

If you walk out of your house and realize you forgot your mobile phone, chances are very high you will go back and get it. In fact, a survey of college students found that they were more likely to return home for their cell phone than they were for their wallet. Some day that question may become irrelevant, as those two items may be on a path toward convergence.

Recent consumer research conducted at Hitachi Consulting indicates consumers are interested in using their phones for mobile commerce, particularly mobile banking and mobile payments at the point of sale (POS). Overall interest in these mobile features is high, with the majority of consumers indicating they are ready to start using these services now, or in the near future. When asked which mobile commerce applications they are most excited to use, nearly two thirds of research participants chose mobile banking, while 30 percent chose mobile payments at the POS. However, there are still technology choices for banks to make and questions that mobile carriers and financial institutions must address in order to bring these applications to the masses.

# An industry on the move?

Consumers, not technologists, will drive mobile banking, says **Andrew Gorrin.**

## Mobile banking

Over the past year, some of the largest financial institutions in the US, including Bank of America, Citibank and Wachovia, have either piloted or launched mobile banking applications. Bank of America recently announced that it has over 750,000 mobile banking users and will likely hit the one million mark this next quarter. Now, many other financial institutions are making plans to follow suit and enter the mobile banking arena. The Aite Group predicts that over 56 percent of banks will begin to offer mobile banking applications within the next two years. While some banks highlight the cost-savings of serving customers through the mobile phone as the main benefit, we see others, such as revenue opportunities from advanced business applications and cross-selling customers additional services through the channel. As financial institutions continue to invest in mobile banking and educate their account holders as to the benefits and features of these applications, it is likely consumer confidence and interest in this mobile function will continue to grow – here at Hitachi Consulting, we are estimating that the number of mobile banking users in the US will be in the range of 50 – 100 million by 2016.

Today's mobile banking applications enable consumers to access banking services through devices utilizing one of three technologies: WAP, Applets, and Short Message Service (SMS). Each technology has both advantages and disadvantages, but all enable the same basic functionality.

To date none of these technologies has emerged as a standard in the marketplace, leading to investments in all three. For example, Citi's mobile banking pilot is Applet based, while Bank of America utilizes WAP technology and JP Morgan Chase chose SMS for its program. To date, experts disagree as to which technology will win. Some feel that customers' familiarity with text messaging will give it an advantage, while others believe that the user-interface advantages of WAP and Applet are too much for SMS to overcome, particularly as more users migrate to smart-phones. As a result, some banks are hedging their bets by supporting multiple platforms. Wells Fargo launched WAP service in May of 2007, followed by SMS in October.

## Mobile payments a key application

Unlike with mobile banking, there are few prominent examples of mobile payments at the POS for consumers to refer to. This lack of familiarity with the concept and technology is a likely factor making this functionality less appealing than mobile banking with consumers. Although mobile payments pilots exist, there has been no large-scale roll out, and none of the major financial institutions or mobile

carriers seem to be positioned to deliver one in the near-term. Despite limited progress in bringing a solution to market, some analysts are still bullish about the services prospects. Gartner recently predicted that the number of mobile payment users will triple in the next three years. The predicted rapid increase in contactless POS terminals will provide both the infrastructure and utility (points of availability) to consumers that in turn will drive the rapid adoption of mobile banking and payments.

Questions remain around how financial institutions, wireless carriers, and card networks will partner in order to bring this functionality to consumers. To date, mobile carriers have allowed customers to purchase digital content using their mobile network to authorize the purchase and post the transaction to the customer's wireless bill. However, as more goods and services are purchased via mobile devices, it is unlikely that mobile carriers will be comfortable managing the risk associated with larger transaction volumes, creating an opportunity for financial institutions and card networks to enter this market through collaboration with the carriers.



Andrew Gorrin

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## New solutions

The development of the mobile banking and payments environment has led to the emergence of a new group of companies that are focused on creating the required infrastructure to bring solutions to market. Examples of these include Firethorn and Monitise. Firethorn, which is now owned by Qualcomm, has emerged as a leader in developing mobile banking applications for Financial institutions. Its clients include Wachovia, Sun Trust and BancorpSouth. Monitise, which was founded in Europe and is a relatively new entrant to the US market, is looking to provide access to banking applications by connecting mobile devices to banks via the ATM rails. This strategy enables Monitise to utilize its relationship with NYCE (Monitise is backed by Metavante) to serve customers from all financial institutions, however it limits the type services it can provide to basic applications, such as balance inquiries, mini-statements and money transfers.

While there are multiple business models being tested, to date the industry has not yet determine exactly how financial institutions, wireless carriers and card networks will work together to bring mobile payments to the masses. The questions surrounding this emerging channel

extend over multiple aspects of the business, including: technology, regulatory, financial, infrastructure, etc. In order to help tackle these issues the Financial Services Technology Consortium (FSTC) has announced the formation of a Mobile Payments and Banking Project. This four month endeavor's goal is to develop standards for the mobile banking infrastructure end-state. Specifically the group is looking to establish security and back-end technology standards. This strategy will enable Financial institutions to work with application providers to develop differentiated offerings by innovating on the front-end, while leveraging standardized back-end systems. The successful completion of this project could serve as catalyst to jump-start the investment by financial institutions and collaboration with mobile carriers that is necessary to bring solutions to the market.

A second factor that will drive the adoption of mobile payments is the emergence of near-field communication or NFC. NFC technology is similar to RFID, with the added benefit of being a two-way communication. This feature enables the implementation of advanced security features, such as passwords or pin numbers for large transactions and addresses consumers' main concern (security) surrounding mobile payments. Since NFC's emergence, mobile phone manufacturers have been quick to announce new products with the technology – Nokia and Kyocera have both announced NFC enable models. Market projections indicate that by 2011 there will be 450 million NFC enabled units, representing almost 30 percent of the handsets shipped that year. Given the rapid turnover of handsets, a considerable portion of the market will be utilizing NFC enabled devices within the next five years.

### Moving mobile commerce forward

Mobile commerce is one of the hottest topics in both the retail financial services and telecom industries. The banks are eager to utilize this channel to lower their cost to serve, enhance customer relationships and generate new business. Telecom companies are eager to extend their offering of broadband connectivity and content delivery to consumers' third-screen which included mobile device (Cell Phones and PDAs). The first screen, television failed due to consumer behavior, privacy and technology cost issues. The second screen, the personal computer with broadband access has been very successful over the past decade; Forrester Research

Bank of America  
has over  
**750,000**  
mobile banking  
users

**56%**  
of banks will  
begin to offer  
mobile banking  
applications  
within the next  
two years

**50-100**  
million  
US mobile  
banking  
customers by  
2016

reported that in 2007 there were more than 52 million households using the service. However, desire and technology alone do not beget success, as the failure of past efforts, such as web TV and screen phones for banking in the mid 1990's demonstrated.

For mobile banking and commerce to be successful it must be better, faster and/or cheaper than current methods used by consumers today. Clearly the mobile banking technology and economics have already improved dramatically. And they will get better as next generation NFC capable phones replace the current installed base. If the FSTC is able to develop industry standards, then it should control costs for banks and drive economic alignment between banks and wireless carriers.

So the question comes back to the level of customer interest in the application and the benefits it provides. Our research indicates that consumers (and businesses) are very interested in the added convenience that mobile commerce will bring to their lives and work. Over the next few years, we expect customer adoption of mobile banking pilots to increase rapidly as early adopters continue to get on board and begin to drive mainstream interest. Therefore, financial institutions must develop their plans and strategies to bring this offering to their customers or risk losing them to competitors. This will require investments in technology and collaboration with new partners, but the window of opportunity is open now, so banks that ignore Mobile banking must do so knowing that they will lag behind their competitors.

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