ON THE BRINK OF CHANGE

Why mobile payments are set to explode

BY TODD ABLOWITZ

The promise of mobile payments is not a new concept. We've seen early applications for mobile shopping and banking roll out and gain acceptance among consumers. However, recent developments are signaling that widespread adoption of mobile payments may come sooner than we think.

The convergence of different mobile payments types—combined with consumer demand for promotions and offers—is driving the development of compelling new applications and will fuel explosive growth in the market. In fact, it's quite conceivable that technologies like Near Field Communications (NFC) may have a greater impact on society than the Internet did 20 years ago. Consumers with smartphones containing NFC chips can wave their devices past an NFC-enabled terminal to wirelessly pay for goods and receive offers.

Even though mobile payments are in a very early stage of overall evolution, the nexus of the smartphone and innovative technologies like NFC will enable mobile payments to challenge traditional payment methods. In the past few thousand years, currency has shifted only three times—from coins, to paper money, to plastic cards.

That's all about to change.

The impact of mobile phones

The mobile telecommunications industry is a behemoth. Gartner Inc., a research and consulting firm, says there were 1.6 billion mobile phones sold in 2010—a 32% increase over 2009.

The smartphone is gaining traction by providing a user-friendly platform that encourages consumers to become comfortable with using their phone for things like texting, games, photos and browsing the web. According to Gartner, smartphone sales rose 72% in 2010, and in 2011 The Nielsen Co. reported that 79% of smartphone owners are now using mobile apps at least once a day.

It's always technology that drives new behavior and lifestyle change, like the telephone, TV, credit card and Internet have done in the past. The mobile phone is bigger in its reach than any previous technology and adds the combined utility of all these life changing technologies—that's why it's expected to create bigger changes in the next decade than ever seen before and set the stage for rapid mobile payment adoption.

Going mobile now will provide a competitive advantage moving into 2012 and beyond.

The mobile payments market can be divided into five segments—mobile acceptance; remote mobile payments; face-to-face mobile

The mobile phone is the most prolific technology in history

The mobile phone is the only device that over two thirds of the world's population carries.

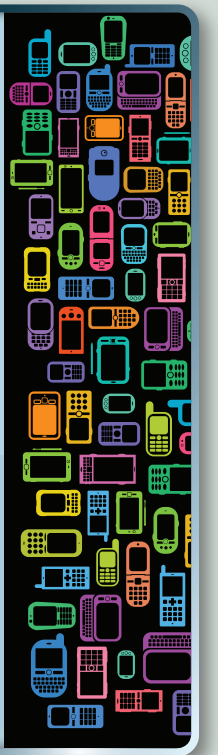
1.6 billion mobile phones were sold in 2010.*
More than total installed base of PCs and a 32% increase over 2009.

Today's phones' processors are more powerful than those in 1999 desktop PCs.

The mobile telecoms industry earned $1 trillion last year:
- Split 80:20 (service revenues:equipment)
- The $800 billion in service revenues breaks down as: around $600 billion voice, $130 billion messaging, $70 billion other.

As big as the total Internet content industry, plus Internet advertising revenues, plus global video gaming revenues, plus Hollywood box office revenues worldwide, plus the global music industry.

*Source: Gartner 2011



payments; mobile remittances; and promotions, coupons, offers and loyalty. Mobile remittances are a growing banking alternative in developing countries, but won't be discussed here.

Mobile acceptance

Mobile acceptance has its roots in the early 1990s when point-of-sale (POS) devices for specific applications, such as flea market and taxi payments, first hit the scene. While wireless POS has been available for 10 years, it's the iPhone that jumpstarted the market.

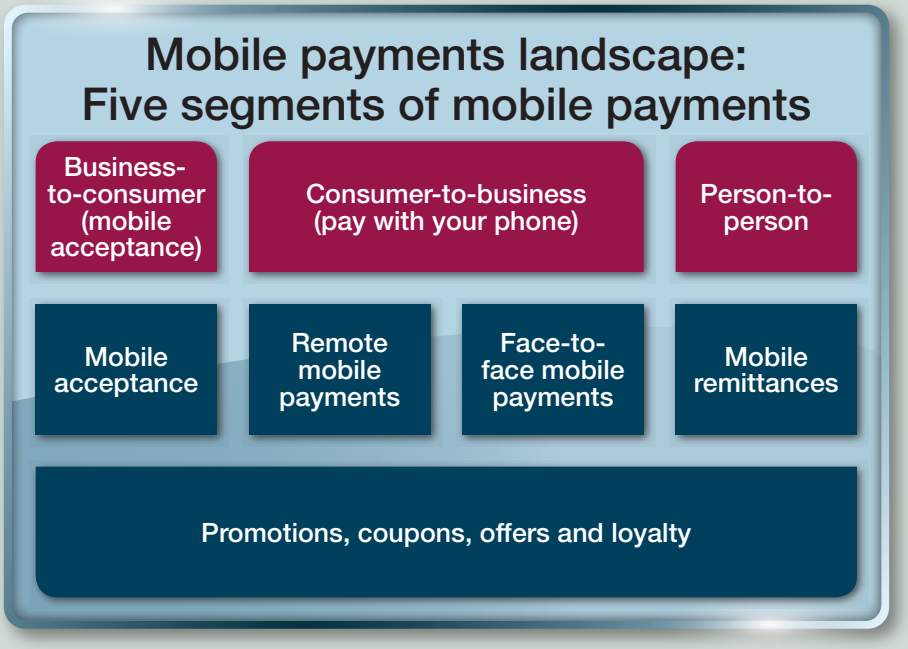
A real turning point was in 2010, when Square Inc. introduced a tiny card reader that attaches to a smartphone to enable card payments—igniting considerable growth. According to industry estimates, Square in 2011 has been processing $4 million in payments daily and expects to process $1 billion in payment volume within a year. Square also received an infusion of $100 million in new funding, pegging its value at $1.6 billion in July 2011, up from $240 million in January 2011. This type of payment technology is game-changing, just as PayPal was in the early 2000s.

Although security questions about mobile POS devices were raised when the PCI Security Standards Council stopped approving them (and eventually delisted all devices in January 2011), the announced addition of encryption—and a timely investment in Square by Visa in April 2011—has helped address security concerns.

Remote mobile payments

The next category, remote mobile payments, where consumers buy goods but don't interact in person with a merchant, includes three payment types, each with distinct pros and cons.

- **Carrier billing:** Consumers pay a phone carrier for purchases of goods such as ringtones, games or text donations. This model is good for low-cost, virtual items, but not practical for typical merchants due to fees ranging from 15% to as much as 50% of the sale.
- **Card-based billing:** Consumers enter their credit or debit card number into the phone to purchase items like books or movie tickets. The benefits of this model include lower merchant costs, fast funding and no need for consumer registration. The downside is that entering card numbers on a mobile phone is time-consuming and creates perceived security concerns.
- **Register-and-pay billing:** Consumers register payment information with companies like iTunes or PayPal and then have a user name and password to purchase goods. This model provides payment flexibility and is easy for existing users, but it requires a lengthy registration process and can be expensive for merchants since at least one additional player gets a portion of the transaction profit.



Face-to-face mobile payments

In the third category, face-to-face mobile payments are POS-centered and include promising technologies such as bar code scanning and NFC. There are already innovative applications of bar code scanning from companies like Starbucks, which has an app that enables its customers to use smartphones to pay for drinks by scanning a bar code at the point of sale. The app adjusts the balance and keeps a running total of the account.

This model has great potential for closed loop systems because it's relatively easy to deploy. An example of a closed loop system would be Starbucks' mobile payments, where Starbucks issues a bar code for a smartphone user and the company handles all aspects of the payment process. However, many experts are concerned that bar code scanning may not be scalable for open systems, as it poses too many security risks and users have reported problems with consistent bar code readings due to issues like dim smartphone screens. An open system deals with multiple payment cards and multiple merchants, which presents the challenges of ensuring interoperability and tight security.

A very exciting technology in face-to-face mobile payments is NFC, a short-range wireless connectivity standard that uses a chip in a phone to enable communication between devices when they are near each other. NFC made a big splash in the U.S. with last year's announcement of Isis (an NFC-based mobile payment joint

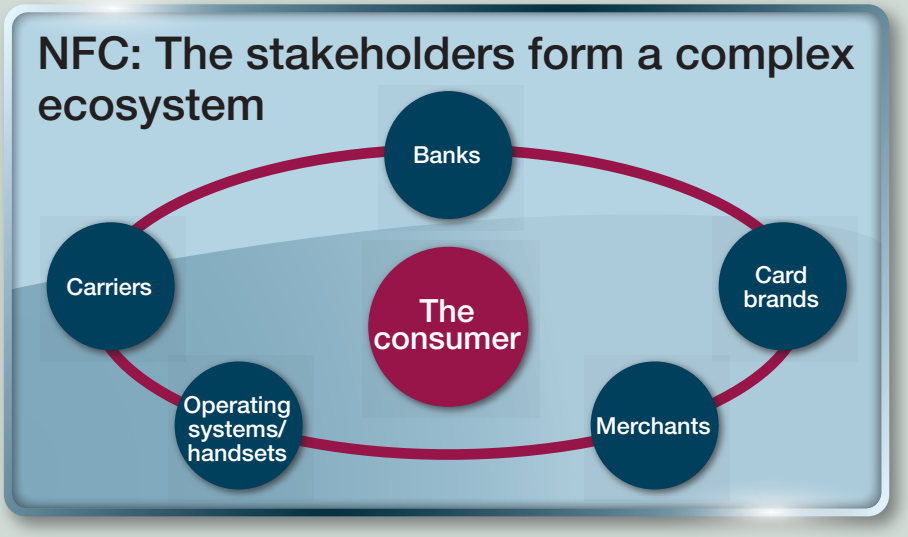
venture formed by AT&T, T-Mobile and Verizon) and this year's launch of Google Wallet. The Google Wallet is a smartphone application that stores virtual versions of a consumer's plastic cards on their phone. Users simply tap their phone on a merchant reader to wirelessly pay and redeem offers.

What makes Google Wallet so compelling is the focus on offers and discounts, which now gives the consumer a valid reason to use a phone instead of the very familiar magnetic stripe payment card; this has the potential for driving mass adoption. In addition, a host of merchants, including popular brands like Subway, Walgreens, Radio Shack, Bloomingdales and Peet's Coffee, have already announced support for Google Wallet with actual launches in major cities already underway.

Google Wallet includes the entry of a PIN on each transaction for security, which presents some pros and cons. On the one hand, consumers are highly concerned about security. In fact, it's one of the first topics the average person asks about when introduced to mobile payments. On the other hand, consumers historically have been reluctant to adopt stronger security measures if those measures change the convenience of the overall payments experience. The added step of entering a PIN to improve security perceptions may unintentionally cause consumers to wonder how it's better than swiping their card.

Some consumers want security above all, but that's a small percentage once a product has been well explained and properly protected. Some want savings at all costs. But the bottom line is that most consumers are interested in convenience, provided they are protected and achieve good value.

Overall, there are still a few sticking points with NFC. The biggest challenge that could slow adoption is that NFC requires a complex ecosystem including carriers, banks, smartphone manufacturers, card brands and merchants—more players than with traditional card payments—who all want a piece of the profit. Ultimately, it's the merchants that bear the associated costs of deploying readers. As an important stakeholder, they may be reluctant to adopt NFC until they are sure their financial needs will be met.



Each stakeholder has underlying strengths and is battling for position in the market.

▶ **Carriers,** like Sprint and Verizon, are very good at delivering new products and services to customers and have control of the mobile phone's SIM user identification card, which can drive security and potentially decide who will be on a wallet.

▶ **Smartphone manufacturers,** like Apple and Research in Motion, are very popular consumer brands that have a loyal, engaged customer base. In addition, they control the phone experience and can provide compelling offers to their customers.

▶ **Card brands,** like Visa and MasterCard, are very familiar with payments, are highly trusted by consumers, and have a large, established merchant network. They've done a lot of testing of payment networks and provide a ubiquitous payment experience. However, it's difficult for them to get a chip on the phone without collaboration with one of the other players.

▶ **Banks** are trusted and have a huge existing customer base as well as deep consumer payments expertise, but they are not experienced at getting the required hardware into consumers' hands.

This sets the stage for a momentous battle for the key position in NFC mobile payments. Ultimately the losers will cut deals with the winners in order to stay in the game. The biggest risk to rapid NFC adoption is the battle for territory, which could delay roll-out. While the first NFC phone—Google's Nexus S—is already available, mass adoption will rely on many pieces falling into place.

Promotions, coupons, loyalty

The final category of mobile payments is promotions, coupons, offers and loyalty, which is a key driver for growth and acceptance in all categories of mobile payments. The growing popularity of "daily deal" web sites like Groupon and LivingSocial, which feature deeply discounted offers, has sparked enthusiastic demand for online promotions and translates well to mobile. Daily deals offer access to a large customer base and drive visits, so despite arguably harsh economics (for example, on a Groupon deal such as $50 of food for $25, the merchant

only collects $12.50, with the other $12.50 going to Groupon) merchants are clamoring to participate.

Location-based services on the mobile handset allow consumers to take advantage of promotional offers on the go. "Check-in" companies like Foursquare and Facebook, as well as content-specific sites such as OpenTable and Yelp, are leveraging the combined power of mobile to drive promotions and offers.

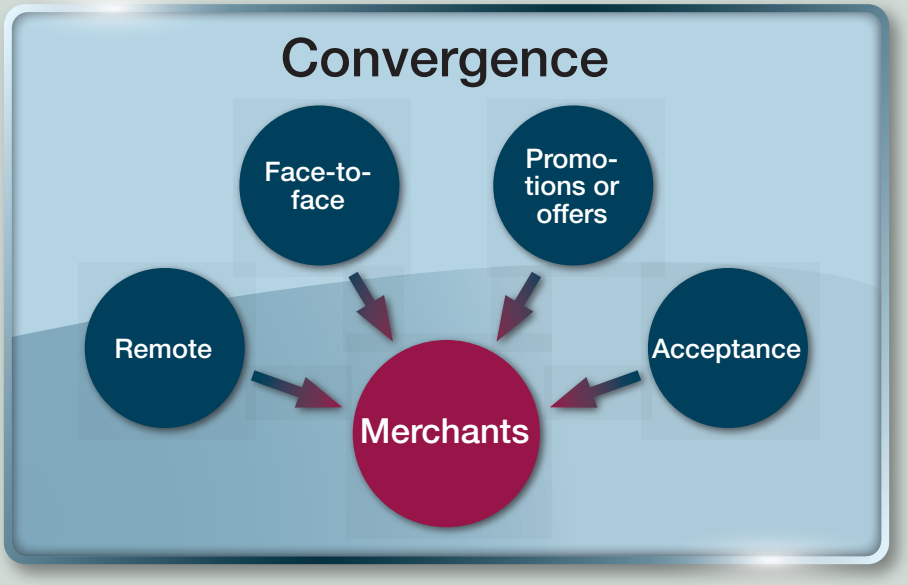
Google Offers, like Groupon, enables a subscriber to receive deals from local businesses, but it is particularly compelling when combined with the Google Wallet. Google's strong database, mapping prowess and AdWords business create enormous opportunities for this new service.

The Holy Grail in this space is redemption of offers and coupons at the point of sale. Instant POS redemption is expected to attract consumers to mobile payments, and ultimately cause the shift from leather to mobile wallets.

It's become clear that 2011 is the year for convergence where various mobile payments technologies and accelerating innovations are combining to fuel early consumer adoption and ignite the market. Some great recent examples include:

▶ **AisleBuyer.** AisleBuyer offers a mobile shopping app that uses a smartphone to enable a world where waiting in line does not exist. A shopper simply finds a product and uses his or her mobile phone to scan the bar code, which instantly provides product information and an enhanced shopping experience. Used at a bricks-and-mortar retailer, the user builds a shopping cart and completes a self-checkout by initiating payment from the phone. In addition, the retailer can use the shopper's history to provide offers on favorite products. It's a great example of how the convergence of face-to-face mobile payments and remote mobile payments with offers and promotions provides a compelling solution for mobile users.


Todd Ablowitz is president of Double Diamond Group LLC, a payments consulting firm.



▶ **Google SingleTap.** Google SingleTap technology, which combines Google Wallet and Google Offers, enables a consumer to redeem targeted promotions directly at the point of sale with one tap of their phone. This powerful convergence of face-to-face mobile payments with promotions and loyalty has the potential to shift consumer behavior from plastic to mobile payments at the point of sale.

▶ **Square Card Case.** Square is now offering Card Case, a consumer app where users create tabs to pay merchants using their smartphones. Users open the Card Case app on their phone and create virtual tabs that connect them to the store's Square app. At checkout, users ask to pay with their Square Card Case tab. The merchant sees the customer's name in the tab list and selects it to initiate a payment. Consumers also have the ability to view menus and daily specials, e-mail receipts, and location-based directories. Here the convergence of mobile acceptance, face-to-face payments and promotions provides another compelling reason for consumers to ditch plastic.

We may be early in the overall mobile payments cycle, but it's just the tip of the iceberg. This continuing trend of convergence along with still unmet consumer needs will inspire the necessary innovations to incite acceptance by the average mobile phone user. Remaining barriers will be addressed and explosive growth will start to take place across the market.

Forrester Research says the 2012 Olympics in London will be the first major event where mobile payments systems using NFC will be on display in a big way. The Yankee Group forecasts the total value of global mobile payment transactions will rise to $984 billion in 2014, up from $162 billion in 2010.

It's only a matter of time before paying for a candy bar or redeeming a coupon at the deli using a smartphone is second nature. ◆