

Merchant Forum

Are you looking for answers related to your organization's chip migration implementation? Please email your question to info@emvcanada.com.

The questions are broken into the following categories:

Business Concerns

Customer Transactions

Cashier/Staff Education What

Happens When... Hardware

Related Card-Not-Present General

Business Concerns

- **What do we need to know about fraud migration? We have our own card. Should we be concerned?**

It is evident internationally that fraud activity will migrate away from chipped cards and terminals to the nonchipped parties in a marketplace. However, the liability shift applicable for EMV adopting markets is an important milestone on whether the non-chipped party remains holding the fraud liability

- o It is noted that October 2010 is the date for this shift in the Canadian market – as lead by Visa initially.

Interac transactions will not have a liability shift

- o The concern should be brand reputation and the anticipated degree of exposure for increased fraud if the rest of the market moves faster than you Source: Integri Americas

The significance and extent of fraud migration from chip & PIN credit cards, which is perceived to be a more secure technology, to magnetic stripe credit cards, which is perceived to be a less secure technology, is uncertain. Only time will tell. But, our view is that the "perception" of magnetic stripe technology as a less secure alternative will attract fraudsters. In other words, we expect fraudsters engaged in organized crime to prioritize their efforts and vandalize magnetic stripe credit cards. As more companies adopt chip & PIN there is also the possibility that this vandalism will accentuate among the ever fewer magnetic stripe users that remain. Therefore, the perceived differences in security and the adverse selection resulting from the adoption of a more secure technology are concerns that magnetic stripe credit card users should have. Source: Deloitte

It has been shown that fraud is migrating to the cards / technology that does not utilize the chip solution. Source: ICC Solutions Ltd.

- **My terminal uses my telephone line to process transactions. Does anything change with the introduction of chip cards?**

To the best of our knowledge, telephone lines should still be able to process chip cards. Source: Deloitte No. If a transaction is to be online, it will interact with your bank acquiring host as in the past. You may however, have a small reduction in online transactions if chip cards are presented that allow for offline authorization of the transaction at the terminal level. This will be more likely with international scheme credit card transactions. Source: Integri Americas

- **We take cash payment across the counter but would like to accept credit and debit cards, but we're not sure how to handle the need for PINs.**

o PIN is required on debit today in many cases. The advent of chip will see all transactions move to PIN authorization as a more secure & faster card payment transaction

o Your terminal provider & acquirer will provide the appropriate certified solutions that will ensure that as the card is used, automated prompts will guide you through the transaction steps Source: Integri Americas

- **Can I use an EMV terminal for anything other than credit or debit payments? Can I use it for my loyalty scheme?** That will depend on your loyalty scheme and how it is administered. If the loyalty scheme is administered at a host within your company you are likely getting the information from the POS already and that should continue and be built into your EMV compliant terminal. If you are launching a loyalty program that leverages the Smartcard Chip then additional enhancements to the POS will be required. Source: Deloitte

Yes. This may be where you issue a standalone chip card for your own program, or work with a suitable payment card issuing partner and have your loyalty application available on their chip cards. Indeed with some solutions offered by Visa and MasterCard, you could consider offering the program to cardholders of more than one issuing bank. Other applications may be contactless payments or services, ticketing and stored value payments. Source: Integri Americas

- **Will merchants benefit from the move to chip cards?**
 - o Merchants benefit from a ubiquitous and fast payment service. The move to chip cards also brings a move to PIN over signature in most cases. Major UK retail group Tesco's has publicly declared their significant savings operationally and financially as a result of the move to chip and PIN away from signature. A further sometime forgotten benefit is the reduction in chargebacks with PIN entry
 - o Other financial or marketing benefits may be derived in looking at value added chip based services including loyalty, prepaid, or data management Source: Integri Americas

By accepting *Visa* chip & PIN cards at a chip-reading terminal in your store or restaurant:

- Merchants can expect reduced chargeback frequency for fraud
- Retail staff will no longer be responsible for signature verification
- Retailers should experience faster checkout speed

Source: Visa Canada

- **We only take credit. If we have to invest in pinpads, should we also take debit?** You should talk with your acquirer and if you qualify for acceptance of debit then the new pinpads would enable acceptance of debit too. Source: Deloitte The acceptance of debit cards is likely to be a financial decision beyond the use of the PIN Pad. The likely introduction of Scheme (Visa/MasterCard) debit into the Canadian market will also be a consideration above and beyond the acceptance of the existing credit card products. Source: Integri Americas

Customer Transactions

- **We hear there may be new choices for debit. How does my customer indicate his choice and also, does he have to indicate credit or debit, or does the terminal know based on the card?**
 - o Under chip based transactions, the terminal and card will automatically offer up to the cardholder/merchant a selection of available applications to choose from. In many cases it will be one only – a default credit or default debit application.
 - o The concept of account selection, which takes the above a further step is not being introduced in Canada at this time it is understood. It is also believed that certain international debit applications (Maestro/Cirrus/Plus etc) would not be displayed as available domestic debit transaction choices at the POS device – it is recommended that you confirm the above with your terminal provider Source: Integri Americas

- **How will we process returns when the payment was from a chip card?** It is very likely that this will remain the same as with magnetic stripe. That is you will credit the funds back to the card originally used for the transaction Source: Integri Americas

- **How do consumers select or change their pins and what happens if they can't remember this at the POS? Can they use the same PIN they use on their debit card to help them remember?**

How consumers will select and change their PIN will vary by issuer. Some will use the same PIN already issued on the credit or debit card, others will be issued a new PIN. Consumers can change their PIN through various means including ABM and branch. In some cases they will change it online or through the IVR and a script will be sent to the card when it is next used at a POS. If this happens it will only take a few seconds. Consumers will be encouraged to select a unique PIN for each card to protect its security, however, some consumers will choose the same PIN. Source: Deloitte

- o In many cases, the bank will issue a PIN to the cardholder with their new card. If the card had an existing PIN, they should be able to retain that original PIN on each reissue of the plastic. PIN change is often provided at ABMs and in branches for cardholders to change to more memorable PINs or Customers often do align PINs across multiple cards to avoid confusion. This however is a risk to the cardholder when they do this

- o If they forget their PIN at the POS, they will usually be able to have more than 1 attempt. If too many attempts are made, the transaction will be declined and depending on the chip configuration, the card may be locked as well.

- o It is a retailers own risk if they wish to proceed with the transaction by over-riding or allowing PIN fall back to signature. This procedure would normally be allowed during a transition period from magnetic stripe to chip Source: Integri Americas

- **Will the icons on chip readers make it easier for customers to decide how to swipe their cards, because they certainly can't figure out the direction for the magnetic stripe!**

It is certainly a sound idea to make the chip reader visible to the Customer or merchant depending on who controls the card transaction. The problem is each chip reader can be quite different, so Customer confusion will need to be effectively managed. Source: Integri Americas

- **Can my customers sign their receipts if they can't remember their PIN?** This is usually allowed for a short transition period during the migration to Chip. The risk at the time should be monitored when allowing fallback of this type. Source: Integri Americas

Cashier/Staff Education

- **I hear that my cashiers will no longer handle the customer's credit card. Is that the case, because that would impact staff training?**

Correct. Cashiers will no longer need to handle the customer's card. Customers should dip their own card and enter their own PIN. Source: Deloitte

This is not the case in all environments and will depend on how and where you install the card reader and PIN pad. The opportunity in restaurants will be to deploy wireless devices that do allow the Customer to retain the card at all times. Some retail POS solutions may upgrade the POS with a combined chip card reader and PIN pad that may warrant the Customer to control the use of the card. Source: Integri Americas

Training cards containing actual issuer test data and keys are used to great effect in the UK Chip & PIN rollout for this very purpose ie merchant training and confidence testing. Cashiers training should include the knowledge of what to do with a chip card, what happens if the PIN is blocked or a retry needed. Source: ICC Solutions Ltd.

A transaction using a *Visa* chip and PIN card with chip-reading terminals is simple. Rather than swiping the *Visa* card and signing a receipt, the cardholder inserts their *Visa* chip card and enters their PIN to verify their identity.

- The cardholder inserts the *Visa* chip & PIN card into the chip-reading terminal instead of having it swiped by your staff.
- The *Visa* chip & PIN card remains in the chip-reading terminal for the full duration of the transaction process.
- The prompts on the terminal guide the cardholder through the transaction process, and will direct the cardholder when to enter their PIN to authenticate the transaction.
- When the transaction is complete, as indicated by the prompts on the terminal, the cardholder removes the card from the terminal. No signature is required.
- The *Visa* chip & PIN card also has a magnetic stripe that enables it to work with non-chip-reading terminals. The *Visa* card is swiped and the usual magnetic stripe transaction process applies. The cardholder is required to sign the receipt to complete the transaction.

Source: Visa Canada

- **If the chip doesn't work can we use the stripe or key in the card number?**

The terminal will recognize if the card is a chip and PIN card and will be expected to authenticate the chip and PIN and then go online for authorization. If the chip is damaged and the merchant swipes the card, they will accept the liability. Source: Deloitte

It is very likely that a period will be permitted for technical fallback to the magnetic stripe during the migration. You will be encouraged to avoid this or key entry as it may be a 'ruse' to permit card fraud – care should be taken to verify the signature in these cases as PIN may not be requested. Source: Integri Americas

- **How much training do I need to do with my cashiers and IT staff? Will materials and training classes be available?**

- o Your acquiring relationship bank/partner should provide source materials for training. Many terminals should also have a training function so that you can allow staff to conduct 'dummy' transactions as part of their training.

- o It is very important that all staff are advised to follow the terminal prompts carefully as new screen information will be displayed

- o As the volume of cards and terminals conducting Chip & PIN transactions increase, both Customer and retail staff will increase their awareness Source: Integri Americas

U.K. payment providers conducted a chip and PIN trial in Northampton in 2003 and found the following benefits for merchants:

- The onus of authenticating a cardholder's identity shifted away from the merchant to the card
- Reduced administration costs, especially related to receipt tracking
- Reduced customer lineups due to the faster chip and PIN payment processes
- Quick for merchant staff to master: Staff required three chip and PIN transactions per shift at a major supermarket to become proficient and cashier and store staff training took place in as little as 15 minutes per individual.

Source: Visa Canada

What Happens When...

- **What happens if I get a chip card from outside of Canada?**

You should process it the same way as a Canadian chip card when the terminal recognizes the brand eg Visa, MasterCard etc. You may see some foreign payment cards with chips which will fail to work in your chip reader – this is due to fact that they are not internationally recognized credit or debit chip services. The international payment is still magnetic stripe based, so these cards once dipped and fail – should be swiped to confirm. Source: Integri Americas

All EMV transactions, irrespective of card issuing country, follow a standard process according to configurable risk parameters defined by your acquirer. Source: ICC Solutions Ltd.

• **What happens if a U.S. VISA cardholder visits Canada after merchants migrate to chip and PIN terminals?**

When a *Visa* card is inserted into an EMV-compliant terminal, the terminal will prompt the cardholder for an authentication method. If the card presented is U.S.-issued, the card may or may not have a chip. If the card only has a magnetic stripe, a signature will be requested. If a chip card is presented, the terminal may request either a PIN or a signature. In all cases, U.S. cardholders will be able to make purchases easily with their *Visa* cards in Canada. Source: Visa Canada

• **What if we get fraudulent cards from the US?**

The fraud liability under chip and PIN lies with the non-chip party. However the liability shift for Canada on Visa is not until October 2010. Chargeback processing will still apply where applicable. Copied chip cards from around the world do exist as magnetic stripe cards and usually target countries not accepting chip and who still provide floor limits in retail stores Source: Integri Americas

• **My business deals with a number of tourists. Will foreign debit cards work at these new terminals?**

All existing magnetic stripe based cards that were previously accepted will continue to work. Foreign tourist chip cards will fall into two categories as noted above – where it is internationally recognized it will work as a chip transaction, otherwise as magnetic stripe. Eg Geldkarte in Germany is country specific chip. Source: Integri Americas

• **What happens if we don't convert?**

Eventually, a combination of issues will likely occur:

- o Customer trust will decline and they seek out chip accepting merchants
- o Post the liability shift, you would be responsible for any fraud, where the card was originally chip based
- o Likely to incur future increases in merchant service fees or
- o Be declined from accepting card payments

Source: Integri Americas

• **What happens when the power is out?**

If the power is out then the merchant terminal will not work to authenticate the chip and PIN and ask for authorization from the issuer. In this case, if the merchants decides to write out a paper slip they accept the risk. Source: Deloitte

Fall back rules will continue to apply where applicable. Source: Integri Americas

• **Are there any rules regarding the placement of pin pads in relation to the customer?** None other than security should be a consideration including limiting the ability to shoulder surf the Customer. Source: Integri Americas

• **Are we liable for fraud if the chip doesn't work and the cashier uses the stripe?**

In Canada, Visa has mandated a liability shift that will require Canadian retailers to absorb fraud cost if they accept magnetic-stripe cards instead of chip & PIN cards after 2010. While MasterCard and American Express have not imposed this requirement, Interac will have its own requirements in 2015. Source: Deloitte

The only recorded liability shift at the moment is Visa in October 2010. I am not aware of anything else that would change the existing position on this at this time. Source: Integri Americas

- **When retailers become responsible for the fraud, can we refuse to accept mag-stripe cards?**
 - o The earliest liability shift noted is October 2010 for Visa. If you are chip enabled, then you would be covered for this situation. If you refuse to transact magnetic stripe cards for international payments, you will be firstly losing a sale.
 - o Magnetic stripe is still a valid card and will continue to be for international interoperability. Domestic mandates have been documented for Interac in 2012 & 2015
 - o If you are suspicious of fraud, you should act accordingly once verifying the identity of the cardholderSource: Integri Americas
- **How do chip cards impact chargebacks?**

In a mature chip on chip market with PIN, these should decline and increasingly become partially automated. During the transition period, any available liability shift will change who is responsible for the fraud based on who supported chip. Source: Integri Americas

Hardware Related

- **What type of terminals can I choose from?**

Essentially all internationally recognized and Scheme certified manufacturers have solutions for EMV based chip & PIN. You should choose the solution that fits with your retail environment and need to mitigate mistakes. Tesco and other multi-lane retailers installed swipe & park POS readers to take the decision of chip or mag away from the attendant and to speed up the transaction speed. Source: Integri Americas
- **What do we need to know about contactless before we make decisions about terminals?**

It is the merchant choice regarding acceptance of contactless cards. If the merchant chooses to accept contactless then the POS will need to be able to accept this form of payment and training will be required regarding when a PIN is required (over \$25 for Visa and MasterCard). Source: Deloitte

This is a significantly larger topic than this question suggests. The first issue will be sourcing a reader that operates with contactless functionality. You will also need to determine if are to accept both Mag Stripe Defined (MSD) contactless or EMV based or both! When considering contactless, your environment should not require the Customer to hand over their card at any time to be effective. Source: Integri Americas
- **How reliable is this new technology? Do we need to worry about cards or terminals failing?**

The technology is proven and has been in existence for multiple decades. In fact, the technology should be more resilient than existing mag stripe due to reduced wear and tear. Failures will occur, and appropriate fallback procedures should be followed. Source: Integri Americas
- **Our POS system is integrated into our cash registers. How will chip cards impact our system?**
 - o This is not a small investment and impacts retailers in your model. Tesco however will attest to the value that it has delivered since. You will need to investigate suitable security compliant solutions for both the PIN pad and chip reader as applicable
 - o Processing capability and speed should be less of an issue to standalone terminals, but is a consideration for DDA based chip cards Source: Integri Americas
- **I hear about testing and certification, but as a retailer do I have to do anything about this?**

Once the device is upgraded and installed, live testing is highly recommended with a variety of chip cards available. The device will have been tested and proven for commercial release, but the combination of acquirer host developments, theirs or your code on the device and your own host environment will each impact that original commercial certification. Testing is a critical aspect of any major project with multiple constituents. Source: Integri Americas

Your acquirer will inform you of their specific merchant certification test requirements necessary to ensure end-to-end compliance and reduce risk of interoperability problems. Source: ICC Solutions Ltd.

- **Is it true that there are no terminals available in Canada which meet both the PCI PED and EMV requirements?**

It is not likely to be true today, but it is likely, a number of terminals installed in the field would fail these requirements. Source: Integri Americas

Card-Not-Present

- **We use IVR for all our credit card transactions. How will EMV change this?**

Currently there are no plans to accept PIN through IVR. You will want to manage fraud using Verified by Visa and Secure Code from MasterCard to do a deeper level authentication. Source: Deloitte

- **We hear that there is no technology that eliminates the card-not-present fraud, so why should we spend money to convert to EMV, because much of our business is card-not-present?**

In fact, some markets have taken the EMV migration another step to start addressing CNP fraud. This incorporates two factor authentication and can be linked to VbV or Secure Code to enhance the Customer experience. Source: Integri Americas

Many issuers are exploring the possibility of putting an application on the chip that would facilitate a single use password. This would require the consumer to also have a device that would generate the password and online merchants to accept/validate the one time password. This is a technology in progress. Source: Deloitte

Visa has developed a layered approach to card security in the card-not-present environment. This layered approach has been developed to offer both merchants and consumers multiple checkpoints and "layers" of security with each one designed to help foil fraudsters. Tools like the *Verified by Visa*[®] (VbV) program, the Account Information Security (AIS) program, the Three-Digit Code (CVV2) on the back of the card, and the Address Verification Service (AVS) can help protect merchants who operate an online, mail order or telephone order business. Source: Visa Canada

- **How will we process card-not-present transactions and who will be liable for the fraud?**

Many issuers are exploring the possibility of putting an application on the chip that would facilitate a single use password. This would require the consumer to also have a device that would generate the password and online merchants to accept/validate the one time password. This is a technology in progress. Source: Deloitte

There is no change in this regard from today. Source: Integri Americas

- **How do I process telephone orders?**

Many issuers are exploring the possibility of putting an application on the chip that would facilitate a single use password. This would require the consumer to also have a device that would generate the password and online

merchants to accept/validate the one time password. This is a technology in progress. Source: Deloitte

- **What impact will chip cards have on my online business?** Many issuers are exploring the possibility of putting an application on the chip that would facilitate a single use password. This would require the consumer to also have a device that would generate the password and online merchants to accept/validate the one time password. This is a technology in progress. Source: Deloitte

None. Unless you and the issuing community decide to leverage the chip & PIN migration to introduce Chip Authentication as part of a 2 factor authentication strategy. Source: Integri Americas

General

- **No one has approached us about EMV so I assume we do not need to do anything. Is that true?**
Your Merchant Acquirer is likely to contact you about your EMV needs. In the meantime it is advisable that you participate in communities like ACT and engage advisors/consultancies to keep you apprised of chip & PIN developments. Source: Deloitte Your terminal provider/acquiring partner should be approaching you soon. You are also able to approach them to enquire and learn about the migration. Source: Integri Americas

- **Does EMV change the way we take credit and debit at the POS?**
Yes. Consumers using magnetic stripe cards often give their card, and thus their credit or debit card number, to personnel at the point of sale. Consumers using chip & PIN cards will not need to give their card to anyone when making a purchase. Instead, personnel at the point of sale will give consumers a card reading device into which the consumer will place their card and then enter their PIN. By not providing their card number or PIN to anyone, consumers will be better protected against fraud. To this end, point of sale personnel will need to be trained on how to interact with consumers using chip & PIN cards. Source: Deloitte

Yes. Instead of swiping the card and removing from the terminal, the card will be dipped into a chip reader and remain in the device during the transaction. PIN will also be implemented on credit transactions. Source: Integri Americas

- **Why move to chip cards? Can't they be copied like mag-stripe cards?**
The encryption on a chip card is superior to a magnetic stripe card making it more difficult to copy. Additionally, the usage of the card at the point of sale as described in the answer above will also help prevent fraud. Source: Deloitte

Chip is a far stronger technology to magnetic stripe and allows for new risk management tasks to be completed in both online and offline modes with a terminal and chip card. While the mag stripe on the back of the card can still be copied, but it can only be used where a terminal has a floor limit and is offline and due to secure key data that is stored on the original card. Source: Integri Americas

It is very easy and inexpensive to copy mag-stripe cards, the introduction of chip card technology and complex encryption techniques reduce this risk. Source: ICC Solutions Ltd.

Chip cards are virtually impossible to counterfeit. Compromised account information cannot be used to create either a counterfeit chip card or applied to a magnetic stripe card that can be used at a chip-enabled point-of-sale device. Source: Visa Canada

- **How do I know that I won't have to upgrade again in the near future?** Considerable investments have been made in chip & PIN and it has been rolled out successfully in several countries. Based on this success and the investments made to date, there are no plans at this time to upgrade chip & PIN for several years to come. Source: Deloitte

The investment is significant for the entire payments model. The future enhancements that we see today are extensions – contactless – and are a change in the actual process more generally. Technology is evolving rapidly, but the chip infrastructure at the hardware level should be stable for a period, with software updates the more likely path in the near to medium terms – no one has an answer on the next development. Source: Integri Americas

- **Are you planning to introduce biometrics in the next few years and how would that work with an EMV terminal?**

There are no plans to introduce biometrics at this time. Source: Deloitte

Chip based payments would support biometrics and is used for closed payment systems in countries in Africa and the like. Some retailers are already adopting biometrics without a card in the US, but it remains limited in take up. Source: Integri Americas

- **What are the steps and milestones for EMV conversion?**

Your Merchant Acquirer should guide you through these steps and milestones. Source: Deloitte

Although Visa Canada Member financial institutions will implement chip at their own pace, it is expected that by 2010, almost every *Visa* card in Canada will feature chip technology, and most merchants will have the equipment to accept and fully benefit from chip technology. Source: Visa Canada

- **Where do we go for help? We are a mid size retailer and are unsure of timelines and options. We cannot afford to allocate a lot of resources to this, so waiting until the last minute would be a disaster for us.**

Contact your Merchant Acquirer. Source: Deloitte

Firstly your banking partner and terminal provider – they should provide appropriate information. Many organizations have sourced specialist consultants and advisors to guide them through their migration. Source: Integri Americas

- **When should we expect customers to show up with chip cards and what do we do with them?**

International cardholders may already be doing so. You should see a marked increase in 2008 as issuers in Canada start to ramp up their conversion. Source: Integri Americas

Members of the Canadian payments industry — Interac Association, MasterCard Canada Inc., Visa Canada and many of their respective card issuers, payment processors and merchants — are participating in a chip trial in Kitchener-Waterloo, Ontario and merchants in this area may see cards as early as October 2007. Chip cards are slated to appear more widely in Canada between 2007 and 2010. Source: Visa Canada

- **Will it take longer to process payment with the proposed chip and pin? How does it compare to existing credit and debit and to cash?**

It is actually faster than credit and signature and depending on the type of cash transaction should be faster also – it will depend on what you are measuring. Source: Integri Americas

Although chip transactions involve complex encryption, within EMV the option exists to process transactions off-line eliminating time required for on-line authorization with host systems. Source: ICC Solutions Ltd.

- **I hear we don't need to be EMV ready until 2015. Is this true?** No. That date is for Interac to look at removing the acceptance of mag stripe on Interac cards across POS and ABM. If you don't want to be exposed to reputational risk, liability shifts and higher fees, you should be considering your migration efforts now for readiness before 2010. NB. Visa liability shift is October 2010. The duration of your project will depend on scale of retail POS, who owns them, resource availability etc...It could be a 2 year project in some cases. Source: Integri Americas

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