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# Credit Cards Soon to Get a Makeover

By TARA SIEGEL BERNARD

The simple credit card is about to get a makeover.

Next month, Citibank will begin testing a card that has two buttons and tiny lights that allow users to choose at the register whether they want to pay with rewards points or credit, at most any merchant they please.

Other card issuers are testing more newfangled cards, including some that can double as credit and debit cards, and cards with fraud protections baked right into the plastic. One, for instance, shows a portion of the account number only after the cardholder enters a PIN.

The microscopic engine powering the plastic will help breathe new life into a 1950s-era technology — the black magnetic stripe found on the back of the 1.8 billion credit and debit cards circulating in the United States. Much of the world has already moved to using more advanced cards, like the ones in Europe that require a PIN and use a chip instead of a magnetic strip.

Even with the innovations, no one knows how long plastic cards will reign. They may eventually be rendered obsolete by technologies that will transform consumers' cellphones into virtual wallets, and a large number of companies, including Visa, MasterCard and Apple, are developing these. But several card analysts say it will probably take a while before any one technology standard becomes available

across all phones and merchants.

In the meantime, **banks** are hedging their bets. Citi's cards — known as 2G, for second generation — are no thicker and just as flexible as conventional plastic, but they contain a battery with a four-year life, an embedded chip and, of course, the buttons, which took nearly a year and hundreds of thousands of dollars to develop.

“It's a big deal,” said Megan Bramlette, director of research for the Auriemma Consulting Group, a payments industry consultant in New York. “If once a month a consumer can fill up their gas tank for free, and they don't have to do anything except push a button before they swipe their card, that's cool. And that is something that I think will resonate with consumers.”

**Dynamics Inc.**, the company that developed the minicomputers-in-a-card, said that it had more cards in the works and that its bank partners would introduce its electronic cards on their own schedules.

Citi's cards will be tested by a select group of cardholders beginning in November, though some Citi employees have been testing the cards since May. The pilot program will expand as Citi incorporates user feedback. The bank plans to make the cards available on a broader scale in mid to late 2011.

The 2G card will be offered on two of Citi's existing rewards cards, including the **Citi Dividend Platinum Select MasterCard**, whose holders earn 1 percent cash back on all purchases and 2 percent on categories that change seasonally, as well as the **Citi PremierPass Elite**, whose holders generally earn one point for every dollar spent and mile flown.

To pay with points, users press the request-rewards button before swiping the card; the button marked regular credit allows a straight credit transaction.

Pressing the buttons changes the data imprinted on the magnetic stripe, so it still works like conventional plastic and can be swiped through existing card terminals nationwide. At least for now, cardholders need to know how many points they have, and if they don't have enough, the transaction will be processed using credit.

“We’ve developed a proprietary technology that will allow Citi to do the conversion when the transaction comes through,” said Terry O’Neil, executive vice president of Citi Cards. “All they need to do is push that request-rewards button and we take care of everything else for them. They leave the store with the merchandise they selected.”

The cards are going to be most valuable to bigger spenders. The average cardholder spends about \$6,300 a year, according to [The Nilson Report](#), and, on a typical rewards card, users may earn one point for each dollar spent. At one penny a point, that translates into about \$63 in annual rewards. Still, that is enough for a free cup or two of coffee each month.

Citi may yet change its rewards equation or decide that redeeming points at certain locations will yield better returns. “What we want is to get feedback directly from the customers, which will influence how we will roll the cards out,” Mr. O’Neil said. “We want to dig a little deeper on what the right redemption model is.”

American Express recently made its Membership Rewards points [redeemable](#) at Amazon.com, though they are not worth much: one point is equal to seven-tenths of penny that can be spent at the online retailer.

“Creating greater flexibility on how you redeem rewards points has been percolating in the industry for two or three years now,” said David Robertson, publisher of The Nilson Report, an industry newsletter. “The novelty of being first to market is a plus for Citi. But I anticipate that other issuers will have the technology as well.”

The technology that makes the new Citi card possible was created by Jeffrey D. Mullen, the 32-year-old chief executive of Dynamics, an electrical engineer and former patent lawyer who started the company in 2007 while he was working on his master’s degree in business at Carnegie Mellon. Months after he graduated, he secured \$5.7 million in venture capital financing from Adams Capital Management. (Citi initially declined to issue him one of the electronic cards he had created, because he had used his entire

credit line to start the company. He ultimately received one.)

“We are just scratching the surface with what these cards can do with these initial products,” said Mr. Mullen, whose innovation won business plan competitions, as well as **\$1 million in free advertising** at a recent technology conference. “We are trying to be the innovation arm of an industry that has never had one. With this card, which is the baby-step card, you need to acclimate the consumer.”

Another Dynamics card would allow cardholders to have multiple accounts on one card, like a corporate and personal card. The company introduced another card this week, which he said would reduce fraud associated with “skimming,” when thieves steal your account number using a small scanner, but not your physical card.

All the cards, which are being produced by laptop and cellphone manufacturers, were tested by robots to make sure they would hold up for thousands of swipes. They can also withstand the washing machine. Clearly, they cost more to develop than conventional plastic; Mr. Mullen declined to provide specifics. Citi said it had not yet determined whether customers would be required to pay for the cards once officially introduced.

“The U.S. is the last bastion of the magnetic-stripe technology and shows no near-term desire to switch to chip technology,” said Mr. Robertson of The Nilson Report. “So what Dynamics is doing is extending the life of the mag stripe by adding a number of features that you find on chip cards.”

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