

Welcome to the C.N.A. E-Bulletin Vol. 3, No. 19 – March 27, 2007

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SPECIAL “ALTERNATE PAYMENT” ISSUE

INTRODUCTION

This special Tuesday issue is all about credit cards, debit cards, loyalty reward program cards, smart cards, gift cards, contactless payment cards, EasyPass/SpeedPass payments, transit smart cards, mobile phone payments and more.

MOBILE PHONES TO MAKE PAYMENTS

Tony Hine sent us a very interesting article from The Economist about the fact that mobile phones are quickly emerging as ways to pay with electronic cash. This is bound to impact on the amount of cash in use in the future. Since most of us do not have access to the publication, we are pleased to reprint it.

Some of the hottest nightclubs have a new trick for checking the identity of their VIP guests: they send an entry pass in the form of a super barcode to their mobile phones. This is scanned by the large gentleman who lifts the velvet rope. Even those who must pay to get in may need their handsets: at a recent clubbers' night at London's Ministry of Sound, students were offered discounts if they used their mobile phones to buy electronic tickets.

Mobile phones are becoming an increasingly popular way to make all sorts of payments. In America fans of the Atlanta Hawks have been testing specially adapted Nokia handsets linked to their Visa cards to enter their local stadium and to buy refreshments. Elsewhere, schemes are more advanced. You can already pass the day in Austria without carrying cash, credit or debit cards by paying for everything, including consumer goods, with a mobile phone, says Arthur D. Little, a firm of management consultants. It reckons worldwide payments using mobile phones will climb from just \$3.2 billion in 2003 to more than \$37 billion by 2008.

Mobiles are used to buy lots of things in Asia. Earlier this year Visa and SK Telecom, South Korea's leading mobile company, announced the commercial launch of a phone-payments system aimed initially at 30,000 subscribers. In Japan hundreds of thousands of transactions, from buying railway tickets to picking up groceries, already take place every day with customers passing their handsets across a device. Payments are confirmed with a sound like the bell of an old cash register.

More banking services are also being offered on mobiles. On February 12th, 19 telephone operators with networks in over 100 countries said that people are able to use their handsets to send money abroad. MasterCard will operate the system in which remittances will be sent as text messages.

For people without bank accounts, the credit can be converted into prepaid cards which can then be used to buy things. “It will revolutionize the money-transfer business,” said Sunil Bharti Mittal, boss of Bharti Airtel, one of India's biggest mobile operators. The idea is to tap into more than \$250 billion a year that immigrants and migrant workers send to relatives and friends back home.

Britain's Vodafone and America's Citigroup are also launching an international money transfer service developed from the M-PESA remittance service which is already operating successfully within Kenya. Sir John Bond, formerly chairman of the HSBC banking group and now chairman of Vodafone, has long been convinced that payments and mobiles would somehow converge. "Mobile phones have the ability to make a dramatic change to village life in Africa," he says.

He also thinks phones loaded with credit will make many of the payments people use cash for in rich economies. For banks with high infrastructure costs, says Sir John, it has always "been hard to make money out of small payments." But lower-cost business models, some of them from developing countries, are opening up new opportunities. The big attraction of the mobile phone as a purse is that so many people have them - even children.

Buying a train ticket, picking up a newspaper and grabbing a cup of coffee on the way to work with just a wave of your handset promises to be a lot more convenient than fumbling for money and waiting for change, or using a credit or debit card and having to tap in numbers or sign a slip of paper.

Prepaid or "smart" cards, like those used by Hong Kong's Octopus and London's Oyster for travel on subways, provide a lot of convenience - and for operators as well as passengers, because money is expensive to handle. Transport for London says in the three years since it introduced Oyster, the cards now account for three out of four journeys on the underground and buses. Cash payments for tickets have fallen to just 5%. It has helped to boost usage with differential pricing: tickets bought for cash cost a lot more than using a smart card.

The attraction of the mobile phone as a purse is that so many people have them. Could retailers start charging more for taking cash? At present the fees merchants pay for taking credit cards lead many to impose minimum limits on what customers can charge. If the fees for using smart cards and mobiles were low enough, cash would be more expensive to take, so it might well attract a surcharge.

Both MasterCard and Visa have recently introduced plastic cards in America that do not have to be swiped for purchases under \$25. Later this year a "dual interface" system will be tested in London. It will involve a single plastic card which combines an Oyster for travel, a standard Visa card issued by Britain's Barclays Bank for "chip and PIN" payments and a new "wave and pay" Visa for instant transactions up to £10 (\$19).

The various "contactless" payment systems rely on a technology called "near-field communication" (NFC). The NFC device within the cards reacts when placed close to a reader or touched onto one. The machine induces an electrical circuit in the NFC device, which allows a short exchange of data to effect a transaction, such as deducting a fare from the stored value.

As NFC devices can cost only a few cents, they could be inserted into every mobile phone. The idea is that instead of carrying another piece of plastic, just the phone will do. Payments made from those using stored-value are seen as relatively low-risk. Merchants are guaranteed payment and if the cards or phones are lost or stolen the cost to users is limited.

But mobile phones can be much smarter than smart cards. They can be de-activated remotely; they have a screen which can show information, like a credit balance and product information; they have a keyboard to enter information and they can communicate. This means they can also be used to authorize larger payments by entering PIN codes directly on the handset or topped up with stored credit from an online bank account without having to go to an ATM.

To see the potential of mobile-phone money, start in Japan. Most Japanese have at least one credit card, but they tend to stay in their owners' pockets. With street crime almost non-existent, cash reigns supreme. Housewives routinely peel off crisp 10,000 yen (\$82) notes to pay for their shopping. Utility bills and other invoices are dutifully taken to the bank and paid in cash, or more likely these days at the local convenience store. Yet despite the popularity of cash, the mobile phone is starting to change even Japan's traditional habits.

For customers in a hurry, being able to pay with their keitai - as mobiles are known in Japan - is a lot easier than using cash. Many handsets now perform the various functions of cash, keys, credit cards and ID. Most Japanese consider their phone to be secure. If it is lost or stolen it can be locked remotely to protect the cash, credit and other valuables tied to it.

According to "Mobile Payments and Keitai Credit," a new report by Gerhard Fasol, of Eurotechnology Japan, paying small sums with electronic cash is rewriting the rules for the credit-card industry. "We believe that mobile operators, as well as credit-card companies inside and outside of Japan, should consider how to prepare strategically for the likely success of these mobile payment systems," says Mr. Fasol.

Accounts can be set up quickly and mostly without credit checks. There are already 500 or so smart-card services in use in Japan and many of these are migrating to mobile phones. Credit can be bought for cash, topped up at ATM terminals or purchased from online banking services. Some cards and phones also double up as employee ID badges and allow purchases at canteens, nearby restaurants and vending machines. Edy is the biggest contactless-payment method in Japan and is accepted by some 43,000 stores. The system is operated by bitWallet (itself jointly owned by NTT DoCoMo, the country's largest mobile phone operator, and Sony). Edy accounts for 15 million transactions a month, a rate that is doubling annually. It has about 23 million users, of which 4.5 million are already on mobile phones. The nearest rival is Suica, the brainchild of JR East railway, with over 18 million accounts.

Many smart-card systems do not work with each other, but that changed on March 18th when 26 railways and 75 bus companies in the greater Tokyo area began sharing a new stored-value system, called Pasma. This too is available both as a plastic smart-card or built into mobile phones.

What appeals to the Japanese about e-cash is the way it speeds things up. It offers the convenience and portability of cash, but more so. It takes no more than a tenth of a second to complete most transactions. As no change is required, counting errors are eliminated. Fraud and theft are reduced. For the retailer, it reduces the cost of handling money. And because e-cash is smart, it is easy to add extra services. For instance, ANA, Japan's second largest airline, allows Edy users to convert frequent flyer miles into e-cash.

Many of the keitai-credit systems rely on a NFC chip called FeliCa, which was developed by Sony. This chip is embedded in both NTT DoCoMo's wallet phones and the new Pasma system. The chips have to work rapidly and reliably, says Ted Osamura of FeliCa. For instance, the railway operators have insisted that their system can admit 60 passengers a minute through each ticket barrier.

Sony also wants to get its FeliCa chip embedded into computers, televisions and games consoles. That way digital content, like films, music and games can be paid for easily and

without having to enter credit card details. As the main matches of Japan's budding basketball league are broadcast in paid programs over the internet, there could be plenty of demand.

NTT DoCoMo is comfortable offering credit because it already sends bills to its subscribers. It knows their names, addresses and bank account details. It offers two types of credit. One provides a limit of 10,000 yen. Approval is instant without a credit check. The other typically starts at 200,000 yen and goes up to 1 million yen (with a "gold card" service beyond that). Credit checks could take a couple of weeks, but purchases can be made with just a few clicks on the keypad of the phone.

Stored credit also allows anonymous payment systems to be offered, just as some travel cards or "pay as you go" mobile phone services do. These are popular because they are simple and do not involve contracts, even though they might cost more. But the convenience of automatic top-ups and other services may persuade many users to open formal accounts for their mobile phones.

Unlike the Japanese, Americans prefer to use plastic for their purchases. Cards account for more than half of all transactions, up from 29% a decade ago, according to Nielson Report, a trade publication. More than 1.5 billion credit cards are stuffed into Americans' wallets. The average household has more than ten.

The infrastructure for mobile phone payments in America is starting to take shape. The market for pre paid cards already exceeds \$180 billion and includes telecoms cards, pre-paid cards issued by Visa, MasterCard, American Express and Discover, and gift cards issued by retailers like Gap or Starbucks. Cards are also issued for healthcare and government benefits.

Banks and credit card firms hope to convert more cash and cheque payments to plastic with new smart cards. Some versions are already very successful. Many Americans use EasyPass, in which drivers pay for highway tolls wirelessly. They are later billed on their credit cards. SpeedPass, a contactless keychain issued by Exxon Mobil, can be used at petrol stations.

Yet compared with the overall market, the new payment systems are still small. John Suchanec, of Bank of America, says that whereas debit and credit cards are accepted at 6 million locations in America today, only 1 million sites accept contactless cards. The same systems for contactless cards can be used for mobile phones.

Lower fees for shops could speed up adoption, along with the installation by merchants of more readers to take payments. Again the less well-off countries are sometimes the origin of cheaper ways to use the technology. Instead of making a big investment in having lots of electronic NFC ticket-checking devices at the entrances and exits of stations, Croatia has found that tickets can be bought by and delivered directly to a mobile phone. When the inspector calls, the ticket can be displayed on the screen. Mr. Suchanec says a big opportunity still to be exploited is the "two-way" conversation that mobile phone systems allow. Banks could send text messages to customers using mobiles linked to their accounts. Coupons or product information could be delivered directly to mobiles as consumers pay for items. This opens up lots of new marketing opportunities, which could underwrite fees.

Art Kranzley, of MasterCard, believes mobile phone payments could cut down on fraud. His company is testing, with KeyBank, a system that allows a customer to punch his PIN number into a phone before making a purchase, in effect turning the phone into a credit card. Studies by

Visa show that the average American consumer is twice as likely to carry his mobile phone as he is to carry cash. For those aged 18-34, the average is four times as likely.

Some of the fastest-growing payment systems already operate online. Banks provide online processing for clients to accept internet payments made by credit or debit card when the customer is not present. But, as Sony hopes, computers can be equipped to do the same thing without giving away credit card details.

This could prove very popular. One attraction of PayPal as an online payments system is that neither credit card nor banking details are exchanged when payments are transferred instantly between account holders. PayPal, which is owned by online auctioneer eBay, now has more than 120 million accounts with people in over 100 countries, and claims a fraud rate that is much lower than a typical credit-card firm. PayPal has also begun to promote its own mobile phone payment services.

With their grip on the market, banks and credit-card firms want to be in a position to collect most of the fees from the users of mobile and contactless-payment systems. But the new systems could prove to be a “disruptive technology.” Banks could be “disintermediated” if, say, the payments for the train ticket, newspaper and coffee made every day by a commuter with his mobile phone appear not on their monthly credit card statements, but on those of a mobile phone service provider or an online-payments firm like PayPal.

It is still too early to say whether banks and other financial companies will miss out and, if so, by how much. A natural division may emerge. Tim Attinger, of Visa, thinks phone companies will not be interested in letting customers charge big-ticket items to their phone bills, because it would require them to take on more financial-risk management and start functioning like banks (which have to deal with customer defaults, collect payments and resolve disputes). And the credit card firms will want to keep making their new contactless plastic cards (both in and out of phones) easier to use for small payments.

Much may depend on how bills are settled. Payments associations would lose out if customers pay for goods directly from their bank accounts (whether via mobile phone or online banking services) rather than with credit or debit cards. Banks could try to charge customers for settling such bills online; however in the past such schemes have failed. Some of the smaller banks, which do not have payment card portfolios to protect, might have the most to gain from offering customers a way to use their mobile phones to pay for items directly from their accounts.

Having spent fortunes on branding, credit card firms and banks do not want to see other payment systems gain ground. This presents a threat to banks, says Dan Schatt, of Celent, a research company. Historically, banks have controlled both the hardware (cheques books and debit/credit cards) and the distribution (branches, websites, etc). Mobile-phone banking and contactless smart cards could escape some of their control. Banks could lose customers, says Mr Schatt.

Or will they? Banks and credit card firms say that if cash is replaced by mobile phones, they intend to be part of the transition. A decade ago some observers predicted that internet banking would render retail banking from high street branches obsolete. But JPMorgan, Bank of America and others are adamant that people are nowadays using bank branches more than ever. Even if the phone and the smart card replace cash, who gets to collect the fees remains open to contention.

LOYALTY REWARD PROGRAM CARDS

We have seen a lot of new credit cards introduced over the past few years, with the majority by the same old companies but with new names. This time around, Scotiabank is teaming up with Cineplex on a new loyalty program card.

The ScotiaBank will have its name in lights this spring at the former Paramount theatre in downtown Toronto as part of its partnership with Cineplex Entertainment LP, Canada's largest theatre chain. As part of the joint venture, the two companies launched SCENE, an entertainment loyalty rewards program that begins in the Toronto region, and will be rolled out nationally shortly.

The program, which is open to anyone 14 years and older, allows members to earn points for rewards like free movies and concession items like popcorn at any Cineplex theatre just by going to the movies. Members will have access to contests with prizes like trips to Hollywood or free movies for a year. Cineplex is also trying to negotiate a deal whereby the winner of a SCENE member contest can have a walk-on part in a Hollywood movie.

But members can also earn bonus points if they sign up for an account at ScotiaBank and do transactions with a SCENE Scotia-Card debit card. Existing bank clients can switch their current debit card to the special SCENE card.

The Cineplex-Scotiabank deal also gives the bank naming rights to four other flagship theatres in Montreal, Edmonton, Calgary and Vancouver.

Boy, with the cost of popcorn and soft drinks at the theatre concession stand, it will not take a lot of visits to the movie theatre to get a huge amount of reward points!

PREPAID PLASTIC CARDS

Mint Technology Corp., a small Toronto technology company, is promoting a plastic alternative to costly checks and check-cashing services for native Canadians and temporary employees, with an eye also on migrant workers and immigrants who send money to relatives in home countries. They are developing programs with prepaid MasterCard usable at most of the world's stores, automated banking machines, websites and telephone sales lines. The company claims savings for those with no bank accounts or debit cards and for agencies and individuals distributing money.

Rather than run up a monthly debt, a card user will draw down a positive cash balance, much as he or she would with a bank account. Users are less likely to lose their money. If a card is stolen, the rightful owner will not be liable for losses. Carrying the card is also touted as offering convenience and prestige.

A job agency has calculated some temporary employees pay nearly \$600 a year to cash payroll checks, compared with \$8 a month each would pay with a MasterCard payroll system. A case study found that one native family with several children paid \$24.23 a month, or nearly \$291 a year, to a check-cashing service to access monthly benefits of \$724.48. Others have paid up to \$85 a month, according to Chief Cornell Pashe of the Dakota Tipi First Nation in Manitoba.

A couple of months ago, Pashe's 300-member community became the first in the country to pay social assistance using prepaid MasterCard. The 45 recipients will no longer have to line up for two or three hours to get checks, or travel two and a half kilometers to Portage la Prairie for cash.

A subsidiary of Mint Technology Corp. worked with native-owned FP Financial Ltd. of Winnipeg to develop the First Peoples Prepaid Benefits Card, backed by GE Money. The president of FP Financial says First Nation communities issue between 75,000 and 100,000 social security checks a month. Each check costs up to \$3.60 to process and issue, compared with 25 cents to pay by prepaid MasterCard. Cardholders pay a small sum for the cards. FP Financial is working to develop a merchant loyalty program to provide additional benefits. Charles Fox, former grand chief of Ontario, will market the benefit cards to the more than 80 tribal councils in Ontario, while former national chief Matthew Coon Come will handle Quebec.

Nearly 19,000 Toronto recipients of Ontario Works benefits and 41,000 recipients of Ontario Disability Support benefits are still paid by check rather than direct deposit to a bank account. Five percent of Ontario Works recipients in Toronto, or about 3,600 people, have no banking information on record. Spokespersons say no one has approached the City of Toronto and Ontario's Ministry of Community Services about issuing prepaid cards for social assistance benefits.

So what do people think of the idea? Shares in Mint Technology Corp. traded at \$9.58 in 1998, when the company was promoting a cell phone payment system. Today, the shares are trading at 8.5 cents!

NEW TRANSIT SMART CARD CLOSER

The Ontario government has awarded a \$250 million contract to Accenture, a management consulting and technology services company, to design and implement a new payment system. Under the proposed system, commuters from several transit systems operating in the Greater Toronto Area would use the same payment card, called a smart card, to move between transit systems stretching from Hamilton to Oshawa - with one exception.

The Toronto Transit Commission is still deciding if it makes financial sense for TTC customers to climb on board. The reason for the hesitation is that when you're struggling to get money to replace buses, a new fare system needs to be weighed against other priorities. The decision by the Ontario government to proceed with the study goes absolutely contrary to the Toronto Transit Commission's decision to spend millions to convert the automatic turnstiles to accept a different token that started just recently.

TYPICAL FAMILY'S SOLUTION

A recent Mother Goose & Grimm cartoon was probably more truth than humor for more than a few of you. It shows Mother Goose on the telephone talking to...well, I think the conversation is self-explanatory:

"Hello, MasterCard? I'm sorry I missed my last two months payments. Money has been kind of tight lately. But, you'll be happy to know I'm finally prepared to pay my long over-due bill. Do you take Visa?"

GIVER BEWARE

Gift cards were more popular than toys this past Christmas – but sometimes they self-destruct.

This Christmas, two thirds of us planned to give gift cards. But many of those on the receiving end will be disappointed when they finally try to use their cards and discover that their gift has self-destructed.

That's what happened to Mary Maddever, whose 15-year-old son received a \$50 gift card for a video store a few years ago. "It took us forever to find a store where we could use the card," she says. "Then we found one, but by that time, he'd lost the card. Then we found the card again, but it had expired." The video store got to keep the \$50 and didn't have to provide a thing in return.

No wonder retailers love gift cards. J.C. Williams Group, a Toronto retailing consultant, estimated that 10% of the money spent to purchase gift cards is never used. That works out to billions of dollars of pure profit a year for the stores that sell the cards.

Davide Ward-Mathis III, president of the Better Business Bureau in Hamilton, Ont., says that most cards with expiry dates expire one or two years after the purchase date. Some start charging fees that eat into their value just six months after purchase. That will likely change in Ontario though, because the government hopes to pass a new law banning card expiry dates this spring. In the meantime, says Ward-Mathis, you can avoid disappointment by using cards you receive within three months, no matter what the fine print says. "And if you're considering giving a card," he says, "you could give cash instead. "After all, you can redeem cash everywhere – and it never expires."

CONCLUSION

With more and more people around the world using cards for more and more purchases, where does that leave those little treasures we love to collect?

John Regitko
Your C.N.A. E-Bulletin Editor
Canadian Numismatic Association

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