

Chapter 7.9

Employment and Acceptance of Near Field Communication in Mobile Marketing

Klaus-Peter Wiedmann
Leibniz Universität Hannover, Germany

Marc-Oliver Reeh
Leibniz Universität Hannover, Germany

Henrik Schumacher
Leibniz Universität Hannover, Germany

ABSTRACT

Near Field Communication (NFC) is a short-distance wireless technology which allows user friendly networking of mobile terminals, e.g., cellular phones and PDAs, as it does with stationary units like Automated Teller Machines (ATM). Hardware producers, network operators and service providers are willing to implement NFC technologies in order to offer new services to their customers. The main goal is to increase the attraction of the underdeveloped areas of mobile commerce and make them more interesting for owners of mobile devices. If and how much real potential there is in NFC as a basic technology to really provide new impulses in mobile commerce and mobile marketing so that a higher acceptance can be reached are remaining open questions. This chapter tries to approach these questions and to provide possible answers by outlining relevant applicative examples and further configuration options of NFC technology as well as by discussing their acceptability.

DEVELOPMENT TRENDS IN MOBILE MARKETING

Nothing seems to be more consistent in the sector of Information and Communication Technology

DOI: 10.4018/978-1-61350-101-6.ch709

(ICT) than the change of its structure, as market dynamics and development velocity are still growing. The fact that incremental innovations constantly pass off the will, needs and perceptions of customers had to be experienced a few years ago by the mobile telephony industry in its early days. A much-cited example is the Wireless Ap-

plication Protocol (WAP), which was meant to provide the new economy with “twenty-four-seven” distribution channels, and which was supposed to constitute the entrance to the mobile internet era. The problem of WAP was the enormous fissure between the much praised functionality, the high expectations of service providers as well as users on the one hand and hardware capabilities of that time like low duty times, monochrome matrix displays, low Global System for Mobile communications (GSM) data rates etc. on the other hand (Pleil, 2005). Even technophile innovators and early adopters began to associate WAP with expensive downloads, high transfer delays and non-transparent billing models. However, the market introduction of the Short Message Service (SMS) product was unexpectedly successful and everything but an economic flop, which once again shows that services are mostly used if a) they substantially and adequately satisfy a real existent need and b) they are easily accessible and available from a customer’s point of view (Kuhn, Lehner, 2003).

Although until lately mobile phone services and SMS seemed to be the only suitable products for the mass-market, current trends show that mobile commerce - which is characterized by a new kind of delivery of novel location based services using handheld terminals (Dholakia, Dholakia, 2004) - is facing a real renaissance based on a wide range of equipment manufacturers’ model offensives, e.g., Apple’s iPhone and new, innovative services. In today’s communication media, the presence of smartphones, mobile internet, mobile TV and mobile navigation is winning strong public attention. Meanwhile, mobile phones offer computing power that could only be reached by high-performance PCs a couple of years ago. These facts demonstrate that technical obstacles, in mobile commerce as in other areas, tend to lose complexity and their limiting effects are alleviated as time passes (Pils, 2004b).

Considering the fact that technical prerequisites for successful mobile commerce and

consequently for effective and mature mobile marketing are in place, the following question arises for the marketing developer: “Why should users abandon the comfort of using their PCs and start purchasing products via comparatively small and “uncomfortable” cell phone displays?” Marketing has to be aware of this open issue and the need to urge the development of adequate convenience technologies (in general regarding the development of mobile commerce see Wiedmann, Buckler, and Buxel 2000a and 2000b/2000b). In addition to the necessary increases concerning user-friendliness by latest generations of mobile devices it has to be examined, how mobile marketing can penetrate life- and consumption styles of a constantly growing mobile society, in a way that that real use-benefits can be experienced from a customer’s point of view (Wiedmann, 2001). In this case, a very important aspect is the ease of access to ubiquitously available offers of information, entertainment, service and goods. Eventually, mobile internet shall be of use for today’s mobile society, if it is easy, intuitively to control and have reasonable handling charges.

An enabler and appropriate technology to develop such user-friendly and secure access to virtual world can be found in NFC (Messmer, 2005). In the near future, NFC will allow the user to connect its mobile device with other mobile phones, all kinds of small electronic devices or customer terminals and ATMs by an easy handshake, which is called “touching”, in order to access the services of these terminals (Gonzalez, Organero, Kloos, 2008). Most of the applications related to the use of NFC are technically proven to work. Hence, at this stage it is a matter of acceptance, perception of the offered added value and the actual utilization by and for the customers. Optimizing customer orientation over all parts of the process, companies and NFC-based mobile commerce are able to come into contact with the user fast and straightforward in every condition of life, thus arousing interest in context-relevant contents and services (Kagermann, Österle, 2006).

21 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/employment-acceptance-near-field-communication/58873

Related Content

Ad Hoc Networks Testbed Using a Practice Smart Antenna with IEEE802.15.4 Wireless Modules

Masahiro Watanabe, Sadao Obana and Takashi Watanabe (2009). *Handbook on Advancements in Smart Antenna Technologies for Wireless Networks* (pp. 500-512).

www.irma-international.org/chapter/hoc-networks-testbed-using-practice/8472

IP Paging for Mobile Hosts in Distributed and Fixed Hierarchical Mobile IP

Paramesh C. Upadhyay and Sudarshan Tiwari (2011). *International Journal of Wireless Networks and Broadband Technologies* (pp. 62-76).

www.irma-international.org/article/paging-mobile-hosts-distributed-fixed/55883

Robust Secured Roaming in Wireless Local Area Networks

Shaldon L. Suntu, Nickson H. Odongo, Samwel M. Chege and Obadia K. Bishoge (2017). *International Journal of Wireless Networks and Broadband Technologies* (pp. 26-42).

www.irma-international.org/article/robust-secured-roaming-in-wireless-local-area-networks/201495

A Demonstration of Practical DNS Attacks and their Mitigation Using DNSSEC

Israr Khan, William Farrelly and Kevin Curran (2020). *International Journal of Wireless Networks and Broadband Technologies* (pp. 56-78).

www.irma-international.org/article/a-demonstration-of-practical-dns-attacks-and-their-mitigation-using-dnssec/249154

Higher Data Rate Transmission for Underwater Wireless Sensor Communications Using Industrial, Scientific, and Medical (ISM) Bands

Manish Sharma (2021). *Energy-Efficient Underwater Wireless Communications and Networking* (pp. 155-170).

www.irma-international.org/chapter/higher-data-rate-transmission-for-underwater-wireless-sensor-communications-using-industrial-scientific-and-medical-ism-bands/262242