

# MOBILE PAYMENT—Stepping into Uncharted Territory

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## Mobile Payment—Stepping into Uncharted Territory

The mobile payment industry is building on the success of e-commerce and the rising adoption of smartphones to become a significant force in the U.S. Already 80% of mobile phone users have access to the mobile web, so consumers are getting accustomed to making financial transactions on mobile devices. Consumers are buying apps, music, movies, and books on mobile devices today, so the idea of using a mobile phone as a wallet or to transfer tender is no longer far-fetched.

Mobile payment technologies vary in how they work, but they share a common attribute: they are a gateway between merchants and consumers and are thus very valuable.



80% of mobile phone users report having a web browser on their handset



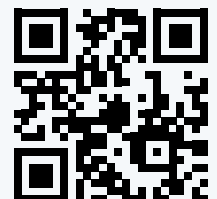
50% of U.S. broadband households own a smartphone

**In the report *Mobile Payment: Technologies and Business Models*, Parks Associates estimates that mobile payment solutions processed over \$100 million in transactions in 2011, a figure which will grow into the hundreds of billions by 2015.**



The potential for mobile payment to disrupt how consumers shop, pay for goods, and engage with advertising means this space is ripe for the emergence of new players as well as new opportunities for established players.

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## Market Segmentation and Key Players

Parks Associates defines a mobile payment, or mPayment, as the purchase of a good or service for which a mobile phone is used in the payment process. The goods or services received may be physical, digital, or virtual. A mobile payment may be made in-person, e.g., at the checkout counter in a retail store, or remotely, using mobile broadband access or cellular network infrastructure.

**IN-PERSON MOBILE PAYMENTS**, sometimes called “proximity payments,” are mobile payments made at the retail point-of-sale (POS). One way to process such a transaction is through Near Field Communications (NFC), a standards-based radio communication technology requiring only a touch or a wave between two objects to transfer information.

Though NFC adoption in today’s U.S. market is extremely low, there was solid movement in 2011 towards establishing NFC as a standard feature on smartphones. Many major OEMs released or announced NFC-enabled handsets. Additionally, key players in the payments industry have issued incentives to

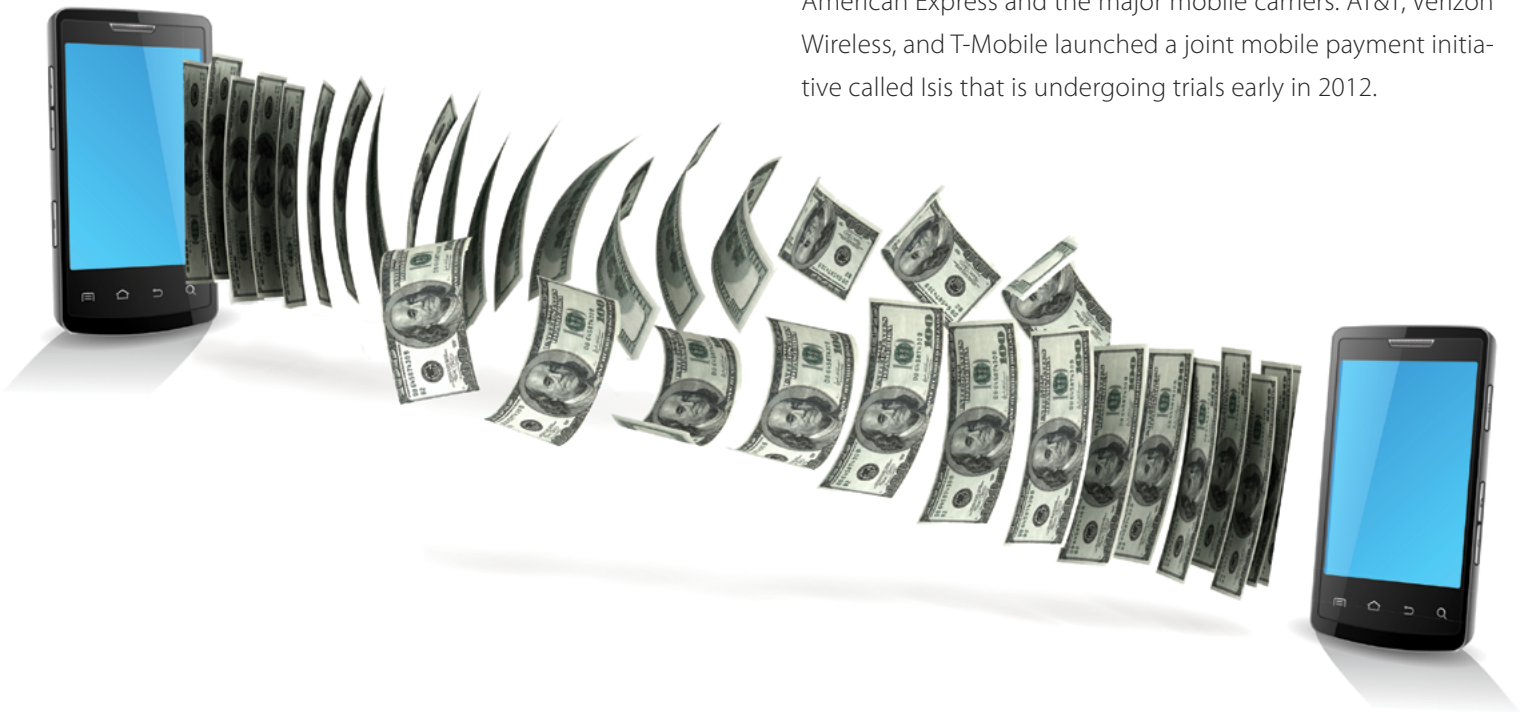
merchants to adopt payment terminals capable of accepting NFC payments in the near future, leading Parks Associates to project NFC adoption will rise sharply after 2013.

But hardware deployment is only one piece of the retail mobile payments puzzle.

**MOBILE WALLETS** are software applications that sit on consumers’ mobile phones and store information for multiple payment accounts, coupon offers, and loyalty programs. These software applications allow consumers access to this information to purchase goods and pay for services at retail stores and online.

They function as the center of the user’s mobile payment experience; therefore, multiple players are jockeying for position to provide this software. Google is an early leader in this space, having released its Google Wallet application in mid-2011 for the few NFC-enabled Android handsets on market.

Other major players from various industries are not far behind, including payment network operators like Visa and American Express and the major mobile carriers. AT&T, Verizon Wireless, and T-Mobile launched a joint mobile payment initiative called Isis that is undergoing trials early in 2012.



**REMOTE MOBILE PAYMENTS** are transactions that involve **legal tender of payment**, e.g., credit/debit card, carrier billing, or third-party billing, for physical and digital goods and services purchased on mobile phones without requiring buyers to be physically present at a store. Compared to in-person mobile payments, some remote mobile payment methods are more established and have been in use for much longer. For instance, mobile subscribers have long had the ability to charge digital goods such as ringtones to their mobile bills through premium SMS or a WAP site.

**Early mobile payment solutions target specific use cases.**

**In the future, successful mobile wallets will enable a range of in-person & remote payment options.**

Smartphone owners also can use their web browsers to make online purchases on their mobile devices, just as they would on a PC, but entering credit card or banking information on a small touch screen is cumbersome and presents a barrier to adoption.

**DIGITAL WALLETS FOR REMOTE E-COMMERCE** on mobile phones are now available to address this need, most notably PayPal Mobile. Similar to mobile wallets intended for retail use with NFC, digital wallets designed for remote payments securely store consumers' payment information and provide easy access during checkout. Eventually, mobile wallets will offer both in-person and remote payment options, plus additional financial services such as person-to-person funds transfer, bill pay, mobile minute top-up, and more. In today's market, however, most mobile wallet developers are introducing their applications to consumers with a focus on a specific segment of the mobile payment market.

**Direct carrier billing** presents another remote mobile payment solution. Through this method, a buyer enters a phone number into the checkout page of a retailer's mobile website, the billing system identifies the carrier and verifies the mobile account, and the purchase amount is charged to the consumer's monthly phone bill. While this method is attractive to carriers as a new revenue stream, they are wary of acting as *de facto* credit providers. They typically cap purchases made through direct carrier billing to \$50 per subscriber per month, clearly limiting its use cases.

**PAYMENT ACCEPTANCE ON MOBILE DEVICES** is another growing mPayment trend. Instead of using mobile handsets to make payments, new mobile accessories and applications are enabling mobile device owners and merchants to use mobile handsets to accept payments. The mobile phone or tablet essentially becomes the POS.

The top-selling peripherals enabling mobile payments are **magnetic stripe readers** that plug into the audio jack of a smartphone. Square is the clear leader in this space, with over one million merchants accepting payments on mobile devices using the company's accessories.



Image courtesy of Square  
[squareup.com/news](http://squareup.com/news)

Typically, mobile payment acceptance solutions are targeted at micro-merchants and unacquired small and medium businesses (i.e., SMBs that do not accept credit or debit cards). The potential reach of this market is enormous as only an estimated 30% of merchants in the U.S. currently accept payment cards, leaving about 27 million U.S. merchants unacquired. Overall, this market is shaping up to be the most dynamic mobile payment space in the U.S. in the short term.

**With only 30% of U.S. merchants currently accepting payment cards, the market for cheap, transparent, and easy-to-use mobile payment acceptance solutions is enormous.**

The need for mobile payment acceptance among unacquired micro-merchants and SMBs is immediate, and the use cases are clear. Consumers will benefit from the convenience of making card payments at more locations, and payment networks and banks will benefit from increased overall payment card use. Micro-merchants and unacquired SMBs will benefit from being able to accept payment cards. Acquired SMBs and large B&M retailers will benefit from the growing range of mobile POS systems and the pressure on existing players to simplify transaction fees.

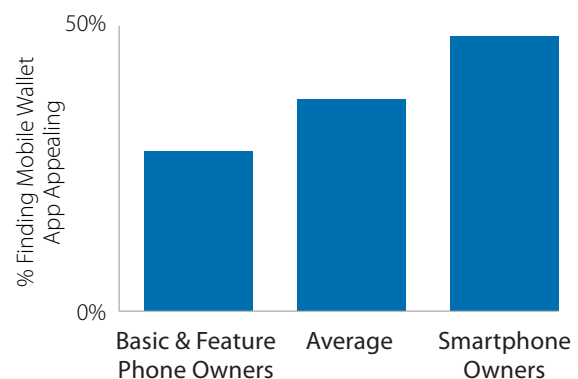
## The Consumer Perspective

According to Parks Associates' consumer study *Consumers and Their Mobile Devices*, 37% of mobile phone owners find a mobile wallet concept appealing, though appeal is higher among younger respondents and smartphone owners.

**The most significant driver for the mobile payment app is the reduction in the number of credit cards that consumers must carry in their wallet.**

They also respond positively to the ability to easily organize receipts and the overall reduction in the need to carry cash.

### Appeal of Mobile Wallet Application (U.S. Mobile Phone Owners)



Source: *Consumers and Their Mobile Devices* | © Parks Associates

Still, many consumers are concerned about the security of their personal and financial information in the event their phone gets lost or stolen. Brands in this space must work to gain consumers' trust. Parks Associates' research reveals that consumers would most trust payment networks (Visa/MasterCard) to provide a mobile wallet application, followed by their mobile carriers. Mobile OS developers ranked low in consumer trust. Even though Google leads this space in being first-to-market with its Google Wallet initiative, few mobile phone users select an OS developer as the most trusted payment solution provider.

## Market Growth Projections

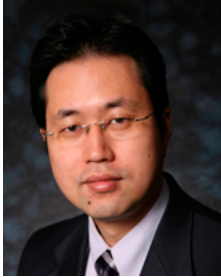
The mobile payment space is not one market but several. Each approach to providing consumers and merchants with mobile-enabled payment options must be analyzed on its own terms. The types of players involved and the drivers and barriers are unique to each case.

Mobile Payment Market Growth Prospects and Catalysts (U.S.)				
	GROWTH PROSPECTS 2012	GROWTH PROSPECTS 2015	POTENTIAL MARKET LEADERS	
IN-PERSON	<b>Mobile Barcode Apps</b>	High growth in niche markets for small-value transactions	Expanded presence but remain niche Loyalty program main merchant attraction	<ul style="list-style-type: none"> <li>National retail chains with loyal customer bases (Starbucks, Barnes &amp; Noble)</li> </ul>
	<b>NFC Mobile Wallet</b>	Slow adoption due to limited NFC-enabled phones and POS equipment	Broad adoption driven by convenience and merchant incentives	<ul style="list-style-type: none"> <li>Google</li> <li>Isis</li> <li>Visa</li> <li>PayPal</li> </ul>
	<b>PSMS/WAP Billing</b>	Deceleration of growth due to app store competition	Decline in users and total value processed	<ul style="list-style-type: none"> <li>mBlox</li> <li>Sybase 365</li> <li>OpenMarket</li> </ul>
REMOTE	<b>Direct Carrier Billing</b>	Slow ramp-up due to limited carrier presence in mCommerce for physical goods	Growth accelerates to offset decline in PSMS/WAP billing	<ul style="list-style-type: none"> <li>Boku</li> <li>Bango</li> <li>MoPay</li> </ul>
	<b>Digital Wallet using Mobile Internet</b>	Broadly available for digital content purchases, niche for virtual goods	Solid growth for physical goods Large user base but low transaction value for digital goods	<ul style="list-style-type: none"> <li>Google</li> <li>Apple</li> <li>Facebook</li> <li>PayPal</li> </ul>

By taking a solution-specific approach, Parks Associates analysts are able to provide a clearer picture of the near- and long-term growth prospects of the multiple markets covered by the mobile payments umbrella. Armed with this knowledge, Parks Associates analysts provide forecasts of NFC handset adoption, mobile payment users, and mobile payment transaction values by technology in the report *Mobile Payment: Technologies and Business Models*.

With promises of convenience and reduced payment friction for consumers, increased in-store and online sales for merchants, the potential for value-added services for carriers, increased card usage for payment networks, and higher profits for handset manufacturers, the value proposition for mobile payments is clear. The more difficult task is determining the mobile payment solutions that will prove sustainable and the companies best suited to provide such solutions.

## About the Authors



### HARRY WANG

Harry Wang studies the consumer electronics and entertainment service industries with a focus on portable CE hardware, software, and associated applications and services. He is also the lead analyst for Parks Associates' digital health

research program. Harry has presented his research in numerous industry events including CES, Digital Hollywood, Photo Marketing Association Annual Show, American Telemedicine Association Annual Show, World Health Congress, and Parks Associates' CONNECTIONS™ conferences.

Harry earned his MS degree in marketing research from the University of Texas at Arlington. He also holds an MBA degree in finance from Texas Christian University and a BA degree in international business from Guangdong University of Foreign Studies, P.R. China.

**INDUSTRY EXPERTISE:** Digital Health Products and Services, Portable and Mobile Access Platforms and Applications, Digital Imaging Products and Services



### JENNIFER KENT

Jennifer Kent is part of the Digital Health and Mobile Product research team. She studies mobile industry trends including wireless carrier strategies, next-generation networking, and mobile consumer devices. Her digital health research focuses

on digital health records and devices, fitness and wellness applications, and mobile healthcare trends. Since joining Parks Associates in 2009, Jennifer has also worked on the consumer research team, analyzing consumer data related to various areas of the digital home and consumer electronics industries.

Jennifer earned her BA in politics from the Catholic University of America in Washington, D.C., and her MA in church-state studies from Baylor University in Waco, TX. She is currently a doctoral candidate at Baylor University for a PhD in Religion, Politics & Society.

**INDUSTRY EXPERTISE:** Digital Health Products and Services, Portable and Mobile Access Platforms and Applications

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The company's expertise includes new media, digital entertainment and gaming, home networks, Internet and television services, digital health, mobile applications and services, consumer electronics, energy management, and home control systems and security.

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