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ABSTRACT

With the increasing use of mobile information systems, mobile devices find its utility growing gradually for business processes. Equally there has been considerable growth of business opportunities over social media provides a win-win situation for both users and business people. Therefore it is also necessary to pay more attention to mobile business processes and social media methods for such systems. One way of analyzing importance of business process over social media is through mobile services acceptance model. In this paper we analyze mobile business process through social media using mobile services acceptance model as presented by Gao et al. and taxonomy of mobility-related requirements that enhances the business processes through recent portable devices. This study indicates basic requirements for Mobile business especially that fits through social media.

Keywords
Mobile business, Social Media, Requirements, Mobile services acceptance model, Mobile information systems

1 Introduction

In the modern world, because of the advancement in Information and Communication technology (ICT) the connectivity between the people are improved and get to know about individual statuses so much because of social networks. This connectivity becomes possible anytime, anywhere through portable mobile devices[1, 2]. The end users already started ubiquitously do business purchase and their needs without physically present at particular time. For example, personal visit is not necessary anymore for any bank transfer of money or avail additional services once you have the account already. Now, it is even simpler than earlier with mobile banking or banking using smart phones etc. Earlier ICT was used to broadcast information, i.e., used to update the status like confirmation of purchase, booking normally an SMS sent to mobile devices and most of the business activities done through traditional information systems like standard PC. From the advent of wireless computing technology and continuous introduction of new devices introduced new business opportunities over it. With the price reduction of mobile devices over time and availability of internet services connectivity anytime anywhere social network connectivity, a new era of business opportunities open for small firms to large ones without investing much for their business. Mobility is the particular distinguishing characteristics with mobile business process and now being available with social network on mobile become state of the art characteristics of common end user[3]. In this paper we propose following research questions;
RQ1. How Mobile business application through social media different from other mobile service application?
RQ2. What are the additional factors that governing the adapted mobile service acceptance model that suit for mobile business application through social media?

Sundar Gopalakrishnan, G. Vijayakumari, and G. Ramesh

The rest of the paper is structured as follows: Section 2 reviews the background and related work and section 3 discusses adaptations required in mobile service acceptance model. Section 4 concludes the paper.

2 Background and Related Work

The traditional e-business and mobile business are basically needed completely different working environments and has different set of requirements[4]. The traditional users perform their business operations over well-known environment (technologies, information, documents and people) in using traditional information devices, but for the mobile workers[5], even though the mobile portable devices are familiar with business people now but yet it is not comparable with traditional systems for their business purpose. In recent times surveys found that social networks updates are getting day today activity of most of the people around the world. In Table 1, the popular social networks available with their user count are provided and it still increasing. The growth of the social networks as shown in fig.1, become unstoppable and thus every business firm started thinking how to utilize social networks for their growth as win-win-win situation for the business firms, social networks and the end users. Because of the minimum resource required through social networks for any firm than the usual way, even smaller firms started utilizing for them customer support purposes that increases again the user count to great peak (shown in fig. 2). Gao et al produced mobile service acceptance model which developed for mobile service applications but that lags in certain aspects for applications that are developed for social networks and utilized in mobile devices[6, 7]. The mobility related requirements provide detailed requirements set and templates for any application that need to be developed over mobility as a main concern[8, 9]. The importance of non-functional requirements and its management in modeling domain are discussed in the work by pavlovski[10]. The way for utilizing mobile business to increase the value for firms are discussed by picoto et al[11].

Table 1. Social Network Stats for the Week 30 Sept 2011[12]

Facebook:	over 800 million users	via Facebook
Twitter:	over 200 million users	via ReadWriteWeb
Renren:	over 170 million users	via iResearch iUser Tracker
Qzone:	480 million users	via Wikipedia
Sina Weibo:	over 140 million users	via SINA Corporation
LinkedIn:	115 million members	via LinkedIn
Groupon:	115 million subscribers	via Reuters
Google Plus:	43 million users	via Mashable
Tumblr:	30 million blogs	via Tumblr
Foursquare:	14 million users	via Foursquare

Sundar Gopalakrishnan, G. Vijayakumari, and G. Ramesh

Time to reach 50 million users
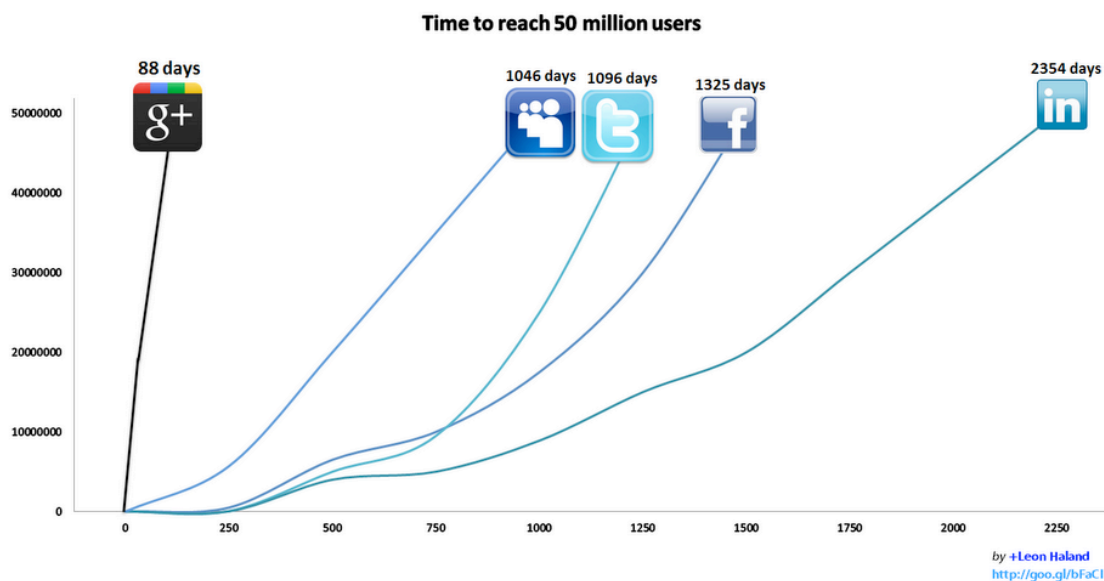
Fig. 1 Social media growth with time period[13]

Fig. 2 Social network visitors count[14]

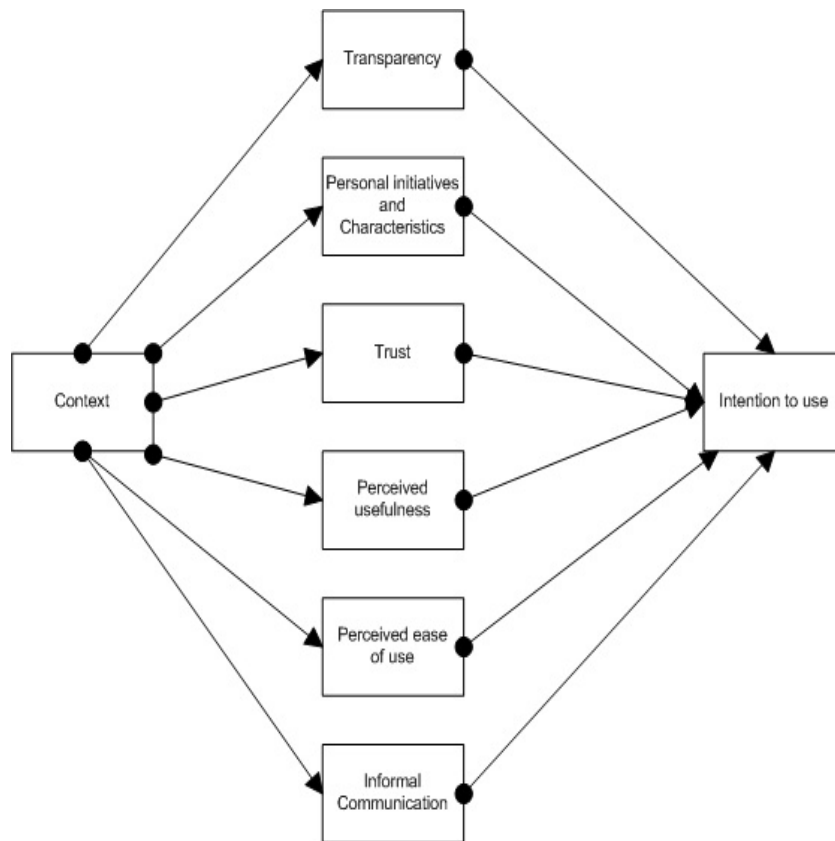Sundar Gopalakrishnan, G. Vijayakumari, and G. Ramesh

Fig. 2 Adapted Mobile Service acceptance model for mobile business

3 Adapted Mobile Services Acceptance Model

Acceptance model are available with different targets in providing certain criteria to fulfill the need of the systems. All these acceptance models are based on the TAM model and will be adapted to support certain particular systems. For example Gao et al provided earlier on mobile services acceptance model. As discussed earlier section this model target mobile commerce applications to follow this model. But we adapted this mobile service acceptance model augmented with factors transparency and informal communication with already available factors like personal initiatives and characteristics, trust, perceived usefulness, perceived ease of use, context and intention to use. This adaptation is provided to suit the concept of mobile business through social media. The detailed description of these factors explained as follows.

Context
Context provides the detailed information about the domain including location, the business activity and end users info. As per

Greenberg define context as a dynamic construct[15], i.e. any information that can be used to characterize the situation of entities (i.e. whether a person, place, or object) that are considered relevant to the interaction between a user and an application, including the user and the application themselves[6, 15]. Mobile business social media application context should provide information on location, identity, the state of the people (walking, travelling in car/train/bus, at airport, ...etc.), mobile device details (computing devices and objects). Mobile acceptance model classifies the context into two categories viz. place and people centered context. In our analysis we keep this two are valid and emphasizing mobility over these two and always denotes the mobile context. i.e. Mobile business applications that are using the social media as their context should always support mobility requirements.

Transparency
Transparency is one of the distinguished factors with mobile service acceptance model. Mobile business application in social media should be able to provide transparent services to the users but the user can opt for their business activities kept invisible to

Sundar Gopalakrishnan, G. Vijayakumari, and G. Ramesh

others. The openness of the business activity with immediate feedback for customers is the advantages of transparent nature of social media. Due to anywhere connectivity concepts of mobile devices, bidding concepts also worked well with mobile business especially through social media.

Personal initiatives and characteristics

Personal initiatives and characteristics are different with individuals. This differs from people to people depending their educational background, gender, age, interest to learn and practice new things. But as far as social media concern, it already won all the age group irrespective of gender and there may little bit difference in using social networks with mobile devices. So this factor could affect the mobile business over social media. The attitude of using social network for other than business purpose will be less risky with mobile devices for example, interrupted transaction due to poor connectivity will be certainly affect the personal initiatives and characteristics of the user.

Trust

For any business application and activity, trust is the key factor. The user should believe and put faith on the specific business application or activity should provide enough safety and security for their transaction or usage[16]. It is indeed a key factor with mobile business especially that is openly available through social networks. In a social network keeping a user trustable with any business application means a lot with business opportunities. i.e. friends and family members following the user will started believing and trust the business application which is the power of social networks.

Perceived usefulness (PU)

Perceived usefulness is defined as the degree to which a person believes that using a particular system, i.e. mobile business through social media would enhance his or her task. It is evident that mobile services confirms the anywhere connectivity and the user almost available anytime through social networks, and hence perceived usefulness for both user and business firms are significant. TAM model also suggest that PU has direct positive effect on users' intention to use.

Perceived ease of use (PEOU)

PEOU is defined as the extent to which a person believes that using a particular system would be free from effort. PEOU mainly deals to what extent the usage of mobile business over social networks beneficial without difficulties. This also influenced by the context where the user, business application being utilized. As per Davis et al, PEOU has positive effect with users' intention to use.

Informal communication

Informal communication is very important for business domain with end user directly. Informal communication defined to be with or without particular intention, knowing in and around happenings and sharing this knowledge with everyone along with updating ones own. Social networks now becoming business dominant than earlier since the users are borderless connected. The users mostly, like minded or with same demands and cultural people are of same interest which is easy for the business people target their users from their beta version ideas. The informal communication enhances both the customers demand and provides business firms quick feedback before firms official launch of the product. Through social network on mobile devices the ability of getting feedback and support after business activity became available anytime which is the primary factor for intention to use.

Intention to use

Intention to use is the intention of people to use the mobile business applications over social media. This is influenced by the above variable factors context, transparency, trust, perceived usefulness, perceived ease of use, informal communication and characteristics.

4 Conclusions and Future Work

Social networking software application development is taking place heavily in almost every organization now. Through above discussion we have shown that certainly mobile business application through social media is different from other mobile service application and suggested the adapted mobile service acceptance model to answer RQ2. In this paper we provide a checklist for the developers who develop the software applications for social network must consider this adapted mobile service

Sundar Gopalakrishnan, G. Vijayakumari, and G. Ramesh

acceptance model in development stage itself. By following this acceptance model, the development team can provide software application that can fit for especially the mobile business. These suggested adapted mobile service acceptance model however not evaluated so far. As a future work on evaluation, we planned to conduct an experiment with a case study on mobile application in social media to confirm the validity of our adapted mobility acceptance model.

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