

Chapter II

The Future of M–Commerce: The Role of Bluetooth and WiMax

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ABSTRACT

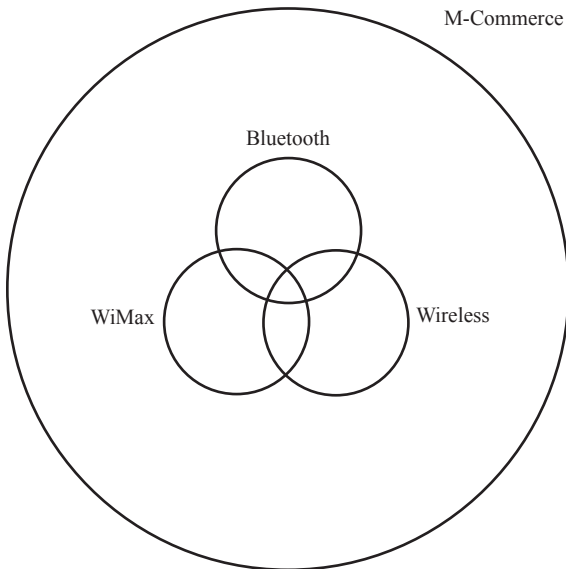
This chapter discusses the growing significance of m-commerce with special focus on Bluetooth and WiMax. There is a detailed investigation of the components involved with, and the marketplace for, m-commerce transactions. The chapter concludes with the future opportunities and obstacles for m-commerce. The authors hope that the reader will gain a better understanding of, not only of m-commerce, but the impact of Bluetooth and WiMax.

INTRODUCTION

As m-commerce continues to grow in overall use and importance for modern business, it is critical to examine future opportunities, trends, questions, and related concerns. By understanding the future implications and outlooks, m-commerce venders, IT/IS developers, and users can continue to pursue this incredible mobile or wireless movement. Additionally, the increasing adoption of short range

technologies like Bluetooth, as well as long range technologies like WiMax, are increasingly aiding m-commerce. These technologies have increased the number of applications for mobile users and strengthened the future of m-commerce. It is important to note that m-commerce is not only expected to expand its share of the e-commerce market, but also to expand the overall e-commerce market through rapid evolution of m-commerce services. M-commerce requires careful e-com-

Figure 1. The relationships, impact, and roles of wireless, Bluetooth, and WiMax



merce adaptation to include mobile access for enhanced services and business communications that are not only anytime, but also anywhere. This chapter will present the importance of, the components and technologies involved with, the future market forecast, and key future trends and issues for m-commerce.

Learning Objectives

- Understand m-commerce and its role in modern business
- Investigate specific m-commerce technologies
- Examine the future trends impacting m-commerce
- Understand the relationship between Bluetooth, WiMax and m-commerce (see Figure 1)

BACKGROUND

A busy executive on a PDA, an anxious driver using a cell phone, and a college student walking

to class listening to his or her Mp3 player; all of the aforementioned are common sights in today's world. All are dependent on wireless technology. Wireless has changed many aspects in our lives, including how we conduct business.

M-commerce is the ability to conduct e-commerce transactions over wireless media. Examples of m-commerce include buying and downloading a ring tone to your cell phone, acting on the real-time stock quote on your PDA, or subscribing to have last night's news and highlights sent to your mobile device.

M-commerce requires similar steps as a physical transaction. An m-commerce transaction is more than just checking an e-mail message from a wireless device. A buyer and seller must agree on an item and price, delivery of the product must be made, and payment to the seller must be completed.

That being said, mobility must still be involved during the transaction and a wireless device must be used by the buyer, the seller, or both. Common examples include cell phones; palm pilots or PDAs; or blackberrys. Even more so, the wireless device should be connected to a wireless ISP and not just an extension of a hardwired LAN.

Wireless applications such as pagers, cellular phones, and satellite television have been around for years. Increasingly today, mobile data communication is viewed as an emerging area for many industries, and companies are increasing their investment accordingly. While many recent developments in the wireless industry have been "flops" (including Mobitex messaging, Cellular Digital Packet Data services), the development and acceptance of the Wireless Application Protocol (WAP) has given wireless carriers and mobile service providers sufficient confidence to introduce a new generation of wireless applications like Bluetooth and WiMax.

The PC Industry

Wireless communication has had great impact on the personal computing industry. Most desktop

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