IDEA GROUP PUBLISHING

701 E. Chocolate Avenue, Hershey PA 17033-1240, USA ITB8679
Tel: 717/533-8845; Fax 717/533-8661; URL-http://www.idea-group.com

Chapter VIII

The Wireless Application Protocol: Strategic Implications for Wireless Internet Services

Stuart J. Barnes
Victoria University of Wellington, New Zealand

ABSTRACT

Individually, the Internet and mobile telephony have witnessed extraordinary growth during the last decade. However, only recently have these two areas of technological development begun to converge. The result is the availability of wireless data communications on remote devices, enabling an array of applications tailored for consumer mobility. In this new era, one standard has been hailed as the entry platform for creating mobile Internet services – the Wireless Application Protocol (WAP). Whether WAP will become a key platform is unclear, but it has provided an interesting starting point for the emergence of mobile data services. This paper explores the dynamics of the emerging market for WAP services, examining the role of the consumer, suppliers, substitutes, new entrants and rivalry among the players. The paper concludes by examining some of the key strategies for WAP service provision, making some predictions regarding the future of strategic Internet service delivery.

INTRODUCTION

The growth of the Internet during the last decade has been phenomenal, as witnessed by the massive surge in users and connected computers; in 2002, the estimated number of Internet users stood at 529.9 million, and is expected to rise to 709.1 million by 2004 (eMarketer, 2002). Not only do the efficient services themselves attract people, but also the convenient way of accessing them via an Internet browser. Under most circumstances the same services can be used all over the world—as long as the user has access to an appropriately configured personal computer and access to the Internet (AU System, 1999).

Evidence now suggests that growth in Internet use is likely to emerge from a new channel—mobile devices. Throughout the 1990s, mobile telephony has undergone impressive technological development, and alongside, the saturation of mobile phones and other mobile handsets such as personal digital assistants (PDAs) has continued unabated. From a penetration of only 8% in 1995, more than half of the UK population now owns a mobile phone. Similar patterns can also be seen in Japan, the US, and many other countries. In some places, such as some parts of Scandinavia and Hong Kong, the saturation of mobile phone ownership is now in excess of 80 per cent (Fernández, 2000). Recently, the inevitable convergence of wireless and the Internet has occurred—bringing 'the Internet in your pocket' for which the potential applications are many and varied, including shopping, banking, news feeds, and e-mail.

Under the present technological constraints of low bandwidths and high latency in wireless networks, as well as the low power and small screens of handheld devices, a key standard has emerged for Internet service provision—the Wireless Application Protocol (WAP). WAP provides the means for bringing the Internet and a range of services to the wireless consumer. The emergence of WAP has created a whole new set of dynamics in the wireless industry driven by this new era of value-added service provision. During 2002, data is predicted to account for 20 to 30% of all wireless network traffic, and by 2005, there could be more mobile phones connected to the Internet than PCs (Logica, 2000). Further, the value of commercial transactions made over this channel could be worth more than $200 billion during that period (Strategy Analytics, 2000).

The objective of this chapter is to analyze the strategic implications of the WAP platform for the provision of wireless Internet services. It begins by providing a brief overview of the development of WAP. It continues with a detailed analysis of the WAP service industry, including the role of customers, suppliers, rivalry, new entrants and substitutes. The main focus for this chapter is business-to-consumer mobile commerce—currently the fastest-growing sector (Datamonitor, 2000). The chapter synthesizes and analyses some of the key issues, culminating in an original strategic framework for examining the development of WAP service provision. The