

Chapter 3.20

M–Commerce Opportunities

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INTRODUCTION

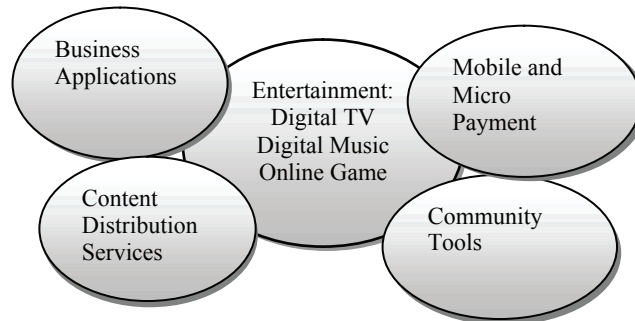
The mobile phone industry has experienced an explosive growth in recent years. Mobile phone subscriber numbers have passed the 1.6 billion mark at the end of 2004. The emerging markets such as China, India, and Brazil contribute this growth. In China, the number of mobile subscribers has already surpassed the number of fixed landline phone subscribers. In Korea, the number of mobile phone Internet subscribers is 34.53 million people or 72% of the population in June 2004 (APEC, 2005). Mobile e-commerce (m-commerce) makes business mobility a reality. Mobile users can access the Internet anytime and anywhere with ubiquitous, inexpensive computing infrastructure. Mobile wireless services are ranging from mobile phone networks to wireless local area networks. The service provided by mobile phone systems has achieved huge success. Mobile phone users originate from all walks of life and

include almost all age groups—from teenagers to retired people. It creates a new method of personal communication without location constraints. As telecommunication technologies are converging at fast speed. We will study mobile phone and personal digital assistant (PDA) related to mobile and wireless telecommunication. Hence, m-commerce is defined as electronic commerce carried out in handheld devices such as mobile phone and PDA through mobile and wireless telecommunication networks.

BACKGROUND

E-commerce is characterized by e-marketplaces, online auction systems that act as the intermediary between buyers and sellers. On the other hand, m-commerce is more personalized and ideal for access to location based services. Many new business models have been established around

Figure 1. M-commerce applications



the use of mobile devices. Mobile devices have the characteristics of portability, low cost, more personalization, GPS (global positioning system), voice, and so forth. The new business models include micropayment and mobile payment, content distribution services, entertainment, community communication and business services. Figure 1 illustrates m-commerce applications. Because of their existing customer base, technical expertise and familiarity with billing, mobile telephone operators are the natural candidates for the provision of mobile and micro payment services. Micropayment involves small purchases such as vending and other items. In other words, the mobile phone is used as an ATM card or debit card. Consumers can pay for purchases at convenience stores or buy train tickets using their mobile phones.

Content distribution services are concerned with real time information, notification (e.g., bank overdraft), using positioning systems for intelligent distribution of personalized information by location (e.g., selective advertising of locally available services and entertainment). Real-time information such as news, traffic reports, stock prices, and weather forecasts can be distributed to mobile phones via the Internet. The information is personalized to the user's interests. By using a positioning system, users can retrieve local

information such as restaurants, traffic reports and shopping information. Content distribution services with a greater degree of personalization and localization can be effectively provided through a mobile portal. Localization means to supply information relevant to the current location of the user. Users' profile such as past behavior, situation and location should be taken into account for personalization and localized service provision. Notification can be sent to mobile devices too. Mobile network operators (MNOs) have a number of advantages over the other portal players (Tsalgatidou & Veijalainen, 2000). First, they have an existing customer relationship and can identify the location of the subscriber. Second, they have a billing relationship with the customers while the traditional portal does not. MNOs can act as a trusted third party and play a dominant role in m-commerce applications.

In addition, mobile phone has become a new personal entertainment medium. A wide range of entertainment services are available, which consist of online game playing, ring tones download, watching football video clips, live TV broadcasting, music download and so on. According to *Screen Digest* estimates, Korea and Japan accounted for 80% of worldwide games download revenues of Euro 380 million (*Screen*

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