Chapter XXXIII
Relating Mobile Computing to Mobile Commerce

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ABSTRACT

In today's digital economy and the extended enterprise paradigm, mobility is on the rise. It is important to perceive mobility as an opportunity, rather than a threat. Although m-commerce is still at its infancy, it serves as an extension to e-commerce sites—it has been regarded as a value-added service. However, there are many issues and challenges while reaping full benefits of mobile computing solutions for m-commerce. This is because mobility and mobile computing is replete with many challenges on the business front, technical challenges as well as social challenges. This chapter undertakes discussion on understanding mobility and categories of mobile user types, understanding the meaning of m-commerce. Typical applications that support the m-commerce paradigm are illustrated through case studies. The chapter ends with a discussion on legal implications of mobile technology, and future directions for mobile commerce and mobile computing. The key message is that mobility is not just about connectivity— it is about function it provides and the way organizations work in today's digital economy.

INTRODUCING MOBILE COMMERCE

The Internet, especially combined with wireless technologies, has become more than just a communication media. Together, they form important business drivers for e-commerce (electronic commerce) and m-commerce (mobile commerce) and, as such, have become integral features of the global economy. The Internet, combined with wireless communications, enables flow of information among business players, increasing the speed and accuracy with which businesses exchange information and, simultaneously reducing the costs of transactions. For example, Internet economics facilitate a reduction in the number of middlemen involved. Along with the development of

the Internet is the phenomenal growth of the mobile communications industry. In fact, the mobile communications industry is growing so rapidly that in 1999, there were more mobile phones sold than automobiles and PCs combined (Telecommunications Service Inquiry, 2003). During the Qualcomm BREW 2005 Conference (statistics on camera phone), a phenomenal rise in the use of SMS and picture messaging was reported. Kerner (2005) also states that by 2009, consumers worldwide will be buying and/or replacing their mobile phones at a rate of one billion per year. Thus, it should be anticipated that the trend in e-commerce, which has influenced the economy and lifestyle of today's culture, will extend to m-commerce enabled by the wireless technology and the wireless application protocol (WAP).

According to a Commonwealth Report (Telecommunications Service Inquiry, 2003), it is expected that by the year 2006, there will be 923 million Internet users, whereas 543 million will be mobile (wireless) users. Currently, there are almost 8.5 million mobile services in Australia after 13 years of operation, compared with approximately 10.64 million fixed lines after over 100 years of operation. The number of mobile phones sold in Europe has also grown rapidly. In the UK, there are approximately 30 million subscribers. In both Italy and Finland, 70% of the population owns a mobile phone. Consequently, this global trend has motivated businesses to adjust them with the change. Gartner raised its 2005 forecast (see Kerner, 2005) for mobile phone sales to 779 million units, an increase of 16% over 2004. As recently as May 2005, Gartner revised its 2005 mobile phone sales forecasts from 720 million to 750 million units, which is a 13% increase over 2004.

Thus, the mandate to mobilize business data is clear and, with global m-commerce reaching $200 billion by 2004 (Gartner, 2005), m-commerce is the new benchmark. Just as business

Figure 1.

organizations compete with one another to do business on the Internet, the evolution of technology continues through handhelds and smart phones. Examples of such handheld gadgets are shown in Figure 1.

The benefits of *pervasive information access* and the ability to do *business anywhere* are evident in organizations that have decided to embrace mobile commerce opportunities as part of their strategic choice. This poses certain critical issues for today's CEOs and CIOs: How will my company measure up against the m-commerce benchmark? Are we supplying business data to our workers via handheld devices? Are we supporting our critical business functions with mobile technology? Is our IT shop providing support to end users? These are some of the crucial questions explored in this chapter. This chapter undertakes discussion on understanding mobility and categories of mobile user types, understanding the meaning of m-commerce, and typical applications that support the m-commerce paradigm. Finally, the chapter ends with a discussion on legal implications of mobile technology, and

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