

Google wants to turn your smartphone into a wallet

August 10 2011, By Mike Swift

In a Mountain View convenience store, Marc Freed-Finnegan carries a bottle of water up to the cashier, who scans it and announces the price. Freed-Finnegan touches his smartphone to a gray plastic sensor labeled "PayPass," and "Information Sent" appears on his phone's screen, with a MasterCard image and a few digits of his card number.

Freed-Finnegan, who oversees the forthcoming [Google](#) Wallet service that is expected to become available to the public for this first time later this month, has just paid with his phone.

Google Wallet uses a technology called [Near Field Communication](#), short-range communication systems that can transmit secure credit card data within a range of about 1.6 inches, allowing a smartphone to become a virtual credit card or prepaid cash card.

The new Google service, one of several new technologies that aim to turn smartphones into payment devices, will initially be available to a select group - users of a Samsung Nexus S Android phone on the Sprint network - but Google hopes to gradually extend that audience to other phones, [wireless carriers](#) and credit card companies.

The Wallet service ultimately will bundle payments with online discount offers and [loyalty programs](#), so one tap of a consumer's phone at the frozen yogurt store could simultaneously provide a payment, cash in a discount coupon and record the purchase for the store's [customer loyalty](#) point program.

"Most people's wallets are a mess," said Freed-Finnegan. "We're trying to help improve that."

Google Wallet is just one of a wave of new [mobile payment](#) technologies from startups and established companies that are about to give smartphones yet another ability - becoming a virtual billfold or pocketbook as well as a communication and information device.

No one expects the wallet to become extinct anytime soon. But while consumers have long been able to use [mobile apps](#) to buy things online with a phone as they would on a desktop computer, new proximity technologies like NFC will soon allow the phone to step into the role of the credit or debit card, becoming the actual payment tool in bricks-and-mortar stores.

Among the other ventures:

- Isis, a joint venture of AT&T Mobility, T-Mobile USA and Verizon Wireless, says it will launch the first trials of its NFC-powered smartphone payment system in the first half of 2012, with support from Visa, MasterCard, Discover and American Express.

- Square, a San Francisco-based startup launched by Twitter co-founder Jack Dorsey, already provides hardware that allows merchants to use an iPad, iPhone or Android phone to swipe credit cards, as well as a mobile app that lets consumers pay by showing their name and photo to a participating merchant. "We think of what we're doing as reinventing the entire process of buying and selling in the real world," said Keith Rabois, Square's chief operating officer. "We're not a mobile payments company. We're reinventing payments, assuming that everybody is carrying a mobile device."

- Two Silicon Valley startups, Jumio and Naratte, allow users to complete

the equivalent of a credit card swipe by transmitting payment data through the camera of a mobile device in the case of Jumio, or through an inaudible ultrasonic signal from a phone in the case of Naratte's "Zoosh" technology. Last month, eBay spent \$240 million to acquire Zong, a Menlo Park, Calif., company that lets users make purchases and charge them to their wireless phone account.

Despite the surge of new payment technologies made possible by the increasing ubiquity of the smartphone, old payment methods aren't going away. While the day might be coming when you could forget your wallet and get through the day using your phone, it will be awhile, experts say, before you can throw your wallet away altogether.

"Payments change very slowly," said Aaron McPherson, an IDC analyst who follows payment systems. "We're still seeing lots of check usage, and that method is centuries old. Cash is millennia old, and we're still using cash. We're seeing a real blossoming of creativity and all these different payment technologies, but it's way too early to make any kind of prediction about which one will win out."

PayPal says purchases on all kinds of mobile devices using its services, including both proximity technologies like NFC as well as standard Internet-based purchases, are expected to grow tenfold from \$750 million in 2010 to \$7.5 billion in 2013. But the online payments company says it remains agnostic about which proximity technology will win out.

NFC is not a new technology. Some municipal transit agencies already use NFC in reusable fare cards, which allow transit riders to pay their fare by laying the card on a sensor. But earlier experiments using NFC technology for in-store purchases did not gain traction.

If Google is to be successful with NFC this time - and also unify loyalty

and coupon services - experts like McPherson say it will have to bring together an array of partners, including phone manufacturers, wireless carriers, banks, retailers and credit card companies.

Technologies like NFC will also allow consumers to use their phones to gather much information about products while they are in a store, and also to quickly compare prices with online competitors.

"For a lot of these stores, unless they figure out how to get more engaged with consumers, they risk becoming very expensive showcases for online stores," said Laura Chambers, senior director of mobile for PayPal, which is also looking at NFC-based payments. "The mobile device has definitely put more power into the hands of consumers."

Google argues its service will be more secure than a standard [credit card](#) because phone users will have to activate one to two layers of PINs before the actual payment can go through. The service also allows merchants to more easily gather data about their customers by recording their purchases.

With payments, "there is a huge gap between online mobile and the offline world. It's really overdue that there is new technology to make it really simple and secure," said Daniel Mattes, founder and CEO of Mountain View-based Jumio. "The technology is simply ready. It's a great movement, especially for the consumer."

PAYPAL MOBILE PAYMENTS:

-2006: under \$1 million

-2007: \$7 million

-2008: \$25 million

-2009: \$141 million

-2010: \$750 million

-2011: \$3 billion (expected)

-2013: More than \$7.5 billion (expected)

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