Valuation of Alternative Business Models in Information, Communication and Media Markets: Convergence, Ubiquity and Pervasiveness

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ABSTRACT

Information, Communication and Media Markets (ICMM) are in a process of tremendous change. IP-based technologies and services such as broadband and triple/quadruple-play are realities that have the ability to enforce the convergence of so far parallel industries, that is, Telephony, Internet, and Broadcast. In this paper, the authors derive a scenario where a telecom operator aims to design, develop, and validate a global B3G (Beyond 3rd Generation) framework to support secure, personalized, and pervasive telecommunications services built on heterogeneous network and service infrastructures. The authors rethink the telecommunications architecture and business models to enable easy, seamless, and pervasive access to content and services, while supporting user preferences and context. This proposal involves significant changes in current industry business models. A value chain approach allows the identification of different scenarios, where the firm faces several options from which to choose. The authors investigate operators’ decision process and evaluates the project based on its flexibility, using a real option approach.

Keywords: Aggregation, Convergence, Flexibility, Pervasiveness, Real Options, Telecommunications, Ubiquity

INTRODUCTION

Telephony, Internet and Broadcast had been, for a long time, distinct industries, providing differentiated services though, sometimes, supported on the same access technology. Technological evolution along with liberalization developments – especially in telephony and broadcast industries – enabled industries to diversify their service portfolios in a way that currently these industries can no longer be seen as independent. That is, technological development allowed convergence as economies of scale and scope encouraged companies to adopt broad strategies that aimed at a larger market. Telephony,
Internet and Broadcast are segments of what we (hereafter) designate Information, Communication and Media (ICM) industry.

Even though cross segment competition meant convergence – which suggests homogeneous service offer – it still did not mean perfect homogeneity. ICM industry is still characterized by the diversity of agents evolved and by service and access heterogeneity (a very good reference on convergence is provided by Saxtoft, 2008)

Along with convergence, complexity and atomicity are increasingly regarded as important features of the ICM industry. Once again, technological evolution had the ability to lower entry barriers and reinforce innovation. At the same time, liberalization process enforced the separation between access and service markets. In this context, because entering is possible both in access and service markets users are given the possibility to choose service and access providers among an increasing number of alternatives. Access / Service partition enabled potential entrants to operate in service (access) layer without a need to operate in access (service) layer. By lowering investment requirements and incumbents’ economies of scale, the number of agents operating in access and service layers increased considerably, which reduces sunk costs and, hence, stimulates entry.

We propose stylized overview of ICMM value chain as follows.

Figure 1 shows, on the one hand, a clear separation between service and access layers; and, on the other hand, that both access and service layers are accessible to the user. This ultimately means that users are given the possibility to choose both access and service providers.

The current trend, on the demand side, is characterized by users’ demand for ubiquity. That is, the ability to purchase whatever service in a certain access technology as well as the ability to purchase a certain service in whatever access typology. Changes in users’ life-styles are also forcing changes on the supply of ICMM. Contemporary life-style is increasingly flexible and mobile, which means that along with ubiquity, users are also demanding mobility. Ubiquitous and mobile service provision, anyhow and anywhere, ultimately implies multiple opportunities and threats for suppliers – market players. On the supply side, on the one hand, operators need to diversify their service portfolio and available access

Figure 1. Current ICCM value chain – stylized overview
A Survey on Classical Teletraffic Models and Network Planning Issues for Cellular Telephony
www.igi-global.com/article/survey-classical-teletraffic-models-network/37527?camid=4v1a