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securing tomorrow's transactions

WHAT IS NFC

In today's fast-paced world, it seems absurd that people are still queuing up to buy paper train tickets, hunting for coins to pay for their newspapers, and trekking over to clunky old payment machines in order to get out of a car park – especially when the latest technology can offer much more convenient solutions.

NFC communication is enabled by bringing two NFC-compatible devices within a few centimetres of one another, which is why it's often called "tap 'n go" technology. Customers love the idea of being able to wave their phone to get on the Tube, buy a coffee, or to pay for their parking. The benefits are equally compelling for service providers, vendors and other stakeholders: they have less cash to manage, reduced risk of theft, more information coming back from points of access, as well as an interactive channel to communicate directly with customers.

You might ask why is this a big deal? When it comes to using NFC phones in "the real world", people often ask: couldn't we just use 2D barcodes on our mobile phone screen instead? The simple answer is yes, it's possible, but the truth is that NFC works much better, it's easier, and it's faster.

In our experience, customers will often try to wave their phone in front of a scanner when trying to scan a 2D barcode, but nearly all barcode systems require both the phone and scanner to remain stationary. By comparison, the motion of simply tapping an NFC reader with a mobile phone is a much more natural human gesture. As such, the combination of NFC at the point-of-sale (POS), ticket machine, or time and attendance register and the mobile phone as a carrier looks pretty promising.

At is very simplest NFC is a short range wireless Radio Frequency Identification (RFID) technology that makes use of interacting electromagnetic radio fields instead of the typical direct radio transmissions used by technologies such as Bluetooth. This is of course a description that has no meaning unless it is then put into context and shown how it is going to be applicable to Mobile Network Operators (MNO's).



Contactless payments are already on the high street as seen here with Boots' Contactless payment terminal

The most common use of NFC we see used today is with Contactless payment cards, such as Visa PayWave and Mastercard PayPass. Widely issued by Barclays in the UK (8 million cards at the end of 2009) this is slowly becoming an accepted form of payment with new retailers signing up to accept them for payments. But NFC, especially Mobile NFC, is far more than just a card replacement. It is a new way of developing and delivering services to your customers across all segments.

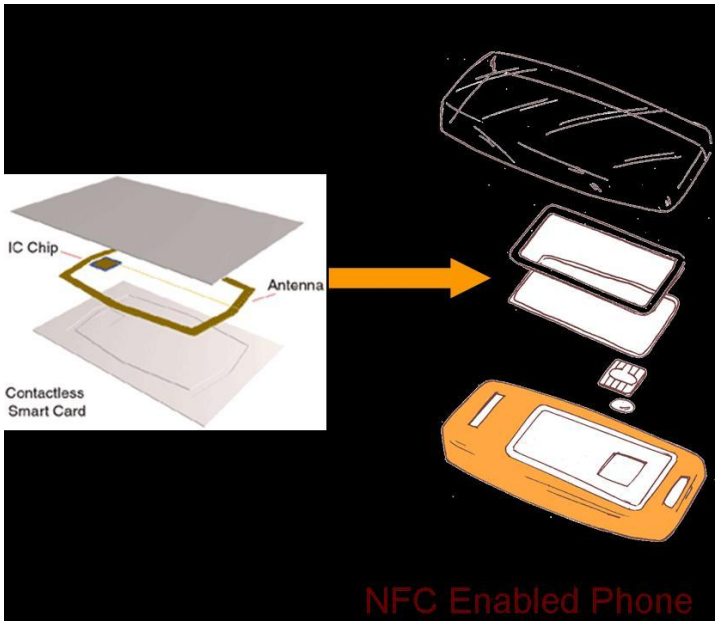


NFC, Oyster enabled Mobile phone being used on London Underground during London O2 Wallet trials

For the MNO, NFC offers a much wider opportunity to develop new applications and uses for both Corporate and Consumer customers. Applications such as payment services, Time and

Attendance, Asset Management, Ticketing, Coupons, Identity Management, Social Media and many others are all either developed or being developed by the Mobile industry. Consumers feel very comfortable using the handset as a payment device (as shown in the very successful O2/Oyster/Barclaycard trial) and are far less likely to leave the device at home over their purse or wallet. For the Enterprise, applications around Health, Time and Attendance, Payments etc are all of huge interest as ways of addressing issues that exist today that require multiple devices to be carried, when an NFC enabled phone could address them all.

The key to making NFC work for MNO's in the GSMA model is using the SIM for trusted services. By using the SIM, Mobile Operators can maintain security, privacy and immediacy needed. It can re-use proven authentication and, with increased memory of SIMs, allow more secure NFC applications to be stored on the card using Over The Air Management to ensure they are kept up to date and secure. By creating this secure environment on the SIM card, the Mobile Operator can use this to create a revenue model to allow other applications to reside on the SIM card that need to access these secure elements.



While NFC supports and enables multiple applications on handsets, the first phase of its adoption is already seeing NFC being utilised for payment and ticketing in the transport sector. Pilots and trials have proved successful around the world, and increasingly innovative and compelling services are being designed to exploit the connectivity it enables. With more and more NFC compatible devices being launched by device manufacturers, mobile operators and service providers need to work closely to put in place the infrastructure that will facilitate and drive rollout of the technology.