Available online at www.sciencedirect.com
ScienceDirect
Electronic Commerce Research and Applications 7 (2008) 202–213
Electronic Commerce Research and Applications
www.elsevier.com/locate/ecra

Inter-consortia battles in mobile payments standardisation ☆

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Received 17 September 2006; received in revised form 9 May 2007; accepted 9 May 2007
Available online 18 May 2007

Abstract

Mobile payments can be seen as an innovation service offered by key players from the financial and mobile communication industries. Many believe that standards ensure the success of mobile payments. However, actors with heterogeneous interests cause the complexity in standards-setting process and, therefore, the absence of standards for mobile payments. Various groups have been formed to generate standardised solutions for mobile payments. This paper describes and analyses the role of these groups and how they influence the development of mobile payments. Five consortia are explored in min-case analysis. They are the Mobile Payment Forum, the Mobey Forum, Simpay, PayCircle, and the European Committee for Banking Standards. The existence of these consortia has instigated inter-consortia competition. As a result, there are three types of mobile payments developments identified: bank-account based, telecommunications companies billing-based, and credit-card based. The implications of the developments are discussed with the help of interpretive theory.

Keywords: Consortia; Mobile payments; Standardisation; Standards

1. Introduction

Globalisation has brought a new era to payments systems. Rapid innovations in finance have led to the introduction of new products and services, such as new payments systems, which can be defined as a "system of instruments and rules which permits agents to meet payment obligations and to receive payments owed to them" [19, p. 77]. Payments are made by different methods and regulations differ between geographical areas. Although traditionally payment has been based on money transactions, there are now a number of other means of payment, including credit and debit cards. Technological development has allowed more efficient and secure payment systems through the Internet, sometimes known as *e-payments* using *e-money*. Examples include Internet payments through PayPal in the United States and iDeal, an Internet payment platform developed through the collaboration of Dutch banks. Technological development has also made it possible for institutions to provide payment services without actually being banks, or to separate payment services from other banking activities.

At the same time, mobile communications have entered a mature period. Since its 1G (First Generation) launch, GSM has developed and extended features have been added until it has become 3G (Third Generation) mobile communication. Along with the maturing technology, the market has also progressed. To avoid market saturation, both mobile communications' manufacturers and operators have preserved their product and service innovations and this particularly applies to service innovations, since service has become the key to successful marketing rather than the technology itself. Mobile firms must continue to be innovative.

Technological innovation allows more sophisticated payment methods by combining the existing payment system with mobile technology and, at the same time, increases the efficiency of payments by reducing transaction costs. As a result, following the rapid growth in the

☆ Material in this article is adapted from a conference paper [23], and the author's doctoral dissertation [24]. Views expressed are those of the author and do not necessarily reflect official positions of De Nedersandsche Bank.

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doi:10.1016/j.elerap.2007.05.003

mobile communication industry, mobile technology has extended to the banking and finance industry, and particularly the payments industry. This is indicated by the migration of mobile technology to mobile commerce devices. This new converging technology is known as *mobile payments* (or *m-payments*), and this involves players from diverse industries: banking or financial institutions, mobile telecommunications operators and suppliers. The European Central Bank [11] refers to this as the *electronification of payments*, which means a migration towards the provision of payment services on a fully electronic and highly automated basis. A collaborative development of some technical frameworks, such as magnetic stripe and chip card, point-of-sale (POS) terminal and asynchronous transfer mode (ATM), have been successfully undertaken and have become the base for further development and innovation in m-payments.

From the user's point of view, consumers become more familiar, and benefit more from sophisticated payment systems using payment cards. Besides paying merchants, card payment systems allow consumers to make *peer-to-peer payments*, which involve person-to-person transactions between consumers. Most of these transactions are micro-payments, which are cheap to process, both for customers and merchants, compared to traditional payment methods [11]. A survey showed that up to 93% of current Internet transactions involved payment cards [28]. This number will grow even further in the future to the end-user's convenience as a result of the rapid developments and innovations in the infrastructure of payment systems and mobile telecommunications. To achieve the ideal number, technological standards are needed which will create movement toward inter-industrial technology. In this case, standards act as a baseline from which new technologies emerge [17,18]. As a result of global standards, consumers are freed from product uncertainty and, at the same time, they encourage merchants to invest in the technology.

The development of m-payments, however, leads to a circumstance where various players in wireless Internet and mobile commerce technologies, banks, telecommunication operators, handset manufacturers and vendors are partially and individually developing new technologies to support m-payments solutions. Heterogeneous and cross-industry players produce complexity in the development of m-payments, because consensus for standards is more difficult to reach among heterogeneous players. The regulations for players in the financial industry are different from those governing the telecommunications industry, which means that each industry has its own particular standards body. For instance, in continental Europe, the European Telecommunications Standards Institute (ETSI) and European Committee for Banking Standards are responsible, respectively, for telecommunications and banking. As a result, emerging technological developments hamper the growth of the m-payments industry and the market becomes fragmented. First movers benefit from this situation by creating *de facto* standards and major market share.

Since there is no consensus between the players in these industries in terms of m-payments standards-setting, no technological standards for m-payments currently exist. Global threats have increased the urgency for more rapid and more international development of new understandings and decisions with regard to the choice and implementation of standards [25]. A number of innovative firms, optimistic about the success of m-payments success, have indicated their intention to develop specifications to be proposed as m-payments standards. They plan to launch trials in particular markets. In most cases, the trials involve collaboration between firms from different industries, however, in the case of m-payments, these firms are from the banking and mobile communications sectors. This has an explicit strategic advantage: the possibility to achieve *de facto* standards through early market selection. They also plan to initiate partnerships to develop global and open standards through the formal standards-setting process. The partnerships will become consortia that will accommodate players from different industries.

Through case studies of five organisations which develop standards solutions for m-payments, this article describes the role of these consortia in the development of m-payments. The consortium phenomenon introduces another complication though. The battle over standards becomes apparent not only at the inter-firm level, but also at the inter-consortia level. A number of m-payments consortia now exist with the common objective of developing a global standard for m-payments. However, several consortia have explicitly referred to a certain industry from the existing two main blocks of industry (banking and mobile communications). The composition of membership within different consortia indicates their orientation. The more finance-oriented consortia, for instance, tend to include more banking firms.

2. Case studies

The five m-payments-developing organisations used as case studies in this article are: the Mobile Payment Forum, the Mobey Forum, Simpay, PayCircle, and the European Committee for Banking Standards. The case study approach is often used when the investigator has little control over events, and when the focus is on a contemporary phenomenon within a real-life context [40]. The time frame of the case studies was between February 2003 and February 2005; further events after that period were not analysed.[1] The data collection includes interviews and documentation. Twenty-six unstructured interviews were conducted with individuals who represented their companies as members of one of the organisations. The interviews list is shown in Table 1. Written documentation includes technical reports, white papers, and news briefings. These

[1] For example, Simpay collapsed and PayCircle completed its mission in 2005. These events are outside the scope of the analysis here.