Chapter II

Corporate Adoption of Mobile Cell Phones: Business Opportunities for 3G and Beyond

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Abstract

This chapter identifies the technology and non-technology factors that companies consider important in deciding to adopt and deploy wireless devices designed for mobile telephony and information services, the extent of current use of cell phones, the extent of existing utilization and/or planning for Web-enabled cell phone use, the constraining factors in their deployment decisions, how such decisions are made, and the practical technology implications for decision-making, including beyond 3G. This
chapter seeks to help decision makers by shedding light on the adoption process. The conceptual model combines the TAM and innovation adoption/diffusion models, adding the factors of security, cost, reliability, digital standards/regulatory environment, technology product suitability, and future Web connectivity. Case study methodology is utilized for five manufacturing and technology firms. A key finding is that the most important technology decision factors are security, reliability, and Web connectivity. Although the current uses are dominated by voice, Web-enabled capability dominates future decision-making.

Introduction

Mobile devices have been among the fastest adopted consumer products of all time (Clarke III, 2001). Subscribers for mobile telephony services in the United States through December 31, 2002, stood at 141.8 million, which equates to a nationwide average population penetration rate of 49 percent (Federal Communications Commission, 2003). While such a penetration rate is significant, there are other areas of the world that are much higher (e.g., 80 percent in Western Europe (Federal Communications Commission, 2003) and over 90 percent in some countries, such as Sweden) for the same time period. It has been estimated that this year (2003) there will be 1.4 billion mobile phones worldwide, with half of them capable of being Internet-enabled (Clarke III, 2001). An estimated 11.9 million in the U.S. subscribe to mobile Internet service and an estimated 21 percent of all Web-enabled mobile phone users in the U.S. (7.5 percent of all mobile phone subscribers) actually use the phones to browse the Internet (Federal Communications Commission, 2003). Jeff Bezos, the CEO and founder of Amazon.com, believes that in five to 10 years almost all e-commerce will be done with wireless devices (Clarke III, 2001). The benefits to users include removal of space and time constraints, better access to decision makers, better reception of information about an organization and its environment, and improved social networking (Davis, 2002; Palen, 2002; Mennecke & Strader, 2003), while disadvantages may include greater security and privacy intrusions, interruption of business work and personal life, and social improprieties (Davis, 2002; Palen, 2002). Regardless of which time estimate is correct, the point is fast approaching when more people will be likely to access the Internet through a mobile device than through a personal computer. Just as the general population is increasingly dependent upon wireless communication devices for both entertainment and commerce, corporations are increasingly considering cell phones as a critical success factor to conducting business. This chapter focuses on identifying the technology and non-technology factors that corporations consider important in
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