

CONTACTLESS PAYMENTS: THE NEXT WAVE

As if trying to maintain a link to the past—maybe because we all have this legacy notion that payments actually have to pass hands, and therefore touch—RFID-enabled payments have taken on the odd moniker of ‘contactless’. RFID technology certainly provides the ability to pay ‘without contact’, but it is far from ‘contactless’; rather, it has the ability to dramatically increase consumer convenience, and in doing so provide a mechanism for putting consumers more ‘in touch’ than ever before.

If we as a payments industry believe that compelling value can be created in RFID-enabled payments, and that companies can capture advantage based on that value, our first order of business should be to drop the notion of ‘contactless’ and create brands that communicate what the payment mechanism does, rather than what it doesn’t do. It’s akin to continuing to call cars ‘horse-less carriages’. Surely we can do better than this.

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RFID. Contactless. Wireless. However, you refer to it, it’s a hot topic in the U.S.—but it’s not new. Mobile phones have been used to make payments in Japan for years. In the U.S., Mobil (now ExxonMobil) launched ‘key fob’ payment devices in 1997. Cool as they are, however, they have not become a mass market phenomenon. Yet.

The recent launch of the Chase ‘Blink’ card and announcements by Citibank and KeyBank, however, may give the industry a scale platform for broad-based adoption of RFID.

The roll-out of an RFID payment mechanism by major U.S. issuers is significant because of its potential to further migrate consumers away from paper at the point-of-sale. Over the past five years, checks presented at the point-of-sale have declined at an average annual rate of 4.3%. RFID payments presents the opportunity to accelerate this decline, and (if the economics play out), displace cash beyond what debit has done to date.

We are a species of habit, and the use of cash remains (and probably will remain for some time) one of our most treasured habits. Why? It feels good to hold a crisp bill (the larger the better) and it is relatively fast as a payment device—an attribute prized by consumers and merchants alike. RFID payments will probably never give us the same tactile pleasure as cash, but speed will be unmatched: no PIN (usually), no paper, and best of all, no waiting for a clerk who really doesn’t want to be doing what they’re doing.

History

RFID-enabled payments are not new to merchants or consumers. A variety of similar mechanisms exist in the U.S., all of which have had varying degrees of success.

- Exxon/Mobil introduced its SpeedPass key fob program in 1997, and now has approximately six million users¹. While successful for gas purchases, attempts to migrate SpeedPass to other retail transactions have not gained momentum.
- Many professional NFL sports arenas are issuing PowerPay key fobs, offered by SMART Systems Technologies, to season ticket holders for purchases during games.
- MasterCard and American Express have conducted pilots with PayPass and ExpressPay, respectively. Unlike SpeedPass and PowerPay, MasterCard and American Express's offerings were designed for universal acceptance by merchants.

How It Works

RFID technology provides cardholders with the ability to pay by holding a device containing a chip close to a terminal reader. SpeedPass suggests 'tapping' its key fob on the terminal; Chase suggests 'waving' Blink.

Example: MasterCard's PayPass



Step 1—PayPass terminal/reader in the ready state waiting for consumer to present card or device. A single indicator light shows the ready state.

Step 2—Consumer taps card or device on landing zone and terminal reads data. Once completed, visual and audible cues are provided.

Step 3—Consumer removes card or device. The visual indicators go off and the transaction is processed in the normal way by the merchant.

Source: MasterCard

¹ ExxonMobil "Speedpass Fact Sheet"

Whatever the device is—a card, mobile phone, etc.—it contains an embedded chip and radio frequency antenna. As the card/device is tapped or waved at a special point-of-sale merchant terminal, it transmits purchaser/account details that are subsequently processed through an acceptance network in the normal manner.

MasterCard and Visa recently announced that they would share a common communications protocol and associated testing requirements to facilitate industry-wide product development and reduce implementation costs. With a common protocol in place, merchants will be able to use a single point-of-sale terminal to support payments from both associations. Although American Express was not mentioned in the agreement, the MasterCard/Visa announcement does not exclude any other party from utilizing the same protocol.

Benefits

For any technology, adoption requires a compelling value proposition for all players in the chain. Payment mechanisms are no different; there are just more participants in the chain.

- **Issuers** will benefit through increased usage and therefore increased fee income. According to a 2002 MasterCard study², 53% of consumers would use “contactless” payments in place of cash if their bank offered the service. Moreover, PayPass pilot results indicate that 80% of the transactions were valued at less than \$25—further evidence that cash will be the primary replacement target.
- **Merchants**, particularly those in high-volume/cash-biased environments—fast-food restaurants, drive-thrus, convenience stores, movie theatres, gas stations, parking garages, mass transit and sports stadiums—will benefit from speed and convenience.

In the 2003 MasterCard pilot in Orlando and Dallas, purchase times were reduced “so substantially as to have a tangible impact on retailers’ ability to support additional transactions and thus potentially increase revenues.” The most significant time savings have been recognized in drive-thru environments, where 12-18 seconds have been shaved off a cash purchase. These results captured merchant attention, and led McDonald’s to agree to accept ‘contactless’ payments in the New York metro area in 2004, with additional locations in 2005. Other merchants like CVS, Sheetz, and Ritz Camera have also announced roll-out plans.

- **Consumers** will benefit from speed and convenience—two of the driving factors that determine consumer payment preferences.³ Maybe just as importantly these days, RFID-enabled payment devices never leave the

² <http://www.mastercard.com>

³ Dove Consulting/American Bankers Association, *2003/2004 Study of Consumer Payment Preferences*.

consumer's hand and therefore should reduce fears that a store clerk might have access to sensitive information.

Challenges

Countering the benefits, RFID-enabled payments are not without their challenges.

- **For issuers**, rolling out an RFID solution can be a costly proposition. Undoubtedly, the cards or key fob carry a higher cost than a traditional mag-stripe card. Some estimate the cost of an RFID card to be as much as three times that of a mag-stripe card. While costs are expected to decline with increased adoption, it still remains a barrier to issuance.
- **For merchants**, acceptance of RFID solutions also requires a significant investment; each reader can cost \$100-\$150. Just as importantly, current RFID solutions are linked to either a credit or debit card, which means that merchants will continue to incur interchange fees.

The Future

RFID-enabled payments are poised to create a major wave of change in the U.S., and in doing so provide a new stage on which to play out some old debates as well as some new opportunities.

- Interchange is certainly an old and continuing debate that will be impacted by RFID growth. Will issuers focus new RFID products on credit, signature debit or PIN debit? Will merchants bias acceptance to lower-cost transaction paths?
- Risk is no longer just the province of banks and card issuers. Recent events and proposed legislation put merchants into the same boat and imply similar compliance requirements (and costs). Although RFID payments won't change the way customer information is stored, it will change the way it reaches that database. And while RFID devices are embedded with encryption software to prevent data theft and 'replay fraud' (capturing the transaction information and replaying it at another terminal), transaction security is largely untested in mass markets. What actions will consumers want merchants to take to ensure that their account information is protected?
- The trend toward more convenient payment devices from paper-based methods (whether check or cash) is undeniable. As new RFID products like Chase's Blink are introduced and gain acceptance, what new products and/or partnerships might we see? It's not too hard to imagine an iPod as a payment device, and with its rapid mass adoption by young consumers around the world.

Since the launch of the Intel® Centrino™ in 2003, every PC manufactured in the world contains wireless technology and many PC owners use it regularly. RFID-enabled payments, if done right—with the right economics, value proposition and brand—may very well follow the same adoption curve.

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