



Payments and mobile devices merge to offer speed, ease and a big 'wow'

Finally, Randy and Rosie Atkinson are speaking the same language. And texting it, too.

Although almost four decades separate them, father and teenage daughter have a bond: their cell phones.

"I keep it with me all the time," says Randy, 53.

"I never leave home on purpose without it," 15-year-old Rosie says.

Both talk on their cell phones easily more than 1,000 minutes a month, "which sounds just ridiculous, I know," Randy says. He discusses business; she chats socially.

Rosie's phone is slightly more supped up. She has special ringtones, can access the Internet and is able to snap pictures, among other technologies that admittedly baffle her dad.

Given the option, both would happily go out and about with their phones—and just their phones—leaving cash and payment cards behind. They agree it would be convenient and pretty cool to make purchases just by waving their cell phone over a scanner at a cash register.

"That's extremely appealing," Randy says. "It's just less stuff to keep track of," says Rosie.

This could be a possibility in their hometown of Oklahoma City and elsewhere around the country as mobile devices become the latest way to make purchases at convenience stores, fast-food restaurants, cinemas, stadiums and public transportation, among other places.

"The use of cell phones or other mobile devices as a payment method and as a means to bank online is becoming a realistic option for consumers in this country," says Terri Bradford, a Payments System Research specialist with the Federal Reserve Bank of Kansas City.

Bradford recently examined mobile-phone payments and banking, including growth prospects, available technologies and entrance in the market.

It already has been adopted in other parts of the world, such as Japan, where one wireless network sold these services to more than 19 million subscribers. Widespread adoption in the United States may not be far off, say credit card companies, wireless networks and

Calling in ca\$h



financial institutions, on the heels of successful consumer trials in New York, Boston, Dallas and Atlanta.

“Soon, instead of choosing between paper and plastic when making a payment,” Bradford says, “the phone may be a realistic option as well.”

Wallet phone

Peter Wakim can hardly pay for a cup of coffee without causing a buzz. Understandably, making a purchase with a flash of his cell phone does have quite the “wow factor,” he says.

“People behind me (in line) wouldn’t let me get out of McDonald’s,” Wakim says. “Everyone who sees it—very amazed.”

Wakim, director of Corporate Venturing at Nokia, has been using his company’s latest product in lieu of cash or cards around Boston, where he lives and works.

The Nokia phone has the same look and features as other cell phones, but is equipped

JPMorgan Chase, which also deploys the contactless card called blink, launched a mobile payments trial in late 2005. A small number of Atlanta Thrashers and Hawks season ticket holders, who also have Chase-issued Visa credit card accounts and AT&T (then Cingular) Wireless, could make mobile payments at certain concession stands throughout the arena. Participants said they would like to use mobile devices for paying at other locations for purchases of all sizes.

In California, Visa is now testing mobile payment coupons and rewards delivered via text message, graphic and bar codes to consumers’ mobile devices.

Other companies, such as Firethorn LLC, recently have entered the market as a facilitator for banks to provide mobile phone services to their customers. Obopay, launched in 2005, utilizes several technologies to conduct mobile payments. Users establish their accounts online for a prepaid MasterCard and PIN, and then

“ **A number of forces are at work suggesting mobile phone payments may be poised for growth in this country.** ”

with technology similar to contactless cards and keytags that allow authorized users to make small payments at participating merchants. This particular phone should be available to consumers this year for about \$340.

Both merchants and consumers benefit from the convenience, efficiency and speed of this payment method. Mobile device payment also benefits financial institutions and credit card networks as users transition from cash to debit or credit payments. For wireless networks, mobile payment is the latest in the list of consumers’ must-have features.

Nokia is just one early-entrant mobile payment provider, along with financial institutions, credit card networks and bill pay companies—many of which are partnering to get consumers to reach for their phones instead of their wallets.

are able to send or request money, and check account status and history via their phones.

PayPal Mobile, which allows users to make payments or send money from their PayPal account, was introduced earlier this year. Users can either text payment information directly to a recipient or call the PayPal automated system. Also offered is “text to buy,” where users text the item code to a number shown. PayPal then calls the user to request the PIN for verification and ships the item.

Right time

“A number of forces are at work suggesting mobile phone payments may be poised for growth in this country,” Bradford says, citing the rising number of mobile devices, increasing consumer willingness to adopt new payment methods, surging use of payment cards and expanding choice of service providers.

ROSIE ATKINSON'S No. 1 accessory is her cell phone. Both the teen and her father, Randy, are eager for more capabilities on their phones, such as using them as a payment method and leaving their cash and cards at home.

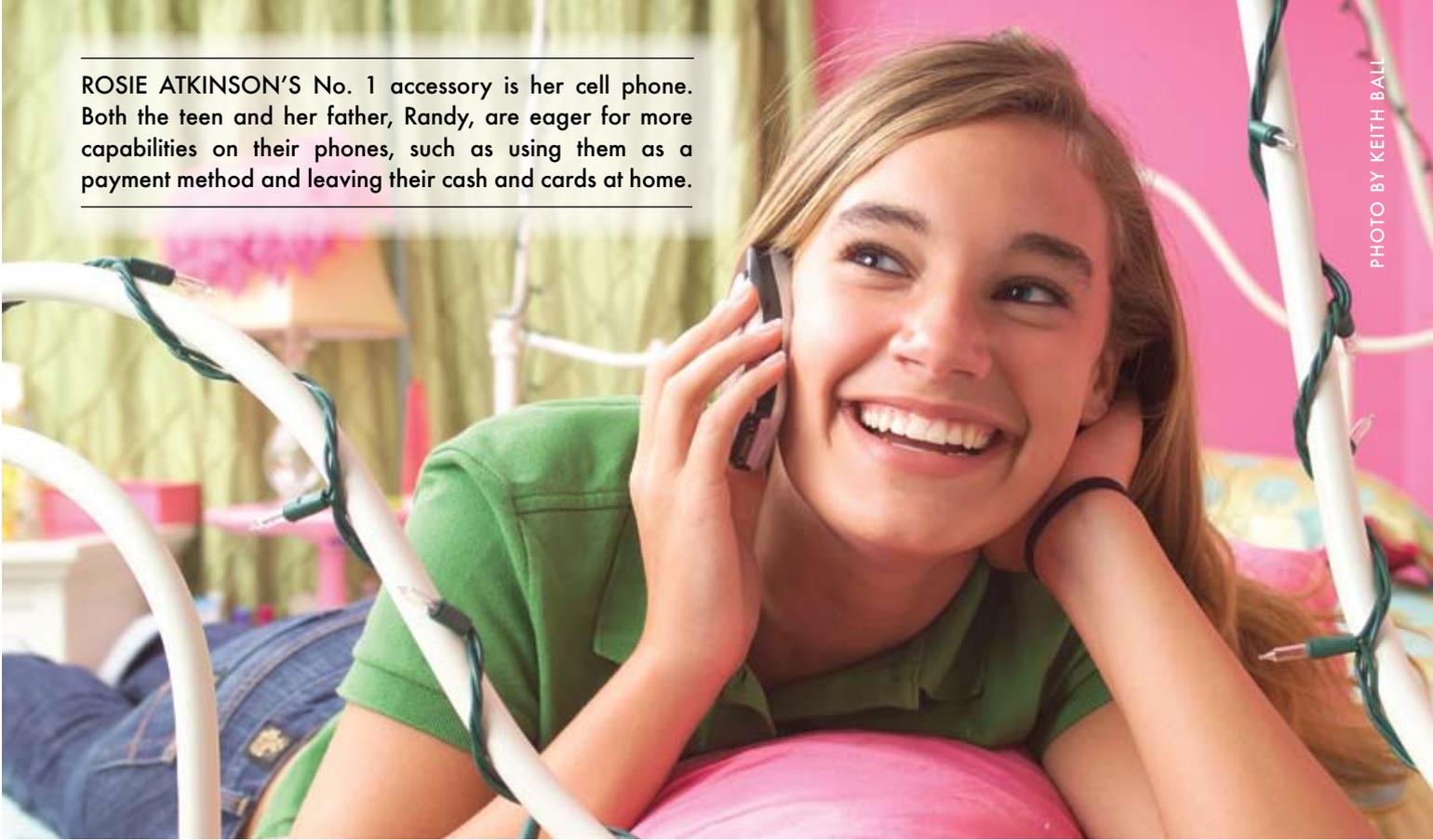


PHOTO BY KEITH BALL

Currently, there are more than 200 million wireless subscribers in the United States, which means three-quarters of the country's total population owns some type of mobile device, whether a phone, BlackBerry or PDA.

According to a Visa survey:

- More than half of consumers have their mobile phones with them at least 75 percent of the time.
- The average consumer is twice as likely to carry a mobile phone as cash.
- The average consumer 18 to 34 years old is four times as likely to carry a mobile phone as cash.

It's no wonder it seems everyone has a mobile phone. They are now used for more than just making and receiving calls. Many phones provide access to the Internet, music, games and text messaging. They double as cameras, iPods and computers.

Cell phones are people's "door to the world," says Illieva Ageenko, director of emerging applications for Wachovia bank.

"Everybody has a cellular phone," Ageenko

says. "They have technology in their hands."

For this reason, the financial institution recently launched Wachovia Mobile, its first phase of wireless retail banking for online customers to access account information, such as checking balances and transferring funds, through Internet-enabled mobile devices.

Ageenko likens the consumer demand and subsequent use of mobile device banking to that of online banking. Consumers' needs simply are evolving beyond brick-and-mortar banking.

Consumers have become more familiar with making payments and accessing financial information in new ways, Bradford says. Sixty-three million adult Americans now bank online, according to a Pew Internet and American Life Project poll. PayPal reports more than 100 million person-to-person online payment accounts. And, contactless payments—debit and credit payment methods in devices waved in front of a payment terminal—are on the rise.

"It's entirely conceivable that consumers

may be ready to adopt mobile phones as a way to access payment and financial information, too,” Bradford says.

Consumers are also increasingly using credit and, even more so, debit cards for lower-dollar transactions. This may further encourage mobile phone payments, as it has with contactless payments devices. Research shows contactless users reportedly like the devices and would use them more if they were more widely available.

“Speed and convenience are important for both consumers and merchants,” Bradford says. “Mobile payment technology could make such transactions even quicker.”

Networks are offering incentives to encourage low-dollar merchants to accept cards, and consumers are increasingly using plastic to make payments everywhere from the grocery store to the fast-food drive-thru.

Visa believes this payment method could “absolutely” be used as a substitute for cash,

says Pam Zuercher, vice president of product innovation and coordination.

“The time is right for mobile payments,” Zuercher says, “and consumers everywhere will benefit from a powerful new payment option that provides more convenience, more security, more flexibility and more control, while at the same time simplifying their lives by allowing them to turn their phones into a wallet.”

Technology and security

There are several technologies available for mobile phone payment and banking, including:

- NFC (near field communication): a short-range wireless connectivity technology that evolved from a combination of existing contactless identification and interconnection technologies. NFC-based mobile payments may experience acceptance, and therefore growth, related to payment terminals already deployed for use with contactless cards.
- SMS (short message service): exists on most mobile phones; allows users to receive and send short text messages to other mobile phones.
- WAP (wireless application protocol): an open, international standard for applications that use wireless communication; primarily used to enable Web access from mobile devices.
- Application downloads: use a mobile device’s WAP capabilities to allow users to type Web addresses to download applications and register their device for use by entering the phone number and creating a PIN.

“Mobile phone technologies may provide another platform to enable all of these types of activities,” Bradford says, “acting as the latest offering in a line of emerging payments methods.”

However, as with new technologies and consumer acceptance, security considerations raise issues, Bradford says.

With NFC technology, there is concern transmitted information could be captured by



PHOTO BY GETTY IMAGES

CONSUMERS CAN PAY with their mobile devices at merchants, some public transit lines, and soon they will be able to wave their devices over posters, business cards and the like for tickets, coupons and information, wherever they go.

an unintended recipient. Additionally, without a PIN requirement, if a phone is lost or stolen there is a possibility of unauthorized transactions made before deactivation. SMS technology does have assigned PINs and confirmations, which provides some protection, although not 100 percent, against unauthorized use. WAP has considerations, such as information encryption, similar to Internet use.

Ultimately, application download may offer the most protection, Bradford says. In addition to utilizing PIN protection, the information that resides on a phone is encrypted and comparable in amount to the information provided on an ATM receipt. If the phone is lost or stolen, its owner could remotely wipe it clean of any financial information.

For the Nokia phone, PINs, passcodes and prompts at terminals all protect the user from unauthorized use.

“Like all new technology, there are going to be concerns,” says Nokia’s Wakim. “Nothing is foolproof, but a lot of steps have been taken.”

Role in the marketplace

It’s not yet clear to what extent future deployment of mobile payment and banking products will mirror the deployment of online banking and P2P (person-to-person) payment products.

Currently, banks play a prominent role among participants providing NFC-enabled mobile payments—the actual transaction is handled by a bank. With SMS- and WAP-enabled models and downloaded applications, nonbank providers are at the forefront.

Bradford says the approach that ultimately takes hold in the marketplace hinges upon a number of considerations, including consumers’ preferred technologies and firms; most convenient options; most secure options; and, ultimately, how widely accepted the payment methods become.

Consumers are already somewhat familiar with the technologies. NFC payment via a tap or wave of a card or key fob is becoming mainstream, so using that payment method via a mobile device is not a stretch. Likewise, SMS



instant messaging and WAP-based Internet browsing are familiar for many mobile device users. The use of a PIN at ATMs or point-of-sale terminals is also a mainstream process. Downloading applications to a phone, though, is less familiar.

“While there are challenges to overcome, a significant portion of the population owns a mobile device, and acceptance of previous emerging payment methods continues to increase. Above all, there are a number of interested parties and available technologies that address a variety of mobile payment needs,” Bradford says. “Mobile payments may be positioned for a meaningful level of adoption in the United States.”



BY BRYE STEEVES, SENIOR WRITER

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