Chapter 6.2
Mobile Business Applications

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INTRODUCTION

As an increasing number of organizations and individuals are dependent on mobile technologies to perform their tasks, various mobile applications have been rapidly introduced and used in a number of areas such as communications, financial management, information retrieval, and entertainment. Mobile applications were initially very basic and simple, but the introduction of higher bandwidth capability and the rapid diffusion of Internet-compatible phones, along with the innovations in the mobile technologies, allow for richer and more efficient applications.

Over the years, mobile applications have primarily been developed in consumer-oriented areas where products such as e-mail, games, and music have led the market (Gebauer & Shaw, 2004). According to the ARC group, mobile entertainment service will generate $27 billion globally by 2008 with 2.5 billion users (Smith, 2004). Even though mobile business (m-business) applications have been slow to catch on mobile applications for consumers and are still waiting for larger-scale usage, m-business application areas have received enormous attention and have rapidly grown. As entertainment has been a significant driver of consumer-oriented mobile applications, applications such as delivery, construction, maintenance, and sales of mobile business have been drivers of m-business applications (Funk, 2003).

By fall of 2003, Microsoft mobile solutions partners had registered more than 11,000 applications including e-mail, calendars and contacts, sales force automation, customer relationship management, and filed force automation (Smith, 2004). However, in spite of their huge potential and benefits, the adoption of m-business applications appears much slower than anticipated due to numerous technical and managerial problems.

BACKGROUND

M-business applications can be classified into two distinct categories in terms of target groups: vertical and horizontal target group (Paavilainen, 2002). Vertical targets are typically narrow user segments, such as filed service engineers or sales representatives. On the other hand, horizontal targets are a massive number of users. For example, mobile e-mail, mobile bulletin

board, and mobile calendar are applications for a horizontal target group, while mobile recruitment tools, mobile sales reporting, and mobile remote control represent vertical applications (see Table 1). Generally, the goal of horizontal applications is to improve communication and streamlined processes in horizontal procedures, such as travel management and time entry. In contrast, the goal of vertical applications is to improve and solve business processes in more detailed and specific areas such as the needs of sales departments. Various vertical and horizontal applications are currently used in a number of industries. Table 2 provides examples of m-business applications in various industries.

THE IMPACTS OF MOBILE BUSINESS APPLICATIONS ON BUSINESSES

The advantages of using m-business applications are mobility, flexibility, and dissemination of m-business applications (Nah, Siau, & Sheng, 2005). Mobility allows users to conduct business anytime and anywhere, and flexibility allows users to capture data at the source or point of origin. In addition, m-business applications offer an efficient means of disseminating real-time information to a larger user population, which consequently enhances and improves customer service. According to Gebauer and Shaw (2004), users valued two things most in m-business applications use:

notification, especially in connection with high mobility, and support for simple activities like tracking. The study suggested that the combination of mobility and the frequency with which each task occurred is a primary indicator of the usage of m-business applications.

M-business applications have shown significant impacts and created enormous business values. For example, m-business applications have improved operational efficiency as well as flexibility and the ability to handle situations to current operations (Chen & Nath, 2004; Gebauer & Shaw, 2004). In addition, m-business applications allow users to have access to critical information from anywhere at anytime, resulting in greater abilities to seize business opportunities.

It is very difficult to measure the direct impact of mobile business applications in *productivity* statistics, but according to an OMNI (2005) consulting report, financial services agents executed approximately 11.4% more trade options on an annualized basis with mobile business applications and achieved an average nominal improvement of 3.1% in overall portfolio performance. Also, health care and pharmaceutical filed sales representatives conducted an additional 8.3 physical briefings per week due to mobile business applications. Finally, insurance-filed claims adjusters handled an additional 7.4 claims per worker per week and improved payout ratios by an annual yield of 6.4% per adjuster using mobile business applications. Table 3 provides a list of values created by mobile business applications.

Table 1. Examples of vertical and horizontal mobile business applications (Paavilainen, 2002)

Vertical Mobile Applications	Horizontal Mobile Applications
• Mobile e-mail	• Mobile recruitment tools
• Mobile bulletin board	• Mobile tools for filed engineers
• Mobile time entry	• Mobile sales reporting
• Mobile calendar	• Mobile supply chain tools
• Mobile travel management	• Mobile fleet control
• Mobile pay slips	• Mobile remote control
	• Mobile job dispatch

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