

Discover Rolling Out RFID Payment Platform

The fourth-largest credit card organization in the United States says it will launch field tests of an RFID-based payment system by year's end.

By Mary Catherine O'Connor

Dec. 14, 2006—By the end of this year, Discover Financial Services, the fourth-largest credit card organization in the United States, will launch field tests of an RFID-based payment system, according to Joby Orlowsky, vice president of marketing for the Discover Network. Tasked with developing products and providing support to merchants, Discover Network is the business arm of Discover Financial Services. Though Orlowsky will not reveal specifics about the tests, he notes that in addition to RFID-enabled credit cards, Discover is also testing RFID payment fobs and cell phones with embedded near-field communication (NFC) modules.

In 2003, the three largest credit card organizations in the United States—MasterCard, Visa and American Express—were all testing and developing RFID-enabled payment platforms based on credit cards with embedded high-frequency RFID inlays compliant with the ISO 14443 standard. Today, banks have issued millions of RFID-enabled MasterCard and Visa cards, while American Express, which issues its own cards, is embedding RFID in a number of its card lines, including its Blue card.

Discover is rolling out its RFID (contactless) payment platform well after the three major U.S. credit card organizations have already done so. Still, says Bruce Cundiff, a research analyst with Javelin Strategy & Research, which advises financial institutions on e-commerce, the company is not late to the game. "[Discover] took a wait-and-see attitude and timed its jump into fray correctly for it," he says, "based on its cardholders and what [kinds of services] cardholders want. The services are coming out in a calculated way."

According to Orlowsky, Discover Networks has worked for the past year and a half to develop the payment protocol that will power the RF-based transactions consumers will make with the cards, fobs and NFC-enabled phones. This payment protocol closely follows the one used by both MasterCard and Visa (which licenses the MasterCard spec), and also closely follows that of American Express.

All protocols are based on the ISO 14443 air-interface protocol, which describes how a high-frequency (HF) interrogator pulls data from an HF inlay over a read range of a few centimeters. The ISO 14443 protocol supports data-encryption tools leveraged by AmEx, Discover, MasterCard and Visa. Each firm, however, uses a slightly different method to secure the data on the inlay (or, in the case of cell phones, the NFC module) and the data transmission between the inlay or module and the reader, which is integrated with point-of-sale terminals.

"We use a lot of the Visa and MasterCard [protocol] because it is the [de facto] industry standard," says Orlowsky. To be too different, he says, could hamper the success of the Discover RFID payment products, because consumers want to be able to use its products the same way they might use American Express, Visa or MasterCard RFID payment products.

Because the RFID payments products will all be using the same air-interface protocol, a merchant will be able to a single payment terminal to accept RFID payments. Manufacturers of these payment terminals must have them certified by each card organization, since each uses a unique security specification that must be installed on the reader embedded in the terminal.

RELATED_ARTICLES In early August, Discover certified several RFID terminals made by Santa Clara, Calif.-based ViVOtech, including the ViVOpay 4000 and ViVOpay 3000, for use with Discover Network's contactless payment application. In late November, Discover announced that it had also certified the Saturn 5000 RFID terminal, from Fort Lee, N.J., firm On Track Innovations. To develop the payment cards and fobs, Discover Network is also working with RFID inlay providers Inside Contactless and Gemalto, as well as card manufacturers Perfect Plastics and CPI Card Group.

Discover is moving into RFID-enabled payments just as that market is headed for explosive growth, according to market research firm ABI Research. In a new report, ABI Research predicts that spending on contactless payments hardware and software will reach \$870 million by 2011, up from just \$260 million in 2006, amounting to a compound annual growth rate of 27 percent. The full report is available to subscribers to ABI's RFID Contactless Payments Research Service.

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