

# Online Banking Security

## Best Practices for Small Business

Presented by:

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# Small Business Fraud and Theft

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## News

### IT contractor gets five years for \$2M credit union theft

Insider threat case the second this week, following Terry Childs guilty verdict

By Jaikumar Vijayan

April 29, 2010 08:44 PM ET

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Computerworld - For the [second time this week](#), companies are getting a stark reminder of the danger posed to [enterprise](#) networks and assets by insiders with privileged access.

## DNS Perspective

April 23, 2010

### Cybercriminals Attacking SMBs through ACH Fraud



By [Michael Dinan](#), TMCnet Editor





Small- and medium-sized businesses are facing a major cybersecurity threat involving ACH fraud, an expert in the field told TMCnet during an interview that forms part of an article that appears in a [special technology section](#) of the Chicago Tribune today.

## Cybercrime Poses New Risks in Commercial Banking

Richard Raysman and Peter Brown

New York Law Journal

April 14, 2010

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A recent report calculated that small and medium-sized businesses and local government institutions are losing, on average, \$100,000 to \$200,000 per day to cybercriminals who perpetrate fraudulent electronic funds transfers. Typically, thieves send targeted phishing e-mails that trick users into disclosing banking log-in information or installing password-stealing malware that records their keystrokes and online banking credentials.

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# How do they do it?

- One real example of theft:

**May 7:** an unknown third party originated an ACH (Automated Clearing House) transfer from an IP address that a Maine company had never used before.

**Perpetrator logged in using a Company employee's user name and password. They also successfully answered 2 challenge questions to initiate the transfer.**

Krebs, Brian, "Maine Firm Sues Bank After \$588,000 Cyber Heist", [www.washingtonpost.com](http://www.washingtonpost.com), September 23, 2009

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# How do they do it?

- One real example of theft:

**By May 15:** Six batches totaling \$588,851 were transferred to several individuals with whom Company had never done business. The batches ranged from \$56,594 to \$115,620. Portions of the ACH never reached its destination.

Krebs, Brian, "Maine Firm Sues Bank After \$588,000 Cyber Heist", [www.washingtonpost.com](http://www.washingtonpost.com), September 23, 2009

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# Other important factors of the story:

- ACH transfers only used for weekly payroll on Fridays.
- Account used to fund ACH transfers was tied into a line of credit that had automatic draws. No prior notice or approval was required.
- Fraud was discovered days later, when an owner received a letter, mailed to his house, stating that portions of a recent ACH transaction had been rejected due to invalid account numbers.

Krebs, Brian, "Maine Firm Sues Bank After \$588,000 Cyber Heist", [www.washingtonpost.com](http://www.washingtonpost.com), September 23, 2009

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# What is ACH? And can this happen on any account?

Krebs, Brian, "Maine Firm Sues Bank After \$588,000 Cyber Heist", [www.washingtonpost.com](http://www.washingtonpost.com), September 23, 2009

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# Key Logging Access

- Frauds typically through a “key logger” virus.
- The virus can be unknowingly downloaded from various sources.
- All keystrokes are logged and transmitted to a cyber thief.
- Using keystroke data, the thief can answer your username, password, challenge questions, PINs, etc.
- Thieves access your bank accounts and send transfer funds to “money mules”.
- “Money mules” are everyday people; hired to accept electronic funds and forward them to companies and individuals.

# How to defend yourself

- Awareness of the danger.
- Best practices in business computing.
- Choose a financial institution that educates customers and users about the dangers.



# How to defend yourself

- Physical security of computers
  - Know who has access to the online banking computer.
- Network security
  - Firewall protection
  - Virus protection
- Internet and E-mail practices
  - Know what is being downloaded on your online banking computer
  - Set guidelines for employees using online banking computers
- Insurance
- Internal procedures
- Financial institution security & policy
  - Know your financial institution's policy for fraud on business accounts
- Authentication
  - Multifactor Authentication

# Physical Security

- Consider a dedicated computer
  - Not networked to your company data
  - Do not allow e-mail or internet surfing
  - Consider removing the ability to write to the hard drive.
  - Turn-off when not in use.

# Network Security

- **Firewall**

- Work with a computer firewall expert to implement and understand firewall protection for your networks and computers.

- **Anti-virus protection**

- Definition files should be updated at least weekly or whenever a major outbreak of a virus occurs.
- Continuously running in the background.
- Full system scan should be performed after a definition update.

<http://csrc.nist.gov/publications/nistpubs/800-42/NIST-SP800-42.pdf>

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# Internet & E-mail Security

- Avoid accessing unknown Web sites
- Don't click on hyperlinks sent via e-mail unless you are sure they are legit. Your financial institution should never ask you to click on a hyperlink to provide information.
- Go directly to the institutions Web site to log-on.
- Don't open e-cards or other attachments that are not absolutely verified by you.
- Do not participate in Facebook games or other social networking apps on your business computer.

# Insurance

- Losses from cyber crimes are not typically covered by general or liability insurance.
- Consider insurance specific to cyber crime.
- Understand your coverage and your exposure.

# Internal Procedures

- Review your activity frequently.
  - On-line banking allows for increased monitoring.
- Use ACH only if you need it.
  - Most small businesses can use online bill pay which is different than ACH and more difficult to defraud in large sums.
  - If you use ACH, work with your Bank to fully understand the risks and best security practices.
- Strong Multi-factor authentication

# Authentication

- Something you are (Biometrics)
  - Voice
  - Fingerprint
- Something you know
  - User Name
  - Password
  - PIN
- Something you have
  - Token
  - USB plug
  - Smart card

# Multifactor Authentication

- One form of authentication is not strong enough
- Biometrics is the strongest; however very expensive to implement
- User names, passwords, PINs are not strong enough by themselves
- Challenge questions can be “adequate” at best; however, they are often considered a weak control, based on implementation.
- Combining more than one of the methods of authentication mentioned
- Currently, one of the strongest methods of multifactor authentication is combining username, password with token technology



# What are Tokens



- A small device that creates a random six or eight digit number
- The number changes every 30 to 60 seconds
- The random number is synced with your login
- Token is specific to a user, cannot be shared or duplicated

# Using Tokens: Security Alerts

- Beware of e-mail requesting token information
  - Tokens are for you to either log into a site or conduct a transaction, only
  - Financial institutions will never request this information in an e-mail or otherwise

For more information:  
visit <http://security.thepowerofand.com/>

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More

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Security Tokens

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We now offer MainStreet Business customers a multi-factor authentication (MFA) system that provides additional security to your MainStreet Business account. Here's how it adds an important layer of protection.

The MFA security token (shown at right) generates a random number every 30 seconds. When you log into your account, you are prompted to enter the token-generated number to gain access to the account. No number - no access. This provides an added layer of security on top of user IDs and passwords to help prevent thieves and fraudsters from gaining unauthorized online account access and conducting fraudulent acts.

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# Questions or Comments

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