

# Chapter XXXI

## M–Business: A Global Perspective

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### ABSTRACT

*This chapter discusses the use of mobile, handheld computer devices that are connected wirelessly to a network for business and personal use across people, projects, tasks or organizational units to infer a trend of general acceptance of m-business in the market place. It describes the state of the mobile commerce industry from a worldwide perspective and the barriers to implementation of m-commerce, discusses the issues and challenges followed by the the conclusions and directions for future research.*

### INTRODUCTION

Only a few years ago, electronic commerce (e-commerce) visionaries were predicting the rapid acceptance of mobile commerce (m-commerce) as the evolutionary result of the e-commerce revolution. M-commerce is the buying and selling of goods and services through wireless handheld devices such as mobile phones and

personal digital assistants (PDAs). The term m-commerce is used in this chapter to describe the adoption and use of mobile, handheld computer devices that are connected wirelessly to a network for business and personal use. Known as next-generation technology, m-commerce enables users to access the Internet without the need to find a place to plug in. According to these visionaries, most of the U.S. population

should be paying bills and shopping with mobile phones or PDAs, while receiving updated flight information on the way to the airport.

In reality, a different situation took place. The wireless industry is lowering its expectations for revenue growth since consumers have not accepted m-commerce as widely as expected. There are signs that m-commerce is growing in popularity. Recently, ComScore Networks (2002) found that almost 10 million wired Internet users in the United States accessed the wireless Internet using mobile devices. Sprint has activated its 3G (third-generation) network in the U.S. market that it serves. Other nations, most notably China, are also moving forward with 3G initiatives. The Chinese are replacing their wireless infrastructures with packet Internet Protocol-based 3G systems in support of the 2008 Olympic Games (Lemon, 2001).

Senior managers will find this information useful for planning and adapting to this new horizon. Educators will also find the information useful as they re-focus academics away from legacy e-business to an m-commerce model in order to adapt themselves to new trends in the world economy. The timing of the shift toward a mobile environment model is important, as strategies must change in advance of the trend. This chapter is structured as follows: we first describe the state of the mobile commerce industry from a worldwide perspective and the barriers to implementation of m-commerce. This is followed by a discussion of issues and challenges. Finally we discuss the conclusions and directions for future research.

## **Mobile Commerce: State of the Industry**

In 2004 we saw the convergence of Wi-Fi and VoIP to evolve a new technology that has been variously described as Voiceover Wi-Fi

(VoWiFi), Voiceover Wireless LAN (VoWLAN), Voiceover Wireless IP (VoWIP), Wireless Voiceover IP (WVoIP), Voiceover IP over Wireless LAN (VoIPoWLAN), Mobile VoIP, and Wi-Fi Telephony. According to a study by Frost and Sullivan Consultancy, about \$25bn (E28bn) in trade will be generated through mobile payments in 2006, or about 15% of estimated online e-commerce consumer spending and mobile-accessed Internet and peer-to-peer payments will make up the bulk of payments, accounting for 39% and 34% of spending in 2006 respectively (M2 Communications, 2002).

The United States, to date tradition-bound by its extensive fixed-line network, is shifting towards wireless means of communication. There are signs that demonstrate an increasing interest by industry towards m-commerce models, but will m-commerce become a reality or will it be just another trend that soon will be outdated? Companies and consumers have fresh memories of past dot-com failures, and this might give one reason to doubt the imminent arrival of a significant level of m-commerce. Furthermore, the high prices of mobile services, together with slow access speeds, have not helped much to add to the luster of the mobile environment. M-commerce in the United States also faces other challenges such as lack of standards, lack of ubiquitous wireless network coverage, technical differences among wireless devices, and security, among others.

Yet despite these drawbacks, mobile wireless devices are a reality today, with expectations of up to 1.5 billion in 2005 (Van Impe, 2002). In 1990, there were five million wireless subscribers in the U.S. In 2000, the number improved to 90 million, and it is expected that by the end of the year 2005, this number will reach 140 million (Kalakota & Robinson, 2001, pp. 26-27). Some expectations go even further, for instance Nokia is predicting that cellular phone

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