

# Latest Trends in Mobile Business

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## MOBILE BUSINESS: INTRODUCTION

Since the 1990s, a surge in the popularity and usage of e-commerce has led to the recent emergence of conducting business transactions using handheld mobile devices connected by wireless networks (Andrew, Valacich, & Jessup, 2003). Known as mobile commerce, m-commerce allows for anytime and anywhere commercial transactions. M-commerce is an upcoming technology whereby commercial transactions are made through handheld devices, such as mobile phones and personal digital assistants (PDA), which are connected by wireless networks. The ability to conduct business anytime and anywhere through mobile commerce will remove the space and time constraints on an individual for conducting business.

Different kinds of services have since emerged for conducting m-commerce, such as location-based services (LBS) (e.g., mobile advertising), pervasive computing, and mobile gaming. These services allow for conducting not only commerce but also business activities using mobile devices. Mobile business (m-business) allows for mainly two kinds of services, namely, push-based and pull-based. Push-based services are initiated by the vendor while pull-based services are initiated by the customer. We will discuss these services in m-business together with their advantages and disadvantages.

## LOCATION-BASED SERVICES

Location-based services are essentially push-based services that generate commercial activity by using geographic location information of the mobile devices, along with information about services and products available in physical proximity (Matthew, Sarker, & Varshney, 2004). The key component of LBS is location. Through location determination technologies (LDTs), the location of mobile device users can be detected via terrestrial or satellite-based technologies, with the global positioning system (GPS) being the most famous LDT.

LBS comprises of various services such as providing travel directions, instant information, traffic alerts, and so forth. Consumer services and mobile advertisements are examples of mobile services that link buyer and seller. Consumer services, a kind of customer-to-business (C2B) pull service, deliver products or shop-related information upon request. Buyers can obtain information from shops in a shopping mall based on products' requirements on the buyer's shopping list. Mobile advertising uses the business-to-customer (B2C) push method whereby advertisements which may contain special events information, discount vouchers, and so forth which are not requested by users will be sent to them when they are within a certain physical proximity from the store. For instance, when a customer is within the vicinity of Swensen's, a 20% discount Swensen's short message is sent to the customer's mobile device. The customer can then use the discount message sent upon entering Swensen's for a meal.

LBS can impact the purchasing behavior of consumers and the operations and business model of commercial businesses. In terms of value proposition, companies that involve in LBS provide not only elements of convenience and speed for up-to-date information, but are also able to achieve cost-savings and price comparisons between products. For example, instead of looking for a computer to search for the information online or to enquire from numerous friends, all one needs to do is to use LBS consumer services for desired information. An updated, hassle-free, and faster reply can thus be obtained.

The market space of companies can also be further expanded, promoting products or services to both intended and unintended consumers. As advertisements and promotions reach out to unintended consumers via LBS, the possibility of increased sales is higher which in turn generates more revenue. For example, a prospective customer may receive a promotional advertisement sent by, say, Marks and Spencer using LBS. Out of curiosity, the customer may decide to visit the Marks and Spencer store and conduct purchases. In this way, Marks and Spencer obtains extra revenue.

A competitive environment definitely exists, if competitors in the same industry are using LBS within the same market space. Such a competitive environment may bring about homogeneous pricing or even various kinds of innovative marketing strategies by companies in order to achieve a competitive advantage. Even in a less competitive environment, companies with LBS certainly have competitive advantages over those without LBS. This is largely due to the provision of improved services (such as ease of navigation). Customers are also able to extract information about the companies regardless of time and place, even when the store is closed. Secondly, product and service promotions and information can be easily and dynamically updated on the database, and marketing strategies can be redesigned. Third, convenient access to information on interactions between the consumer's mobile devices and the screen can help the marketing team of a company to appropriately plan strategies according to information on hand. For example, the statistics of the number of searches of a product by users on a company will effectively help the company to plan its marketing strategies.

## **MOBILE ADVERTISING**

Mobile advertising, a form of location-based service, refers to 'discounts or special offers' offered by businesses in customers' vicinity according to customers' interest. Singapore has one of the highest mobile phone penetration rates in the world.

According to Lim (2006), Singapore's mobile phone ownership stands at 80% with an 11% growth in the number of mobile phones sold. These figures serve to show that most people in Singapore hold at least one mobile phone with some people owning more than one with multiple service providers. This is therefore a prime time to use mobile advertising as a value added platform to increase sales and brand recognition.

Mobile advertising provides better targeting than direct mail and is considerably less expensive than a sustained television advertisement campaign. When combined with traditional forms of advertising like print, radio, and television, mobile advertising can be a very effective way of getting the sales message across for companies.

Mobile advertising with traditional forms of advertising has been used with great success in some

countries. In Australia, a concerted campaign using print media, television, the Internet, and mobile advertising was used to promote the launch of the new Kit Kat Chunky chocolate bar (Veldre, 2001). When consumers bought the product, they were given a serial number and asked to key in either through short message service (SMS) or through the Internet. This allowed them to win instant prizes collected from participating outlets using the reply e-mail or SMS. There was also an option of an opt-in to receive updates and news on new products. Research has shown that more than 97% of participants used their mobiles to participate and about 100,000 people opted to receive the product updates. This example shows how well a coordinated campaign benefits both the consumer and the business. The company got increased brand name recognition and sales of a newly launched product. And the consumers were given the option of receiving product updates which may help them make better purchasing choices and increased excitement when they bought the new product because of the prizes. The use of an opt-in to receive updates also prevents the company from sending unsolicited SMS or spam.

The best part of advertising using the mobile phone platform is it is ubiquity. This allows location-based advertising that is impossible in other mediums. In Shibuya, Tokyo, several fashion outlets used SMS to tell loyal customers of sales when they are in the vicinity of their shops. This allows the shops to disseminate promotions in an effective manner and also allows shoppers to know of any impending sales so they can stretch their purchasing power.

Mobile advertising also has some disadvantages. Although location can help vendors advertise according to customers interests, it is almost impossible for companies using mobile advertising to reach out to their preferred target group as customers' needs differ. This also means that consumers who are interested may not be able to receive such promotion as they may not be in the vicinity of the service. This creates a problem of market failure where businesses may not be reaching out to the interested customers.

Due to the small interface, limited memory, and bandwidth of the mobile devices, vendors can display only a limited amount of information. Therefore, users are unable to view the full advertisement that they may be interested in or they may miss out on the service altogether. Thus, the success of mobile advertising is greatly reduced due to such limitation although improve-

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