
Benefits & Opportunities Available to Businesses from Near Field Communications

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Abstract

This poster describes the benefits offered to businesses by Near Field Communication (NFC), and provides recommendations on how businesses should go about implementing NFC technology in order to realize those benefits. NFC is a new wireless technology that enables communication between devices at short range (typically about four centimetres). NFC technology is being developed primarily for smart phones, which will enable these phones to interact with each other – or with “tags” that hold small pieces of information – simply by touching them to each other.

Keywords

Near Field Communications (NFC), wireless technology, smart phones

Introduction

The main benefit to businesses from the use of NFC is by allowing customers to make “cashless” transactions by swiping their smart phone over the checkout terminal; tracking customer purchases and targeting and personalizing

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advertisements to certain consumers based on their buying habits and the demographic data stored on their phones; allowing consumers to make purchases directly from posters and billboards; and by implementing electronic ticketing, allowing customers to pay for transportation fares with their smart phones.

Near Field Communication is a technology that enables wireless communication between devices at a very short range. The technology is an extension of RFID (Radio-Frequency Identification), which is a one-way standard, allowing devices, named “readers”, to poll “tags” for data. NFC builds on that technology to provide two-way communication as well as one-way, allowing the devices to communicate with each other, as well as with tags. The NFC standard, ISO 18092, aims to enable simple communications between devices, and to provide more convenient ways of accessing information, paying for items and communicating with people.

Development of the NFC standard is driven by the NFC Forum, a collective effort of Visa, Sony, Microsoft, Nokia and over 140 more. NFC is being tested out in pilot studies in most developed countries of the world, and mass market deployment of NFC devices and applications is expected to be as little as two years away.

Literature Review

There have been many surveys done to gauge the demand for NFC from consumers. Clark (2009) found that 76% of consumers wish that there was a viable alternative to carrying around a wallet that holds cash, coupons and various loyalty and credit cards, and most interestingly, that 59% of consumers want to be able to make purchases via their mobile phones at the point of sale. In another survey, Saunders (2009) reported that in the US, 60% of consumers

are prepared to switch banks or mobile phone carriers to be able to use NFC for contactless payments.

Venture Development Corporation (2008) and Butcher (2009) have commented on the fact that NFC hasn't yet become commonplace in the market after more than 7 years of development, and that NFC is currently emerging from a "chicken-and-egg scenario" in that all parties involved are waiting for another party to act first: smart phone manufacturers and operators are waiting for businesses to develop applications that NFC-enabled smart phones can use, businesses are waiting for enough consumers to have NFC-enabled smart phones to interact with their advertisements and products, consumers are waiting for enough service operators and retailers to provide NFC applications, and retailers are waiting for consumers to have smart phones that support NFC before they buy and install contactless terminals at their checkouts.

But Burnell (2008) wrote about the expected popularity of NFC among consumers within the next few years, citing projections that in 2013, there will be an explosion of NFC-enabled mobile phones on the market, and more than \$75 billion worth of transactions could be made worldwide using NFC, and \$110 billion by 2014. Burnell and Juniper expect that between 2011 and 2013, the values of transactions completed through NFC will quadruple annually.

Findings

Nokia announced that from 2011 all their smart phones will feature the NFC technology – regardless of what others may think or believe about the technology. The Nokia C7 was released in September 2010 followed by Sagem that same month and then by HTC in December 2010. By mid-2011 there are now several NFC-enabled smartphones, the latest one from Samsung, launched in May 2011. Google is exploring options with the next Android version, Ice Cream Sandwich, along with many POS vendors and users such as Intuit and McDonalds.

Conclusions

Since NFC is an emerging technology and new applications are still being devised, there are bound to be many more benefits into the future. At this point, however, they do provide a tantalizing glimpse at the ways in which businesses could use NFC to save money, reach more customers, and most importantly, make more sales, provided that those businesses are willing to take a risk and integrate a new and emerging technology into their business processes and strategies.

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