

Chapter LI

Overview and Understanding of Mobile Business in the Age of Communication

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ABSTRACT

This chapter provides an introduction, review and study of mobile businesses with emphasis on its supporting mobile technologies and wireless networking. The chapter first discusses the concept of mobile business where opportunities, motivations and needs for this type of business are studied. Following this discussion, the chapter studies the current status of mobile business, key hardware and software solutions (business applications) available on the market. The chapter also discusses different mobile devices, communication infrastructure, supporting networks and other crucial components that make businesses mobile and able to be conducted anytime and anywhere. Finally, an extended discussion is focused on issues and future developments of mobile businesses along with some recommendations, and suggestions regarding mobile business.

INTRODUCTION

Mobile business is considered an offspring of the Advanced Communication Age and a driving force of the new economy, therefore its discussion is strongly aligned with the discussion of underlying information and communication technologies (ICTs).

The amazing pace of innovations in ICTs during recent years has opened a wide spec-

trum of new opportunities and challenges for the business industry. These opportunities demand a dramatic shift towards mobility in almost every aspect of life such as education, entertainment, health care, and business. Rapid developments in wireless communication technologies, mobile devices, high-speed transmission facilities, and broad bandwidth prepared and paved the way for transforming human activities towards mobility. The most notice-

able impact of these evolving technologies can be seen in business, which is preparing for another revolutionary change. First, business has gone through transformation from traditional business to electronic business, and now it has been adapting towards mobile business, or m-business for short.

In the coming years, m-business will be a fashion for industry, researchers, enterprise managers, and society as a whole. This will be the business style of the Age of Communication, inspiring managers and enterprises for serious shift. Perhaps even, enterprises will experience another era of Business Process Reengineering, or maybe this time, m-Business Process Engineering (mBPR)!

Before diving deep into the topic, it is worthwhile to mention some example where mobility has been making its initial breakthrough. These different examples aim to provide an idea about the breadth, depth, and diversity of mobility and mobile business.

Education

Educational institutions have been pioneering implementation of the wireless networking environment, providing students with flexibility of accessing campus resources and downloading academic applications at their convenience and desired location (lab, classroom, library, cafeteria, campus garden, or while watching campus games). Not being tied to lab hours and classrooms, students are given more flexibility and opportunity to pursue their education, which in turn increases quality of education. So, campuses are going mobile within the campus area.

Health Care

Hospitals in general and modern medical practices in particular are adapting towards mobile health care delivery. Computer-based patient

records, also referred to as electronic medical records, are part of a system that provides a mobile working environment for physicians, staff, and managers of medical practices. Each physician carries a handheld computer that access patients records, X-rays, and surgery videos, allowing sharing and discussing of images with specialists from other hospitals, coordinating remote operations, and so forth. If a physician wants immediate information about a particular medicine prior to issuing a prescription, his handheld computer allows him to access the relevant Internet page for such information. Productivity and quality of health care service is impressive with mobile facilities.

Sales and Marketing

Retail, wholesale, mass distribution centers are using a mobile business environment for goods delivery, shelf refill, inventory control, warehouse management, transport and logistics, and working with branches in different locations. Mobile devices help to track goods delivery and movement of products.

These three small examples illustrate different ranges of mobility within a building, within an enterprise, and within a town, used for a wide range of activities. These examples help analysts extract some important characteristics of m-business including range of functionality and types of mobile devices (wireless laptops, tablet PCs, smart phones, etc.). According to some authors, the application of m-business can be distinguished as “macro” applications in outdoor settings or “micro applications in indoor environments—for example, hospital, libraries, hypermarkets. Like the underlying wireless networks supporting it, m-business may be distinguished by its span as a local, regional, or global m-business.

With this brief introduction, this section is concluded and the rest of the chapter will

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