Chapter III

Mobile Payments (M-Payments) – An Exploratory Study of Emerging Issues and Future Trends

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Abstract

With the growing momentum of wireless revolution and m-commerce explosion, it is evident that mobile devices are becoming a critical component of the new digital economy. As mobile markets continue to mature, being able to pay using the mobile handset may perhaps be the key to the development of next generation services. The current market penetration of mobile phones in conjunction with the optimism on the growth of m-commerce offers high potential for m-payment surge over the next few years. When mobile phones are equipped with a device to protect personal information, the security level of an entire service,
including the network, improves considerably. However, the mobile payments market today is typical of an emergent one, encumbered with an abundance of approaches and concepts that may not interoperate. In this chapter, we have explored the broad range of available m-payment methods, emerging issues in standardization, security, and some proposed and existing solutions.

Introduction

With the creation of the new freedom economy driven by deregulation, new sources of global competition and ICT revolution (Keen & Mackintosh, 2001), commercial transactions are rapidly transitioning from fixed locations, to anytime, anywhere and anyone. New forms of mobile technologies are rapidly transforming the marketplace. Optimists are of the opinion that the new world economy will witness the transition of mobile devices from a simple communication device to a payments mechanism, because the sole ownership characteristics of the mobile phone supports non-repudiation of transactions by customers and enables secure certificates to be stored inside the device to support security of mobile commerce (Ding & Unnithan, 2002). Mobile phones have become devices for paying merchandise, receiving time sensitive information such as stock quotes, or for dissemination of critical business processes in the value chain (Paavalainen, 2001) in many countries. Mobile phones surpass fixed lines in many economies, and in fact, some accession countries or developing nations have made mobile network a choice over the fixed line networks (Unnithan & Swatman, 2002). The number of mobile phone subscribers worldwide was 946,297,000 (ITU, 2002) and is expected to reach 1 billion by 2002. With the rise in the number of Internet enabled mobile devices, the number of subscriptions will rise and perhaps, the wireless Internet users will outnumber the fixed line Internet users (Krueger, 2001). The market for m-commerce in Europe alone is estimated to be worth Euro 3 billion by 2003 (KPMG, 2000; Muller-Veerse, 1999). Bucci (2001) highlighted that Italy—a country with the highest mobile phone penetration rates (63.6 million for 57.5 million people), has more than half of the population participating in m-commerce and 61% of the mobile phones are Internet enabled. Mobile payments will gain significant foothold in coming years.
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