Analyzing the m-business landscape

Giovanni CAMPONOVO*, Yves PIGNEUR*

Abstract

The m-business landscape never stops to change and the impacts on the mobile market are constant as players reposition themselves on the market according to the new opportunities and threats brought by rapid technological developments. This paper provides a conceptual tool to better understand this player arena and its objective is threefold. The first one is to analyze the role of the key actors using ontology for defining and assessing their business models. The second objective is to analyze and visualize the interaction of actors with each other from a value system perspective. The final objective is to evaluate and represent the dependencies of the actors, their strategies and their convergence or divergence on different issues by using an approach borrowed from policy making.

Key words: Electronic trade, Mobile radiocommunication, Economic market, Economic analysis, Modelling, Firm stratégie.

ANALYSE DES ACTEURS ET DES ENJEUX DU COMMERCE PAR TERMINAUX MOBILES

Résumé

Le paysage du commerce par terminaux mobiles (m-business) n’arrête pas d’évoluer et les acteurs présents sur ce marché ou champ de bataille ont de la peine à trouver leurs marques. Au dire de certains experts, les opportunités seraient nombreuses; l’histoire récente a rappelé que les menaces et les erreurs de gestion ne manquaient pas. Cet article suggère un outil conceptuel pour mieux comprendre le paysage du m-business sous différents angles. L’objectif est triple: il s’agit dans un premier temps d’analyser le rôle, la position et les perspectives des différents acteurs, à l’aide notamment d’une meilleure compréhension de leur modèle d’entreprise. Cette étude peut alors être prolongée par une analyse et une visualisation des systèmes de valeur et autres configurations d’activités, ainsi que de leur évolution. Le dernier objectif est de proposer quelques pistes pour évaluer et représenter les dépendances entre les acteurs et leurs convergences ou divergences, par rapport à quelques enjeux majeurs de ce marché.

Mots clés : Commerce électronique, Radiocommunication service mobile, Marché économique, Analyse économique, Modélisation, Stratégie entreprise.

*École des HEC, Université de Lausanne, CH-1015 Lausanne (Suisse) e-mail : yves.pigneur@unil.ch
I. INTRODUCTION

Nowadays rapid developments in wireless networks and mobile information systems, are constantly emerging and can become a major stake in the e-business game, as illustrated by large public- or private-funded research projects, recent reports [29], telecom scenarios [15], strategic conferences [13], and other books of vision [45]. As an illustration of these dramatic changes, a “hot” topic debated in the wireless community is the “ad hoc networks” which runs solely by the operation of end-users, without ground infrastructure. The research described in this paper is precisely related to a long-term research program, called “Terminodes”, which aims at studying and prototyping large-scale infrastructure-less, self-organized networks [20].

There are several ways to come to an assessment of the mobile technology, and to identify research issues in m-business. Well-known authors of the IS community recently published research directions and agendas. Varshney and Vetter [43] propose a 4-level integrated framework for mobile commerce, based on important classes of applications such as finance, advertising, and logistics. They also discuss how existing and emerging wireless networks can support networking requirements of these applications. Pedersen and Ling [32] provide an adoption framework based on the end-user viewed as a technology user, a consumer, and a network member, respectively. He also suggests applying the framework to design guidelines that can be used by market players to predict end-user adoption of m-commerce services. Lyytinen and Yoo [28] suggest a framework, which identifies research issues in nomadic computing environment at the individual, the team, the organizational, and the inter-organizational levels. They assess the opportunities and challenges for research into each area at the level of design, use and adoption, and impacts. Lehner and Watson [27] concentrate on a stakeholder perspective, services and applications perspective, and a market player’s institutional perspective. In the latter, they propose relevant research problems such as the business models, the useful alliances and the driving forces for cooperation, the interaction between market players, among others.

Moreover, some researchers such as Bria et al. [5] remind that the infrastructure deployment is a slow and costly process, in a very uncertain future that demands a long-range strategic planning. The same is true for the broad adoption of new behaviors and practices. Therefore, for guiding research, they suggest to use a scenario-based forecasting approach, based on global trends in technology, economy and politics, and verified among leading industrials and scientists.

This paper will focus on the mobile market player’s arena as suggested by [27], and at the intersection of the inter-organizational and the impact levels in the framework provided by [28]. The paper aims at sketching a conceptual tool for analyzing and visualizing the key