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ITB8894

Chapter I

Mobile Commerce: Current States and Future Trends

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ABSTRACT

Advances in wireless technology increase the number of mobile device users and give pace to the rapid development of e-commerce using these devices. The new type of e-commerce, conducting transactions via mobile terminals, is called mobile commerce. Due to its inherent characteristics such as ubiquity, personalization, flexibility, and dissemination, mobile commerce promises business unprecedented market potential, great productivity, and high profitability. This paper presents an overview of mobile commerce development by examining the enabling technologies, the impact of mobile commerce on the business world, and the implications to mobile commerce providers. The paper also provides an agenda for future research in the area.

INTRODUCTION

Advances in wireless technology increase the number of mobile device users and give pace to the rapid development of e-commerce conducted with these devices. The new type of e-commerce transactions, conducted through mobile devices using wireless telecommunications network and other wired e-commerce technologies, is called mobile commerce (increasingly known as mobile e-commerce or m-commerce). Mobile commerce enables a new mode of information exchange and purchases, and it presents an unexplored domain. To consumers, it represents convenience; merchants associate it with a huge earning potential; service providers view it as a large unexplored market; governments look it as a viable and highly productive connection with their constituents. In short, mobile commerce promises many more alluring market opportunities than traditional e-commerce and the global mobile commerce market is expected to be worth a staggering US\$200 billion by 2004 (Guy Singh, 2000). Because of the characteristics and constraints of mobile devices and wireless network, the emerging mobile commerce operates in an environment very different from e-commerce conducted over the wired Internet. Although mobile commerce will emerge as a major focus of the business world and telecommunication industry in the immediate future, the marriage of mobile devices and the Internet is filled with challenges as well.

The article is structured as follows. We first summarize the features of mobile commerce. Next, value-added applications of mobile commerce and an overview of mobile commerce technology are presented, and the business implications are discussed. We then highlight the challenges in implementing mobile commerce. Finally, we suggest possible directions for future mobile commerce research.

FEATURES OF MOBILE COMMERCE

The essence of mobile commerce revolves around the idea of reaching customers, suppliers, and employees regardless of where they are located. Mobile commerce is about delivering the right information to the right place at the right time. It gives users the ability to access the Internet from any location at any time, the capability to pinpoint an individual mobile terminal user's location, the functionality to access information at the point of need, and a need-based data/information update capability. Mobile commerce has features not available to traditional e-commerce, some of which we discuss next:

Ubiquity

Ubiquity is the primary advantage of mobile commerce. Users can get any information that they are interested in, whenever they want regardless of their location, through Internet-enabled mobile devices. In mobile commerce applications, users may be engaged in activities, such as meeting people or traveling, while conducting transactions or receiving information. In this sense, mobile commerce

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