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Improving Mobile Payment Security with One-Time Use Token Codes

Putting the security of card data in the consumers' hands could overcome fears of the mobile wallet.

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Although the idea of the mobile wallet is gaining acceptance, consumer adoption may be slowed by fears of fraud.

Twenty-four percent of adults in the United Kingdom said using their smartphone to pay for goods in stores "feels less secure but I'm not sure why," according to a study of 1,000 British citizens by Intersperience. The Cumbria, U.K.-based research and consulting firm specializes in consumer behavior. Overall, 44 percent of survey respondents said a lack of security software for smartphones will keep them from using a mobile wallet.

One security technology that could help ease those fears is tokenized card data. Tokenization means creating a valueless stand-in for something of value. Subway riders, for example, buy tokens or load money on a card, and then complete their transaction using the token. Actual cash or credit card data does not change hands at the point of use. The same thing happens with the tokenization solution. The software creates a random code that is the key to the card data but does not have value. Once the code is used, it expires. There is no value in the code, and there is no value to thieves who steal the code.

Payment Alliance International, a Louisville, Ky.-based payment processor, has announced it will offer card-less ATM withdrawals and POS purchases using the Qwick Codes mobile wallet from MagTek, a Seal Beach, Calif.-based manufacturer of electronic devices for secure transmission of PINs, cards and checks.

The Qwick Codes mobile wallet incorporates one-time use tokenized codes for payment cards that are handled strictly by the consumer using a plug-in card reader

More people are using their smartphones to pay for goods, but security remains a concern. Tokenized card data offers a solution.

for mobile devices. The user swipes the card through the card reader and the app generates a code or multiple codes for use with participating merchants. Transactions can be completed without exposure of the mag-stripe data.

A one-time tokenized code system offers a wide range of benefits for both point-of-sale and ATM spaces, including:

- Security
- Ease of use
- Payment network integration

Security

The mobile device-based tokenization solution addresses one of the top areas of concern for consumers: the payment card leaving their presence. With a solution that uses the familiar app structure and an easy-to-use device, the consumer controls the entire process. This process eliminates someone copying the card in the back room of a restaurant or the cardholder falling prey to skimming devices at the ATM.

Almost all financial institutions and credit card issuers use Track 1 or Track 2 card data. Track 1 and Track 2 card data is the information stored on the magnetic stripe on a credit or debit card; Track 1 data typically contains the user's name, account number and discretionary information, while Track 2 data typically has the account number, PIN offset and other discretionary information. With the Qwick Codes solution, the merchant can accept a payment transaction that uses Track 1 and Track 2 card data and pay the lower card-present transaction fee. The consumer has the peace of mind knowing the transaction is secure and the cardholder data is never stored on the mobile device.

Security benefits

- Consumer never lets go of the card
- Limits can be set on transaction amount
- Can implement an expiration date
- Can set a password

44 percent of (British citizens) said a lack of security software for smartphones will keep them from using a mobile wallet.
Source: Intersperience

With the adoption of chip-and-PIN in many major markets, mag-stripe fraud will become even more focused on the United States. A tokenization solution reduces the exposure of consumer card information when the card is not present during a transaction.

Ease of use

A mobile device-based tokenization solution blends the familiarity that a consumer has with her phone with high security. For MagTek's Qwick Codes solution, for example, the user opens the app, swipes the payment card and enters the transaction amount to complete the transaction and generate a code. Just a few steps are all that is required for a secure transaction in a user interface familiar to the consumer.

For additional security, the user can set limits on the transaction amount, an expiration date and even a password for further authentication. For the Payment Alliance International ATM implementation, for example, the user will enter the token code and PIN.

Consumers will be able to use tokenized codes at participating merchants in any payment space, including online, physical stores and at ATMs. The Qwick Codes system, like other token systems in development, will interface with NFC wireless payments as well as standard self-service terminals. Consumers will have complete control over their card data, which should alleviate some of the trepidation of moving to the mobile wallet.

Payment network integration

One key factor in adopting a tokenized card system is the ease in which it relates to the existing payments infrastructure. For instance, with the Qwick Codes solution from MagTek, the merchant or ATM passes the tokenized code to its payment gateway, network or processor. With Qwick Codes, the gateway, network or processor has a secure SSL channel with Magensa.net, a fraud prevention, detection and advisory service, with digital certificates on both ends of the transaction. Through Magensa.net, the quick code is authenticated and the token is then exchanged for the card swipe data. The card data is inserted into the authorization request message, and is passed through the standard payment infrastructure.

The merchant or ATM receives the data necessary for a secure transaction, and the payment network does as well. The card data is confined to the secure payments channel, with no exposure during the swipe transaction at the POS or ATM.

A tokenized solution is simple to use, and can be used in any payment space.

Because one-time use token codes ease consumers' fears of card fraud, are easy to use and integrate well into the payment network, widespread adoption of the tokenized card data solution could pave the way for faster acceptance of mobile wallet technology by a larger number of consumers.

About the sponsor: *Since 1972, MagTek has been a leading manufacturer of electronic devices and systems for the reliable issuance, reading, transmission and security of cards, checks, PINs and other identification documents. Its products include secure card readers, check scanners, PIN pads and distributed credential issuing systems. These products are used worldwide by financial institutions, retailers, hotels, law enforcement agencies and other organizations to provide secure and efficient electronic payment and identification transactions.*