

## Chapter 5.6

# Ubiquitous Communication: Where is the Value Created in the Multi-Play Value Network?

**Mikko Pynnönen**

*Lappeenranta University of Technology, Finland*

**Jukka Hallikas**

*Lappeenranta University of Technology, Finland*

**Petri Savolainen**

*Lappeenranta University of Technology, Finland*

**Karri Mikkonen**

*TeliaSonera, Sweden*

### ABSTRACT

In a digital home a so-called multi-play system integrates networked entertainment and communications systems. Using a mobile phone, all those services can be controlled and used ubiquitously—from everywhere, at any time. Not much research has been conducted in the field of integrated communication offers. The novelty of this study is in that it addresses the ubiquitous communication system, called the multi-play service, from the perspectives of both the customer preference and operator strategy and transforms this into valuation of resources and capabilities. This chapter provides a framework

to connect the customer value preferences to firm resources. The aim of the framework is to connect customer and resource-based strategies together. As a result of the analysis the authors reveal the most important resources in contrast to the customer value preferences.

### INTRODUCTION

The connectedness with everything, everywhere, all the time is what surrounds us more and more in the modern information society. Synonymous to omnipresence, ubiquity is also provided by mobile phones that follow us nearly everywhere and all the time. In a digital home a so-called multi-play

system integrates networked entertainment and communication systems, providing television, video on demand, music, telecommunications etc. Using a mobile phone, all those services can be controlled and used ubiquitously—from everywhere, at any time.

As the communication situation can take place in a stable or mobile location, and the need to enrich communication varies, the choice that the user makes between access types varies greatly. If ubiquity is added to an integrated offering, and the portable computer has the same dynamic and personal settings, it has all the potential to become a mobile communications center as well, especially for sessions demanding more rich media. When the user is physically moving, the usability and availability of a laptop computer decreases, and a mobile terminal becomes the choice. In the case of full integration, the user can still browse files from a PC with the mobile terminal. As those files are located in the network, they do not need to be sent through the radio network, which then also becomes an economic driver for ubiquity in the integrated model.

Not much research has been conducted in the field of integrated communication offers. Furthermore, there is not much literature or research available that profoundly considers the characteristics of a ubiquitous communication system. The novelty of this study is in that it addresses the ubiquitous communication system, called the multi-play service, from the perspectives of both the customer preference and operator strategy and transforms this into valuation of resources and capabilities (Srivastava et al., 2001). The multi-play offer is a new business concept consisting of an integrated set of features aiming to deliver greater systemic value to end customers (Gardner, 2001; Kothandaraman & Wilson, 2001).

The objective of this chapter is to provide a framework to connect the customer value preferences to firm resources. The practical suitability of the method is demonstrated with a relevant real-life business concept development case example

of a Nordic operator (Mikkonen et al., 2008). The focus is in the resource analysis although the customer value and the business model analysis are also reviewed. This chapter and the method of a business model are based on several case studies on the subjects of the customer driven business model. The mapping framework connects different levels together in a system hierarchy. It consists of sequential steps from customer needs to the actor resources and capabilities in a value network. The aim of the framework is to connect customer and resource-based strategies together. As a result of the analysis we reveal the most important resources in contrast to the customer value preferences.

The chapter is structured so that first the backgrounds of the multi-play service and the integrated operator are discussed, second the research framework is introduced, third the customer value analysis and business model mapping are discussed, fourth the resource analysis is provided, and fifth the future trends concerning the multi-play and the method are discussed followed by the conclusion.

## **BACKGROUND**

### **Multi-Play Service from Case Operator's Strategy Perspective**

The business model of an integrated operator or a typical incumbent largely relies on available vendor technology and products enabled by highly standardized components. It can be broadly said that the ICT value network in the past consisted of operators who controlled the customer interface by selling end-user subscriptions to access networks, vendors who delivered network and customer equipment, and system integrators who co-developed services with vendors and operators, installed, operated and maintained the overall infrastructure, depending on the outsourcing structure of each geographic market (see e.g. Coursaris et al., 2008).

13 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/ubiquitous-communication-value-created-multi/37836](http://www.igi-global.com/chapter/ubiquitous-communication-value-created-multi/37836)

## Related Content

---

### Sensors Network for Ultrasonic Ranging System

Tao Gao and Zhenjing Yao (2013). *International Journal of Advanced Pervasive and Ubiquitous Computing* (pp. 47-59).

[www.irma-international.org/article/sensors-network-for-ultrasonic-ranging-system/100438](http://www.irma-international.org/article/sensors-network-for-ultrasonic-ranging-system/100438)

### Secure and Private Service Discovery in Pervasive Computing Environments

Feng Zhu and Wei Zhu (2010). *International Journal of Advanced Pervasive and Ubiquitous Computing* (pp. 46-59).

[www.irma-international.org/article/secure-private-service-discovery-pervasive/51666](http://www.irma-international.org/article/secure-private-service-discovery-pervasive/51666)

### Recovery of Ubiquitous Multimedia Content Discovery Mobile Agent

S. Venkatesan, C. Chellappan and P. Dhavachelvan (2012). *Ubiquitous Multimedia and Mobile Agents: Models and Implementations* (pp. 215-231).

[www.irma-international.org/chapter/recovery-ubiquitous-multimedia-content-discovery/56426](http://www.irma-international.org/chapter/recovery-ubiquitous-multimedia-content-discovery/56426)

### Analysis of Big Data Using Two Mapper Files in Hadoop

Jyotsna Malhotra, Jasleen Kaur Sethi and Mamta Mittal (2021). *International Journal of Security and Privacy in Pervasive Computing* (pp. 69-77).

[www.irma-international.org/article/analysis-of-big-data-using-two-mapper-files-in-hadoop/269506](http://www.irma-international.org/article/analysis-of-big-data-using-two-mapper-files-in-hadoop/269506)

### Security in Pervasive Computing: A Blackhole Attack Perspective

Sunita Prasad and Rakesh Chouhan (2010). *Strategic Pervasive Computing Applications: Emerging Trends* (pp. 123-136).

[www.irma-international.org/chapter/security-pervasive-computing/41585](http://www.irma-international.org/chapter/security-pervasive-computing/41585)