

Chapter 7.8

Deployment and Success Factors for the Mobile Internet: A Case Study Approach

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ABSTRACT

The mobile Internet is a fast-growing technology that provides access to the traditional stationary (fixed-line) Internet from devices connected to mobile communication networks. It is predicted that the convergence between mobile networks and the fixed-line Internet will be a core feature in the next generation network architecture, achieving fast 'anywhere' Internet access and global mobility management. Applying a case study approach, this paper reviews the New Zealand mobile Internet market mix, competition, and mobile service provision. The key mobile Internet deployment requirements are determined and analyzed in order to identify a set of mobile Internet critical success factors and to investigate the impact of the shift from fixed-line to mobile and wireless Internet data communication infrastructure.

INTRODUCTION

Current Internet based services are supported by the existing fixed-line telecommunication infrastructure which provides a platform for deploying them. The corresponding business model is build around the assumption that end users while

paying for the connection and for data traffic to a telecommunications network to an Internet Service provider (ISP), will have unlimited and free access to the Internet itself. However in the case of supporting users who may want to access Internet-based services through their mobile device (connected to a commercial mobile data network) there may be a need for a new business model to emerge; it will need to include the roles

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and responsibilities of mobile network operators (MNOs), mobile virtual network operators (MVNOs) and other mobile network service providers (MNSPs) as collaborators to industry players such as ISPs (Drejer & Skaue, 2007). It is also expected that in the future mobile Internet and fixed-line Internet services will be running on a converged network platform (Blackman, 2006; Schwefel, 2002; Xavier & Ypsilanti, 2007). A number of directions may be followed including the development of Internet-based applications specifically requiring mobile access to the Internet and/or the development of 'anywhere and anytime' mobile Internet services available to both stationary and mobile Internet users (Petrova & Huang, 2007).

With academic research in the area of mobile Internet (MI) focusing mostly on technical issues and user requirements, the requirements and the impact of MI deployment models and the resulting business models have received relatively little attention. This work addresses the gap identified applying a cases study approach. It examines the market directions and their possible impact using a one-country case and analyzes qualitatively data gathered in a series of interviews with key participants in MI market.

The main objectives of the study presented in this paper can be formulated as follows: 1) To identify the critical success factors (CSFs) of MI deployment, and 2) To critically examine the role of MI in extending the functionality of the Internet and facilitating network and technology convergence. Applying a cases study approach, the study looks into the mobile market value chain of service provision and the network and technology convergence process in New Zealand. After determining the key MI deployment requirements, these are analyzed further in order to identify a set of MI critical success factors and to investigate the impact of the shift from fixed-line to mobile and wireless Internet data communication infrastructure.

The rest of the paper is organized as follows: The next section provides a literature and context

background and is followed by a methodology section which describes the study approach and presents the main findings. Finally the case data is summarized and used to propose a set of critical success factors for MI deployment and to examine the evolving role of MI. The paper concludes with directions for further research and a brief summary.

BACKGROUND

For the purposes of this research MI is defined as the part of the current Internet that can be accessed from a mobile device connected to a mobile data network (Ghosh, Wolter, Andrews, & Chen, 2005; Roberts & Kempf, 2006). Another term often used when discussing Internet access via mobile and wireless networks is 'anywhere Internet' implying universal Internet coverage, and also the ability to access the Internet regardless of the availability of a stationary computer (e.g. out of the office or the home). Even though universal coverage of fixed-line Internet (extending the communication media to each household or individual user) has not been achieved yet (Webb, 1998) with mobile data networks supporting individual user access to the Internet anywhere within their coverage, 'mobility' has emerged as second dimension of the anywhere Internet. Finally a third dimension related to 'responsiveness' identified in (Cho & Sung, 2007): the network supporting user ability to reply immediately to email and instant messages. The working definition of MI formulated above implies that MI provides a connection to the Internet to users already connected to a mobile data network meeting user demand for mobility and responsiveness, and to a large extent – for coverage, with a focus on the individual user.

To support MI access, mobile devices need to have an appropriate level of computing power such as an intuitive operating systems, processors that can perform complex computations, user friendly interface, extensibility (connecting to external devices), capability to run applications ported

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