A Multi-Facet Analysis of Factors Affecting the Adoption of Multimedia Messaging Service (MMS)

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ABSTRACT

Mobile applications such as multimedia messaging service (MMS) promises a new way to share rich content of information that enhances its users’ personal connectivity experiences as well as productivity. However, the adoption of MMS seems to be unexpectedly slow (Bonte, 2008). As mobile phones become ever smarter (or complex) in functions, understanding the adoption behaviors of complex mobile services such as MMS becomes utterly important to both practitioners and academic. This paper introduces a multi-facet model for MMS adoption by integrating the well-known behavioral models such as TAM and TPB with other factors including intrinsic motivation, personal innovativeness and critical mass. An internet survey of 213 subjects with prior experience in MMS usage found strong support for the proposed model. The results show that the adopter’s attitude toward MMS is the most dominating factor in shaping his/her intention to use MMS, followed by subjective norm and perceived behavioral control. Moreover, the results further suggest adopter’s intrinsic motivation is the most important motivating factor for attitude toward using MMS. Implications of these findings are discussed for researchers and practitioners.

Keywords: Behavioral Intention, Critical Mass, Intrinsic Motivation, MMS, Mobile Services, Personal Innovativeness

INTRODUCTION

In recent years mobile communication has experienced a tremendous growth and quickly become the preferred means for voice communication around the world. According to Pyramid Research, the number of mobile subscriptions outpaced the numbers of fixed lines in service in many countries since 2002 (Ebrahim, 2004). This explosive penetration rate of mobile device motivates practitioners as well as researchers to innovate and provide increasingly diverse services. Data communication is among one of them. With its rapid improvement in bandwidth and handset functions, mobile device is able to

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surf online, get emails, and send multimedia messages.

Take multimedia messaging service (MMS) for example. It is a global messaging standard that sends multimedia messages between mobile devices. By using this technology, users can exchange rich contents (e.g., color pictures, audio/video, and animations) anytime, anywhere. This leap in messaging capabilities not only enriches mobile phone user’s personal connectivity experiences (e.g., sharing photos), but it also enhances his/her productivity (e.g., sending rich-text files) (Lee et al., 2007). The penetration of MMS applications is affecting our everyday life in many ways. The city of New York, for example, makes good uses of multimedia messages and upgraded its 911 emergency call centers to handle picture messaging so that pictures, instead of voices, could be sent using MMS during emergency (Mobiletracker, 2007).

The potential adoption of MMS seems to promise an important source of revenue for network operators as well as content and services providers. JupiterResearch estimates that the volume of MMS messages will reach €4.1 Billion in Europe by 2011, accounted for 42 percent of European active mobile phone users (Husson et al., 2007). The use of MMS in marketing also promises potential returns for business sectors. BMW, for example, increased its winter tire sale volume by effectively sending MMS ads to its new car owners (Ahonen and Moore, 2008). Thus, mobile marketing using MMS opens another window of opportunity for all industries.

As promising as it may seem, achieving widespread penetrations for mobile services such as MMS are not without obstacle. In fact, statistics show overall adoption of MMS is still significantly below the level for short messaging service (SMS) (Strother and Ask, 2008). Major hurdles such as lacking device penetration and interoperability between carriers as well as price issues have slowed down the adoption rate (Husson et al., 2007). While adoption seems slower than expected (Bonte, 2008), mobile industries, on the other hand, have different expectations for MMS future. According to Charles Lafage, Senior Analyst at Juniper Research, and MMS specialist, “picture-messaging has a great potential as it satisfies a widespread customer need: to share the precious moments of our everyday lives” (Cellula.co.za 2004). Achieving this sense of sharing is getting ever so easy as nowadays about half of mobile phones sold had integrated cameras (Strother and Ask, 2008). As the progressive mobile technology provides a perfect adoption atmosphere for MMS (Kou and Yu, 2006), it becomes more and more compelling to look into the factors affecting the adoption of MMS.

While some attention has been paid in the past to research issues related to MMS users adoption behavior (Hsu et al., 2007; Lee et al., 2007), little research has been done on multi-facet perspectives to explore actual adopters’ behaviors on MMS. For example, Hsu et al. (2007) applied innovation diffusion theory (IDT) to examine customer intention to use MMS. Additionally, Lee et al. (2007) applied motivational theory and media richness theory to investigate the acceptance of MMS. Their study also revealed that media richness was empirically shown to determine the technology acceptance model (TAM) factors such as perceived usefulness, perceived ease of use and enjoyment. These two studies highlight the technical values of exploring MMS because the Hsu et al (2007) emphasized the nature of innovative technology and Lee et al. (2007) stressed the importance of technology acceptance. Nevertheless, according to a recent cross-country study of handset usages, people send MMS messages to far fewer persons as compared to other types of message services (i.e. SMS) since most MMS messages are considered more personal (Verkasalo and Hämmäinen, 2007). Thus, to gain a comprehensive understanding of MMS adoption behavior, one needs to look into this issue from both technical view point and non-technical factors. Moreover, due to its demand in platform specification, the use of MMS also will be affected by network effect. That is, the more people adopt MMS, the higher
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