

# RFID Phone Payment Systems Good to Go

A report by a smart card industry group predicts a strong market for RFID-enabled payment systems using mobile phones, but only if certain issues are resolved.

By Mary Catherine O'Connor

Apr. 21, 2005—Significant opportunities exist today in the U.S. to develop a strong market for RFID-enabled payment systems using mobile phones, according to a report by the [Smart Card Alliance](#).

Cathy Medich, chair of the alliance's Terminal and eTransaction Infrastructure Task Force, which authored the report, says that while the members of the task force are optimistic about the market opportunities, building a robust market for contactless payments using mobile phones will require strong collaboration among the stakeholders: financial institutions, mobile phone carriers and manufacturers and retailers.

"Issuing a mobile phone that has a chip in it that can do payments requires that financial institutions and mobile phone operators work together to get the chip in the phone and then have it personalized so that the consumer can use it as a payment device," she says. "And that requires both of those entities, plus the mobile phone handset manufacturer, to think through the infrastructure that needs to be in place to do that. They'll need to figure out how they'll work together to make it easy to use for the consumer."

Written collaboratively by a Smart Card Alliance task force that includes representatives from American Express, Visa USA, Sony, IBM, and producers of chips and merchant point-of-sale terminals used for contactless payments, the report argues that mobile phones show promise as payment devices in the U.S. in part because more than half of the U.S. population over the age of 18 already have mobile phones and many of them are using the phones to make small transactions such as purchasing ring tones and games. While the report does not include any original market research, it points to a prediction from ABI Research that within five years, 50 percent of all mobile phones will include chips that use near field communication, or NFC.

To date, only a few small pilots in the U.S. have involved mobile phones as contactless payment devices. The report points to a pilot in Dallas, involving MasterCard, Nokia, JPMorgan Chase and AT&T Wireless. For this pilot, which ran from February to October 2003, consumers were issued Nokia phones containing RFID tags from Israeli-based manufacturer OTI. The devices were used with RF-enabled merchant terminals, supplied by Santa Clara, Calif.-based ViVOtech, in restaurants, gas stations and convenience stores. Both merchants and consumers had positive reactions to the program, according to the report.

The report says that most important to the success of contactless payments in the U.S. is that credit card issuers have all settled on a single RF chip standard: ISO/IEC 14443. Because American Express, MasterCard and Visa are already rolling out contactless payment programs for consumers who use cards or key fobs with embedded RFID tags, a number of merchants are upgrading their payment terminals so that they can handle RFID-based transactions. Mobile phones with an embedded RFID tag that complies with the ISO/IEC 18092 near field communication standard will also work with these merchant terminals because 18092 and 14443 are compatible standards, according to the report.

For more than two years, MasterCard, Visa and American Express have been running pilots involving RFID-enabled cards and fobs in the U.S. Initial results of these pilots have been positive, with credit card companies citing a tendency for consumers to purchase more items in the convenience stores and quick-service food outlets when using the payments devices, compared with consumers paying with cash. (See [All CVS Stores to Offer ExpressPay.](#))

Although the report predicts an increase in the use of mobile phones in contactless payments systems in the U.S. in the coming years, it also points to two consumer issues that need to be addressed: ease of use and concerns surrounding privacy.

"The providers of devices enabled for mobile payment at the physical POS must be able to support mobile transactions that are easy to use and provide real convenience," it says. "Consumers need to be able to add and move payment functionality to their mobile phones easily."

While the report notes that "mobile payment scenarios can enhance security and privacy" by encrypting the information transmitted between the phones and terminals, "consumers are showing a heightened awareness of security and privacy issues...and if the perception exists that mobile payment potentially involves loss of privacy, consumers will not accept it."

The report, entitled "Mobile Payments at the Physical Point-of-Sale: Assessing U.S. Market Drivers and Industry Direction," is available for download from the Smart Card Alliance [Web site](#) at no charge to members and government employees. Others must pay a \$145 fee.

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