

NFC without Payments: a Merchant-focused Proposition

Near Field Communications (NFC) has been the payments industry's hard focus vector into mobile payments. But dogged by ecosystem complexity, business model incompatibilities between mobile network operators and financial institutions and the gallinaceous dilemma of contactless issuance and acceptance (that's about chickens and eggs), NFC has been in a limbo of pilot projects and envying glances toward more vertically integrated Asian markets.

That's about to change but not through a payments industry intercession. While some NFC propositions have fallen to App Phone-generated irrelevance, other mobile commerce-driven use cases are poised to flourish. As data increasingly drives the merchant-to-consumer relationship, NFC has a role in delivering practical one-to-one, temporally and geographically situationally relevant mobile marketing, commerce and merchandising. Get ready.

Markets Change, Tech Giveth, Tech Taketh Away

It's axiomatic that new technology supersedes what came before. It's particularly painful when the original approach has never had its time in the sun. For some use cases, that has happened to NFC. While the world waits for its emergence as a payment standard, market forces and tech reality are flowing around what looked like other, certain future roles for this contactless communications method.

Yes, in vertically integrated markets like the Japanese and Chinese mobile markets, strong ecosystem control allows deployment of indigenous contactless approaches. (See Mercator Advisory Group's December 2009 series on the mobile payments market and chip-based approaches, including *How Close Is Proximity? NFC and Alternative Proximity Mobile Payments in 2009* and *Mobile Payment Systems: With or Without Banks*). While there is much to learn from these initiatives, it is almost impossible to transplant them directly to domestic soil

because mobile network operators (MNO) are not in the banking and payments business. Yet.

The more immediate force affecting NFC's fortunes is the enormous flexibility of App Phones endowed with cameras, GPS and access to Google-gauge databases. Camera-based scanning of UPC codes is just one example that substitutes for the NFC tap-and-read "smart poster" proposition. URL-pushing 2D barcodes is another example. While not all smart poster applications are obsolete, the smart tag approach has at least lost a few opportunities. As image recognition, image databases and GPS combine to increase accuracy, reality browsers that overlay what the AppPhone camera sees with location-based rich data further erode the smart poster proposition.

But that use case erosion hardly diminishes the NFC promise. This Viewpoint examines one NFC future that could very positively impact merchandising and user authentication.

“Did You Log Into the Store When You Came In?”

Consider an intriguing App Phone-based NFC application for physically “logging in” to a physical store. Here's how it works: when I walk into a Barnes and Noble, for example, I tap my NFC-based handset against a reader by the door or at one of a handful of readers scattered around the store. The store now knows that I am here, who I am and is able to draw on what I've purchased in the past, my rewards balance, and its recommendation engine, etc. The Barnes and Noble application I downloaded from the App Store (keep in mind, this is ALL about opt-in marketing) launches automatically to present up-to-the second recommendations, discount offers on books or coffee, and even “follow me” floor plans to speed my walking navigation to the exact shelf holding that historical fiction novel the recommendation engine believes I will like enough to purchase.

This “store login” application could be confined to merchandising and loyalty and generate plenty of benefit for both the merchant (ROI) and the consumer (customer experience and loyalty). One-to-one, temporally, geographically, and situationally-relevant marketing becomes practical.

Adding payments is eminently practical. A closed loop approach could use a one-time use 2D barcode generated for that single transaction for scanning at the point of sale as the payment mechanism along the lines of the Starbucks program now rolling out. The funding mechanism is predetermined by the consumer. Perhaps it's a prepaid wallet with automatic top-up from a credit card or, better for the merchant, from a bank account.

Of course, with payment credentials stored on the secure element of the NFC chipset the payment card emulation mode of NFC could be employed for a

contactless transaction. That's the original vision for this technology, after all.

Quick service and casual dining restaurants are obvious candidates for this “store login” approach. Grocery stores (with their well established loyalty programs), warehouse stores and big box retailers might gain similar benefit.

Properly implemented—the devil's in the details of course—there are payment security benefits here too. Hardware-based security is better than software and, at least from an authentication point of view, this m-commerce application of NFC should improve the fraud picture even if it is not directly tied to the payment network itself. Try that one on for size!

Getting There

It's not hard to imagine a third party deployer of this “store login” network using NFC, Wi-Fi and other access methods. The initial implementation might start with the recommendation engine/loyalty application, and move beyond that over time toward payments applications. For consistency, the experience on the mobile phone would be similar to the online experience at the merchant's website. The deployer could work with a range of merchants to form merchant-funded discount networks based on merchant-controlled, rather than card network controlled, data. The data used to drive the customer experience would be far richer than what is captured by today's card network transactions. Given the falling cost of communications gear, the rise of machine-to-machine mobile communications and cloud-based computing and data services, building a parallel network to deliver merchant-specific services just is not that difficult.

Apple, Google and Cisco, Oh My

By now, the intrigue with this notion is giving way to “yeah, but, there aren’t any NFC phones out there.” Right you are. But not for long. Rumors are swirling around Silicon Valley that Apple will soon release an NFC-equipped iPhone. If that happens, Google will surely add NFC to its line of directly marketed handsets. And MNOs, the other dithering NFC gatekeepers, will also have to sell these devices.

Why would Apple bother with NFC? Because new features that expand an ecosystem drive hardware sales. The iPhone’s hardware features like the GPS and accelerometer are already being exploited by software developers. We know that the Apple App Store has succeeded beyond even Apple’s expectations and completely changed how consumers—and now merchants—view mobility. These capabilities drive iPhone and iPod Touch device sales. Adding NFC creates a more interesting ecosystem and more use cases for iPhone owners. And that’s why NFC will work for Apple.

While Google is not a hardware company at heart, it recognizes that App Phones are becoming the central screen for consumers. Google could expose access to the NFC chipset to programmers writing applications for merchants or m-commerce providers, driving demand for this capability among consumers and merchants alike. Given Google’s advertising-based business model, the

Conditions for Swift Change

While the NFC payments proposition has languished, the preconditions for a successful retailing-based NFC ecosystem have started to emerge built on some impressive numbers. Over 50 million iPhones. Over two billion app downloads.

mobile device becomes a means of delivering higher value ads. For both, they become a broad-based platform for consumer interactions with merchants.

And for Cisco? Putting in a merchant-centric loyalty network is going to require a lot of Wi-Fi access points, cellular machine-to-machine nodes, inexpensive routers, NFC readers and more to make up the required infrastructure. That’s in the networking giant’s wheelhouse.

New Players Have Wide Open Opportunity

The parts for an NFC reader are about \$10. An NFC chipset, depending upon configuration, is in the \$5 to \$8 range. Communications gear is nearing commodity status. We are not talking big dollars here and who pays for it is spread beyond just the merchant. Like the Internet where consumers gladly paid for the PCs required to present Google’s ads, the mobile channel has consumers paying for the presentation plane: that App Phone touchscreen.

Any of these new players—and Apple in particular—has the opportunity to become a trusted service manager (TSM) for retailers. As a demonstration of what’s possible, Apple could easily choose to evolve the iTunes application into a mobile wallet communicating with the NFC chip for sales at its own stores. From there, building out the loyalty network described in this Viewpoint becomes a matter of will and scale. Evolving a retail-oriented TSM into one that handles payment credentials is not a stretch.

Google’s Android operating system, Verizon’s Google-based Droid handsets and Google’s own soon-to-be announced devices. The App Store phenomenon and streamlined software distribution infrastructure. Easier mobile application development and at lower cost. This is a fertile substrate for innovation.

Now add NFC-equipped App Phones and NFC readers into stores for the “store login” app. Integrate that into the merchant’s e-commerce databases to deliver a consistent consumer experience whether online or in-store. What’s the result? Customer experience management becomes temporally, geographically, and situationally-relevant across physical and virtual channels. Merchandising changes. Retail supply chain and distribution strategies are affected. And the merchant has a tighter relationship with its customers.

Yes, it will take some years for the NFC-equipped App Phone fleet to grow. But while the payment industry dithers with the chicken-and-egg dilemma of issuance and acceptance, an entirely different industry is poised to crow over its ability

to drive consumer behavior, merchant investment and m-commerce behavior. As Mercator’s recent reports on NFC in China indicate, there are giant entities who no longer must wait for the global NFC standard to be fully embraced. Rather than wait for critical mass to coalesce around the ISO standard, they can own the whole henhouse through first mover advantage. An Apple-centric ecosystem might be the US version of this approach.

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December 31, 2009*

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