encryption should be the part of product functionality. The device should have secure installation of EMV-complaint POS system.

Challenges in Mobile Commerce

The challenge in mobile commerce has started with mode of payments. The scope of m-commerce has not been limited to this; it has been used in a greater context of mobile marketing, sales and CRM. Earlier facebook has given check in facilities with different outlets which is now closed because different users have different mobile may not have facebook app on their device. Facebook facilitates credit purchase with mobile payment and the customer can purchase with

charges being reflected in their mobile bills. Many businesses through social networking provide infinite opportunities for customer to connect with them. Both social networking and M-commerce offer unbounded possibilities for recognition and promotion of both brands and trademarks. Mobile devices are the valuable tools for customer for business and for shopping to-distribute content via applications, interactions and enable purchasing decision by providing bar code scanner, product locator and mobile payment solution, but the major risks are availability of these tools on mobile device. Neither all the devices have these applications, nor all the service provider allow to use these techniques.

Privacy of user, lack of trust and health hazard records has directly influenced the customer in m-commerce. Moreover low processing power, modular exponentiation, low memory and weak battery power are also major challenges in growth of m-commerce.

Customer interaction is the major asset of a company which is not possible in m-commerce. Though it is free from shelf size limitation, yet it does not get the feed back from customer on their demand which becomes a major reason in its reduction in growth. Not all the business can be done through mobile. Its limitation of small screen causes a hurdle to develop mobile market in real estate. It is also not convenient for all business to business chain such as automobile manufacturer.

Mobile devices generally get disconnected when they move from one cell to another. This disconnection may lose the transaction and all functions are required to setup again. Lower bandwidth and usage of different technologies in different devices are the prime reason to make slow growth of m-commerce. It also makes m-commerce costlier than e-commerce. There are some applications of m-commerce which suffers a lot due to lack of customer interest and security of information. The U.S. bank, Wells Fargo is planning to close down their mobile service because of aforesaid reasons.

Perspective Solution to Successful Usage of Social Networking

The mobile devices have become the important part of our life. Its success in business depends upon the

type of business, device used by consumer, national framework of a country and technology of device. The security of data and privacy of information can be solved out by making change in technological framework of different protocols used. There are following perspective solution to make social networking successful in m-commerce.

1. Application should be simple. It should be a simple process for intuitive search and browsing which can easily overcome the problem of small screen.
2. Enhanced security for different payment modes of m-commerce. In India, we are using SMS based techniques which can be made SAFER by using encryption and parsing of data.
3. Development of native applications increases responsiveness and speed of application.
4. Marketing strategy for m-commerce should be different than e-commerce. It should be more focused on location based, mobile email-marketing and coupons.
5. Keep an analytical card for the key performance indicators for effective management of m-business.
6. Mobile application should be platform friendly which takes more time for developing but saves customer's time. Like Amazon has application to save the payment detail and customer's address after first time purchasing, so that next time user need to enter only user name and password.
7. Mobile Website should provide on site search to give options for predictive search across all platforms.
8. The payment partner should be trusted and should have user friendly payment mode.
9. The payment partner should provide access to vendor's relevant and hot offer. It should also compel to existing and new offer.
10. Mobile website should be content centric and context driven than event driven or program driven.

The aforesaid points do not discuss the technological and operating system framework dependency in m-commerce. It is a huge area of discussion and development to make highly effective involvement of social media in m-commerce.

Conclusion

The challenges of social networking are growing at faster pace than any business can manage. Security vendor Web root Software Inc. in its recent report has shown that the users are increasingly aware of the risk of sharing too much information on social networking sites. 27% of users have blocked their profile to be found at search engine.

Mobile phones have emerged as one of the most ubiquitous technologies among wireless technologies. The mobile phones shape the interaction of users with their communities, countries and economics. The business have more control over Wifi than GPS, as one barrier they face is getting customers more comfortable with using it on their phones. There is

lack of applications on desktops such as those that Android, iphone and blackberry have created for mobile phones. Time pressure and ease of availability of mobile phones allow the user to work on phone than desktop. The users can be influenced by aesthetics consideration, as they spend more time on their mobile phones. Now a days many mobile phones are having advance and more developed operating system which support the mobile commerce, but still customer support to work on small screen and security of transaction is creating major hurdles in emergence of m-commerce.

The sure way to mitigate risk is for business and service provider to spend money and efforts on implementing the right authentication strategies. They should also pay high level attention to monitor new threats and potential risk in working environment. Though social networking acts as business development tool for marketing, promotion and sales of product, yet the availability of information to anyone and fraud online communities slows down its process.

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