

What Next For Nearfield Communications?

These are busy times for Near Field Communications (NFC). The big surprise that NFC was missing from Apple's iOS 5 has faded, and the last few weeks have seen a rush of 'cashless society' stories in the news. Although NFC is not the star in all of them, the cashless dream seems alive and well from Sweden to South Korea, via Turkey, Kenya, and a few other places besides.

There's no doubt that Google Wallet is helping to push NFC-based mobile payments into the mainstream. Go into a supermarket near you, and chances are you'll see the 'contactless' symbol on the card reader at the checkout. It's good for low-value payments (under £15) with a contactless card - or from your Google Wallet enabled mobile phone.

NFC is not a new technology. In fact, it has been around for at least a decade. Like location, it has suffered from being one of those perennial 'next year's cool technology' technologies, forever on the cusp of breaking into the mainstream, but never quite seeming to make it.

Apple's caution accepted, NFC is coming to a phone near you, soon.

Under the hood

NFC is an evolution of RFID technology (Radio-frequency identification), in which an RF field emitted by a tag reader is used to activate an unpowered electronic tag. When activated, the tag uses the RF field to transmit data.

Contactless smart cards use similar technology, but with a field of a centimetre or two instead of a metre or two. In phones, NFC is different again because both the reader and the phone are powered, and communication can be two-way. But the 'near' part is the same, and the comms protocols are the same. Most importantly, phones can use the same payment systems as contactless cards.

Security, of course, is a big deal. But the superior processing power of a phone (it can run hefty encryption algorithms), makes it theoretically much safer than a 'dumb' smartcard. And for now, the relatively low value limit on transactions is a useful defence. We'll see. The long experience with phone-based payments in markets like Japan and South Korea is at least reassuring.

Apple may be sitting out the first round, but other vendors are not. NFC-capable phones are now shipping from Nokia (C7, 600, 603,700, 701), Samsung (Galaxy II, Nexus S, Wave, Tocco), HTC (Amaze), LG (Optimus), and RIM (Blackberry Bold), with more than a dozen models between them, and with Sony-Ericsson and Microsoft seeming certain to follow.

The future of NFC

'Mobile money' is a compelling story, but NFC promises much more. Barcodes, QR codes, and RFID allow objects of all kinds to identify themselves, but read-write NFC tags allow them to 'talk'. All kinds of dumb objects from museum artefacts and works of art to advertising panels, billboards, and bus stops can be made smart with NFC.



The promise is that interactivity will move out of our offices and homes and into the streets and shops and other public spaces in which we spend our time.

But NFC is not just about tags. Phone-to-phone 'touch-to-share' applications have great potential in social contexts. Whether it's swapping business cards or contact information; in-game micro-purchases or game 'mods' or 'skins' or 'lives', or new coupon apps that allow us to pass on coupons or ticket offers (think Orange Wednesday) to our friends by touching phones, NFC is likely to find applications in all segments of the mobile market.

Fortune favours the bold

Penrillian has experience working with customers across the mobile value chain, from network operator software infrastructure projects, to mobile apps and services. We've delivered phone and tablet projects on all the platforms you've heard of. We're the perfect partner for your mobile project, from blue-sky proof-of-concept, to porting established solutions.

If you are wondering what NFC could do for you call us on +44 (1768) 214400 and see how we can help.