



what's driving

KEY NOTES

- ▶ The transportation industry represents the majority of contactless payment adoption worldwide. As MasterCard and Visa test contactless payment technology in New York and Los Angeles, other cities are jumping on the bandwagon.
- ▶ The next few months should see significant activity in the area of open system payment applications. Applications built around near field communications (NFC) will surface at a faster pace than usual.



contactless

Transportation industry usage, NFC advances, and new technology solutions fuel a big year

By Julie Ritzer Ross

Spurred by large card associations and banks, merchants, and wireless communications operators, overall spending on contactless payment hardware and software should reach \$870 million by 2011, up from a modest \$260 million in 2006, according to ABI Research in New York.

“Initial contactless payment deployments have already shown the ability to speed transactions and capture previously cash-only transactions for financial service networks,” a factor that will foster growth going forward, says Jonathan Collins, a senior analyst at ABI.

In fact, despite the current credit crunch, there are already more than 60 million branded contactless credit and debit cards issued in the United States, according to Mohammad Khan, president and founder of Santa Clara, California-based vendor ViVOtech, Inc. The company expects the number to reach 100 million by the end of

the third quarter, which would represent 25 percent of the branded cards actively used in the United States. ViVOtech has already shipped nearly 500,000 contactless device readers to end users in 33 countries, and Khan believes the contactless payment implementation rate will continue to increase throughout 2009.

Among the factors driving the growth? Adoption of contactless payments by the transportation industry, growth of the NFC (near field communications) infrastructure, and new developments in technology.

Mass Transit Blazes Trails

The transportation industry represents the majority of contactless payment adoption worldwide, the ABI study reveals. And if recent developments are any indication, we can expect more of the same in the near future. As MasterCard and Visa continue to pilot the use of contactless payment technology in New York and Los Angeles,

[COVER STORY]

respectively, other cities are jumping on the bandwagon.

The Utah Transport Authority (UTA) recently engaged MetraTech Corp., a billing and fee settlement provider headquartered in Waltham, Massachusetts, and automated fare collection company ERG Limited of Balcatta, Australia, to develop and implement a new fare collection solution that incorporates contactless payment card acceptance. The solution will enable a variety of smart cards, including contactless credit cards, to be used for fare payment. A pilot test of the system involved buses serving several ski areas in Salt Lake City and offered consumers the option of paying for transportation and ski resort access via contactless and smart card.

In a similar move, the Southeastern Pennsylvania Transportation Authority (SEPTA) issued a request for proposal for a contactless fare collection system. SEPTA plans to award a contract by April of 2009 and has asked bidders to consider what experts consider a challenge on the contactless transportation payment front: In many areas, among them Southeastern Pennsylvania, a significant portion of consumers who rely on public transportation regularly transfer from busses or trains overseen by one authority to those overseen by another agency—but prefer to handle all payments via a single card. SEPTA aims to create a system that is compatible with the system already in place at the Port Authority Transit Corp. (PATCO), operator of commuter trains between Philadelphia and Southern New Jersey, and with NJ Transit, which is in the early stages of its smart card/contactless card acceptance solution.

NFC on the Move

The next few months also should see significant activity in the area of open system payment applications. Sources say more applications built around NFC will surface at a faster pace than what has been the case.

“Explosive growth in the NFC infrastructure, including the development of software and front- and back-end technology, will bring significant commercial rollouts of NFC contactless in the short term,” predicts Khan. “In 2009, there will be millions of units in place; in 2010, tens of millions; and in 2011, hundreds of millions.”

NFC, which employs radio frequency

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—Gerritt Kerkstra, acquirer relations and U.S. PayPass sales, MasterCard

technology to enable secure communication between devices, enables credit, debit, and/or loyalty information to be embedded into cell phones or other handheld devices to create “electronic wallets” that replace fobs or chip-enabled cards to initiate transactions.

“Contactless is poised to go way beyond waving a key fob or chip-enabled card across a reader,” says Gerritt Kerkstra, group head of acquirer relations and U.S. PayPass sales at MasterCard. “NFC will play an important role here.”

Pressure from consumers, rather than innovations from merchants and other end-users (e.g., transportation systems and local parking authorities, to name a few), will fuel the fire, says Brian Kilcourse, managing director of Retail Systems Research in Miami. “Consumers will adopt [NFC] technology; merchants [and others] will have to follow.”

Grocery giant Kroger Corp. is seriously investigating the prospect of NFC payment acceptance. The NFC form of contactless payment is “a natural fit” for merchants, supermarkets among them, because of the time-savings it affords to consumers, said Kroger Chief Technology Officer Jim Scott at last summer’s National Retail Federation (NRF) NRFtech 2008 Leadership Summit. He predicted that most new terminals in the next few years will contain both the traditional swipe and the NFC capability. “If you haven’t already, you should plan it into your next refresh (of store technology),” Scott said. “It’s part of this new mobile environment. Everything is in a person’s phone. That’s why we, as retailers, are focusing on an increasingly broad mobile space.”

In a preliminary move, Kroger partnered with mobile coupon service provider Cellfire, of San Jose, California, and several consumer packaged goods companies to make grocery coupons available via consumers’ cell phones. The service is available to Kroger consumers in Georgia, South Carolina, eastern Tennessee, and Alabama, and includes savings on products from Clorox, ConAgra, Del Monte, General Mills, Kimberly-Clark, and Unilever. To use the service, shoppers register with Cellfire and link their Cellfire account to their Kroger Plus card.

Emerging Innovations

Meanwhile, technology companies continue to develop new solutions in the realm of contactless payments. Last November, ViVOTech launched the ViVOPay Kiosk II, billed as a flexible contactless payment reader for the point-of-sale kiosk, transit turnstile, bus validator, and ticketing markets. ViVOTech says the product certified to work with all major contactless payment programs, thereby eliminating the need for re-certification with card associations and network providers.

The product’s components include a compact controller module and a customer-facing contactless antenna module that allows integration into new customer-facing self-service payment systems. Its configuration is such that it also permits self-service systems of all types to accept transactions from NFC-enabled mobile phones for payment, ticketing, promotional, and coupon redemption applications. System modules are packaged individually, so equipment manufacturers have “complete” flexibility in integrating contactless payment functionality with their particular applications, according to Khan.

Similarly, Tyfone, a mobile banking technology vendor headquartered in Portland, Oregon, has introduced u4ia Secure Memory Card (SMC), a technology that would allow consumers to install payment capabilities in their mobile phones. U4ia consists of an industry standard, GlobalPlatform-compliant multi-application contactless smart card chip and a memory card controller whose Tyfone IP component enables the SMC to work with any device that has a Secure Digital (SD) slot. (SD slots are found on or inside mobile phones, PDAs, digital

cameras, and GPS navigators, for example.) Other elements of u4ia encompass a miniaturized antenna, developed by Tyfone, and flash memory. In addition to the secure memory cards, Tyfone provides to u4ia users a software platform that integrates into card issuers' back office systems and manages the relationship between the client handset, the card, and the issuer's back end systems.

At presstime, Tyfone was planning first-quarter 2009 field tests over the next couple of months with mobile operators, financial institutions, and closed-loop fare management providers, according to Mike Feliciano, senior vice president, business development.

For its part, NCR has incorporated a platform for future NFC applications into its RealPOS contactless payment terminals. "A huge volume of growth in the NFC infrastructure—including the development of software and front- and back-end technology, coupled with consumers' growing expectation to use cell phones for multiple purposes—lends tremendous promise to NFC [as a form of contactless payment]," says Brad Tracy, NCR vice president of retail channel operations. Future work in

the contactless arena will reflect this view, Tracy adds.

In another vein, Visa Inc. is touting the Micro Tag, the smallest available version of its Visa payWave-enabled contactless devices. Designed to attach to a key ring, the Micro Tag can be used with credit, debit, and prepaid accounts and can be manufactured in a variety of shapes and sizes, from flat to three-dimensional. A Visa account number is not required to be embossed or printed on the Micro Tag, adding another layer of security for consumers who tend to set their keychains down in visible places, such as on a check-out counter.

Late last year, U.S. Bancorp distributed more than 4,000 prepaid Visa Micro Tags to its employees to collect additional feedback on design, functionality, and ease of use.

Elsewhere in the contactless landscape, technology provider INSIDE Contactless of Redwood City, California, Cubic Transportation Systems, a vendor of automatic fare collection systems headquartered in San Diego, and Visa have developed a multifunctional contactless payment card that supports both Visa payWave payments and

Cubic's NextPASS fare collection software. The card meets contactless fare media standards established by the American Public Transportation Association. Based on the INSIDE Contactless' MicroPass 4003 chip platform, it can be used to conduct contactless payments on both a retail point-of-sale terminal and a Cubic transit fare collection device.

According to INSIDE, having a resident transit application on a general-purpose payment card means it can be used just like a native transit card. The transit payment system treats it just like a regular transit card and can perform all the normal front-end processing. Because of its intelligence, the transit application on the card can handle highly complex fare schedules based on distance, zones, and time, as well as various schemes for enabling riders to transfer between multiple transit lines.

While contactless likely won't reach its full development potential for several years, ISOs need to be ready and equipped to capture opportunities as they emerge. **TT**

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