Cyber-Security Update on Smart Cards & Chip Technology

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Micro-chip Security for Credit and Debit Cards

For the past several years your credit and debit cards have been replaced with cards that have micro-chip technology. These "smart cards" give your transactions greater protection from account fraud and identity theft.

A different payment processing system for these "smart cards" is used and so every ATM machine and other point of sale terminal in the United States needed an upgrade or replacement.

What Makes a "Smart Card" Work to Safeguard My Accounts?

"Smart cards" have a microprocessor that can provide secure data storage, multi-factor authentication, biometric matching capability, encrypted communications between the card and readers, one-time transaction codes and more—all tied to you and your accounts.

TAKEAWAY: "Smart cards" offer a very secure way to transact your personal business.

Has the Conversion to "Smart Card" Technology Been Completed?

Implementation requires a massive changeover to the new payment method—a very expensive and time-consuming undertaking.

A multi-step process was initiated.

1. Smart card manufacture and distribution – The cards carry both the micro-chip technology and the magnetic stripe technology.
   STATUS: Very near completion
2. Purchase, installation, testing and certification of the new upgraded hardware and software for every ATM machine and other point of sale terminal.
   STATUS:
   - ATM machines:
     Financial Institutions – completed
     Independent Owners – near completion
   - Point of Sale terminals:
     ongoing, completed soon
   - Gasoline pumps:
     completion deadline 2020

TAKEAWAY: "Smart cards" also include the old magnetic stripe technology, so your card usage can continue without interruption.

How Will My Transactions Change?

The main difference now involves the actual transaction and how it is initiated and authorized.

CARD INSERTION: The micro-chip is activated when the "smart card' is dipped or inserted into an ATM machine or point of sale terminal. The chip technology authenticates the reader and produces a unique one-time encrypted code authorization that changes with each transaction.

CARD SWIPING: The magnetic stripe carries account information identifying the cardholder when swiped. This information is sent along with the payment data and the transaction authorization follows. All transactions use the same account information for every authorization.

CONTACTLESS: The chip technology may allow contactless payments from your "smart card". Similar and compatible security is built into mobile phones.

TAKEAWAY: If possible use the "smart card' insertion payment method.

What Are the Security Improvements?

Here are some facts to remember about the added security benefits with "smart card" technology:

1. Each transaction is one-time only—every new transaction requires unique encrypted authentication and authorization codes.
2. A "smart card" is nearly impossible to duplicate if lost or stolen.

3. In-person or card present “smart card” transactions at properly equipped ATM machines or merchant point of sale terminals are secure.
4. The magnetic stripe option is vulnerable to fraud and not secure—it is easily stolen and counterfeited.
5. Online payments have separate security protocols and guidelines to safeguard your transactions.

What Are the Security Recommendations?

Personal security measures in the care and use of your credit and debit cards is still a necessary precaution:

- ✔ If your card requires a PIN (personal identification number), do not share it with anyone, and do not write it on your card.
- ✔ Use strong passwords. Experts advise using a combination of letters and numbers but stay away from using birthdays or home addresses.
- ✔ Check your statements regularly. If you notice any suspicious activity on your account, notify your financial institution and card issuer immediately by calling the number on the back of your card.

Resources

- **Federal Trade Commission**
  www.ftc.gov
- **Secure Technology Alliance**
  www.securetechalliance.org
- **CreditCards.com**
- **ATM Industry Association**
  www.atmia.com
- **Federal Reserve Board**
  www.federalreserve.gov