

Blog: An alternative view to NFC

Optimised Bluetooth-based offer a different mobile payments option to NFC says Vadim Maor, CEO of WiseSec



The unveiling of Apple Pay in October 2014 appeared to herald an evolution in the world of retail and commerce – the era of mobile payments.

The notion of having a smartphone replace physical wallets, credit cards and cash seemed an attractive one and numerous companies – great and small – were quick to jump on the mobile pay bandwagon. It did not take long for companies such as Google and Samsung to introduce their own version of the mobile wallet and now, as Apple Pay approaches its first birthday, there exist a myriad versions of the mobile wallet.

However, the majority of mobile wallets, relying as they do on Near Field Communications (NFC)-based technology, fall short of these expectations. There is another solution, one that solutions providers are slowly coming round to, and this is specially customised Bluetooth technology to facilitate mobile payments. Properly optimised, a Bluetooth-based mobile payments platform can be more cost-effective, reliable and accessible than the NFC alternatives.

**It's All About the Money**

When any new product appears on the market, one of the first questions asked is “how much is this going to cost me?” Vendors will naturally incur installation and operating costs when adopting a mobile payments system, and so must ensure that any system installed is conducive to maintaining their profit margins. The first shortcoming with NFC-based mobile payments platforms are the substantial installation and running costs which have already

dissuaded a number of merchants.

NFC is still a relatively new technology for payments. Therefore, installing an NFC-based Point of Sale (POS) system is often a costly and protracted affair, requiring engineers to retrofit or completely replace the existing terminals. Multiplied merchant-by-merchant, store-by-store, installation costs alone can be in the tens of thousands of dollars, reaching millions of dollars for the largest retail chains.

And the costs don't end with the installation. As a software, NFC is continually being updated and merchants are having to upgrade their technology accordingly.

### **Bluetooth**

Customised Bluetooth technology, in comparison, provides an overall more cost-effective alternative, both in terms of installation and operating cost. The hardware of customised Bluetooth is often much cheaper than NFC – sometimes as much as half the price – and easily integrating into existing POS terminals, negating the need for expensive and time-consuming retrofitting of terminals. Properly optimised, Bluetooth systems can be installed by the merchants themselves, resulting in further savings without the need for engineers.

Operationally, customised Bluetooth platforms are also substantially more cost effective. Being substantially more stable than NFC, Bluetooth systems seldom require updates. When they do, these upgrades are significantly cheaper to install than their NFC equivalents and do not require any overhauling of the hardware.

### **There Can Be Economy Only Where There Is Efficiency**

In terms of overall efficiency, mobile payment solutions built on Bluetooth provide an attractive alternative to NFC systems. One must remember that Bluetooth is a tried and tested technology, having been utilised for a number of years in a variety of industries, from defence to mobile payments and everything in between. Bluetooth has been incorporated into mobile devices for over ten years and is still being incorporated into today's smartphones and wearables. NFC, in comparison, is a relatively juvenile technology, one which is not compatible with most mobile devices. Indeed, Apple Pay is only available to owners of the iPhone 6 or higher, while Bluetooth is available on all smartphones and the vast majority of other mobile devices.

As mentioned, Bluetooth provides a substantially more stable platform than NFC, one which can be more easily and effectively formatted to provide efficient mobile payment systems. In comparison to NFC, which only works when the mobile device is pressed to the POS terminal, Bluetooth is able to send signals over a distance ranging from centimetres to one hundred meters. Customised with micro-location capabilities, Bluetooth is able to maintain secure and accurate transactions regardless of the distance between the terminal and mobile device. A properly customised Bluetooth platform, with micro-location capabilities, is even able to automatically activate the Bluetooth and application on any android phone when they near the POS, while sending an alert to iOS phone users to manually switch on.

### **The Goals Are Simple: Privacy and Simplicity**

Since its inception, Apple Pay has been the subject of considerable media attention, not all of it positive. Anyone possessing even a cursory interest in the world of technology, will be aware of the instances of fraud the Apple Pay's NFC-based technology has suffered. Relying on the customer to supply the payment details makes NFC vulnerable from interference by third-party hackers or fraudsters using stolen credit card details.

Bluetooth, which has already been utilised in the security and defence sectors, can be customised to include multiple security layers to protect users' credit card details. With the right capabilities, providers can incorporate military-grade algorithms and encryption protocols into customised Bluetooth platforms. Additionally, financial institutions can adopt their own mobile Bluetooth solutions to effectively eliminate a middleman and facilitate highly secure mobile payments.

With the mobile payments industry still in its infancy, it may be too early to predict which technology will emerge victorious, Bluetooth or NFC. Both options provide significant benefits, while neither is without drawbacks. However, NFC – the younger and less predictable of the two – will require significant time and expense to provide a truly holistic solution. With the benefit of maturity and proven reliability, a Bluetooth-based mobile payments platform will prove to be the more ideal, at least for the foreseeable future.

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