Identity Theft: Awareness and Prevention

2007 Richard A. Hadley
APSAC Professional Development Presentation

Identity Theft
Awareness and Prevention

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The World We Live In ...

• The average “take” for an identity theft crime now exceeds the average “take” from a bank robbery!!
The World We Live In ...

- Between January 1 and June 30, 2006, web application vulnerabilities made up 65% of all vulnerabilities for that period.
- For that same period in 2006, 80% of vulnerabilities were considered easily exploitable, up from 79% for the second half of 2005.

Typical Weekday at Purdue

- Unique Purdue systems communicating with off-campus host
  - Campus 25,359
  - Students/Resnet 15,013

- Unique off-campus systems communicating with Purdue host
  - Campus 3,707,481
  - Students/Resnet 9,311,118
It is after 3am

Do you know who your computer is communicating with?

Between 3am and 5am

- Unique Purdue systems communicating with off-campus host
  - Campus: 11,194 (44% of daily)
  - Students/Resnet: 6,319 (42%)
- Unique off-campus systems communicating with Purdue host
  - Campus: 646,034 (17%)
  - Students/Resnet: 1,584,385 (17%)
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Primary Motive Behind Attacks

Financial Show Off
1985 - 1993

Financial Show Off
1994 - 2003

Financial Show Off
2004 - Today

'05 Threat Landscape Shift

<table>
<thead>
<tr>
<th>Old Landscape</th>
<th>New Landscape</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threats are noisy &amp; visible to everyone</td>
<td>Threats are silent &amp; unnoticed</td>
</tr>
<tr>
<td>Threats are indiscriminate, hit everyone</td>
<td>Threats are highly targeted, regionalized</td>
</tr>
<tr>
<td>Threats are disruptive ➔ impact readily visible</td>
<td>Threats steal data &amp; damage brands ➔ impact unclear</td>
</tr>
<tr>
<td>Remediation action is technical (“remove”)</td>
<td>Remediation more complex, may need to investigate data leak</td>
</tr>
<tr>
<td>Only a few named threats to focus on</td>
<td>Overwhelming amount of variants, nameless threats</td>
</tr>
</tbody>
</table>
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The Compliance Landscape
Information—Intensive Legislation Impacts Everyone

- HIPAA*
- FISMA (US)
- NIST 800-53
- Canadian and Asian Privacy Laws

Cross Industry

<table>
<thead>
<tr>
<th>Financial Services</th>
<th>Energy</th>
<th>Life Sciences and Pharmaceutical</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLBA* and USA Patriot Act</td>
<td>NERC CIP 1300</td>
<td>FDA 21 CFR 11</td>
</tr>
<tr>
<td>Basel II</td>
<td>Energy Bill of 2005</td>
<td></td>
</tr>
<tr>
<td>PCI/DSS*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NASD 3010/3110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEC 17 a-4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Highlighted industry is primary focus, but law/regulation crosses industries

Software Vulnerabilities (average discovered each week)

- 6.8 days average before exploit is available (79% easy to exploit)
- 97% of vulnerabilities rated moderate to severe

Source: Symantec Corporation, ISTR IX March 7, 2006
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### Identity Theft

- **Definitions**
  - Legal definitions – often include “fraud”
  - Common definitions
    - Account level
    - Identity level
  - 9.3 Million new victims in 2004 (4.3% of US population)
  - 61% of Identity Theft reports to the FTC indicate the report was also NOT given to local law enforcement!!!
  - Losses in 2005 were $60 Billion (estimated)

- **Average incident costs**
  - $4,800 to businesses involved
  - $500 to consumer involved
  - 200-600 hours of consumer time
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Figure 1
How Victims' Information Is Misused¹
January 1 – December 31, 2004

<table>
<thead>
<tr>
<th>Type</th>
<th>Indiana</th>
<th>All Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Card Fraud</td>
<td>28%</td>
<td>21%</td>
</tr>
<tr>
<td>Phone or Utility Fraud</td>
<td>19%</td>
<td>10%</td>
</tr>
<tr>
<td>Bank Fraud</td>
<td>14%</td>
<td>10%</td>
</tr>
<tr>
<td>Employment-Related Fraud</td>
<td>19%</td>
<td>7%</td>
</tr>
<tr>
<td>Government/Benefits Fraud</td>
<td>9%</td>
<td>8%</td>
</tr>
<tr>
<td>Loan Fraud</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Other Identity Theft</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Attempted Identity Theft</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

¹Percentages are based on the total number of victims reporting. 4,130 from Indiana and 224,780 from all locations. Percentages add to more than 100 because approximately 13% of victims from Indiana and 12% of victims from all locations reported experiencing more than one type of identity theft. All victims reported one type of identity theft.

Figure 3
Complaints by Victim Age¹
January 1 – December 31, 2004

<table>
<thead>
<tr>
<th>Age</th>
<th>Indiana</th>
<th>All Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 18</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>18-29</td>
<td>29%</td>
<td>25%</td>
</tr>
<tr>
<td>30-39</td>
<td>23%</td>
<td>25%</td>
</tr>
<tr>
<td>40-49</td>
<td>19%</td>
<td>20%</td>
</tr>
<tr>
<td>50-59</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>60-64</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>65 and Over</td>
<td>5%</td>
<td>6%</td>
</tr>
</tbody>
</table>

¹Percentages are based on the number of victims who provided their age. 4,130 from Indiana and 224,780 from all locations. This chart represents 97% of victims reporting from Indiana and 95% of victims reporting from all locations who contacted the Federal Trade Commission directly.

Federal Trade Commission
Created February 1, 2007
Identity Theft Quiz
(test your “Identity Quotient”)

- I receive several offers of pre-approved credit every week (5)
  - Add 5 points if you do not shred them
- I carry my Social Security card in my wallet (10)
- My Indiana driver's license has my SSN on it (10)
- I do not have a PO Box or locked, secured mailbox (5)
- I use an unlocked, open box at work or at home to drop off my outgoing mail (10)
- I carry my military ID in my wallet at all times (10)
- I provide my SSN whenever asked, without asking questions as to how that information will be safeguarded (10)
Identity Theft Quiz
(test your “Identity Quotient”)

- Add 5 points if you provide you SSN orally without checking to see who might be listening
- I am required to use my SSN at work as an employee ID or at school as a student ID number (5)
- My SSN is printed on various documents frequently seen in the workplace (timecards, etc.) (10)
- I have my SSN and/or driver’s license number printed on my personal checks (10)
- I am listed in a “Who’s Who” guide (5)
- I carry my insurance card in my wallet and either my SSN or that of my spouse is on that card (10)

Identity Theft Quiz
(test your “Identity Quotient”)

- I have not ordered a copy of my credit report for at least 2 years (20)
- I do not believe that people would root around in my trash looking for credit or financial information or looking for documents containing my SSN (10)
How did you score??

- 100+ - You are at a high risk
- 50 - 100 – Your odds of being victimized are about average but higher if you have good credit
- 0 - 50 – You are in good shape. Don’t let your guard down!

Privacy Rights Clearinghouse, www.privacyrights.org

Themes of the Day

- Deter
- Detect
- Defend
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How it Happens (April 2002 – April 2003)

- Existing Credit Card Only – 5.2 Million
- New Accounts and Other Fraud – 3.2 Million
- Other Existing Accounts – 1.5 Million

Information gathering
- Stolen records, mail, property
- Bribing employees
- Hacking
- Trash
- Abuses authority (landlord, employer, …)
- JUST ASK and many people will tell you!!!
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ATM Skimmer

Gotta Get A PIN
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As it Appears…

Passwords!!
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Passwords

- EU study of “office workers”
  - 16% used their name as password
  - 11% used favorite football team
  - 12% used the word “password”

- Never use a word that could be in any dictionary, names of places, or any proper nouns
- Never use any of the above spelled backwards
- Never use any of the above simply followed by a digit
- Include upper and lower case, numbers, special characters

New Phishing Sites by Month December ’04 - December ’05

<table>
<thead>
<tr>
<th>Month</th>
<th>December ’04</th>
<th>January ’05</th>
<th>February ’05</th>
<th>March ’05</th>
<th>April ’05</th>
<th>May ’05</th>
<th>June ’05</th>
<th>July ’05</th>
<th>August ’05</th>
<th>September ’05</th>
<th>October ’05</th>
<th>November ’05</th>
<th>December ’05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>1707</td>
<td>2560</td>
<td>2025</td>
<td>2870</td>
<td>2854</td>
<td>3326</td>
<td>4280</td>
<td>4584</td>
<td>5259</td>
<td>5242</td>
<td>4367</td>
<td>4630</td>
<td>7197</td>
</tr>
</tbody>
</table>
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Phishing

(fish’ing)

The act of sending an e-mail to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft. The e-mail directs the user to visit a Web site where they are asked to update personal information, such as passwords and credit card, social security, and bank account numbers, that the legitimate organization already has. The Web site, however, is bogus and set up only to steal the user's information.
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Dear eBay Member:

We need to inform you that your eBay account may be suspended if you don’t re-enter your account information.

To resolve this problem, please visit the links below and re-enter your account information:

https://login.ebay.com/ebayscrch?d=Signin&n=1&v=feedback醚c

If your problems could not be resolved, you can contact eBay at HelpDesk@eBay.com.

For the User Agreement, Section 9, we may immediately issue a warning, temporarily suspend, or terminate your account and access to the eBay community if we believe that your actions may cause financial loss or legal liability for you, our users, or eBay itself. If we are unable to resolve these issues, our only course of action is to suspend or terminate your account.

Please note that this suspension is not related to any actions or obligations that you may have with eBay.

Pursuant to the eBay User Agreement, you are prohibited from using eBay in any way that is deceptive or misleading. This includes the reporting of a new account.

Please do not reply to this message.

Copyright © 1995-2006 eBay Inc. All Rights Reserved.
Identity Theft: Awareness and Prevention

Dear SouthTrust Bank user,

For the safety of our clients, our bank has modernized the standard of information transfer. We're confident that the new updated technologies will ensure the safety of your transactions through SouthTrust Bank. Our theft-prevention solutions will take effect urgently.

Click here for confirmation of your card details [SouthTrust Online Banking]. We will offer you the new high-level service to handle your ATM card after the new changes to take effect.

Looking forward for your support and understanding.

SouthTrust Technical Support Department

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Update Your Account Information - Message (HTML)

We are glad to inform you that our bank has a new security system. The new updated technology will ensure the security of your payments through our bank.

Hoping you understand that we are doing this for your own safety, we suggest you to update your information, to maintain your account updated.

Thank you for using us!
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Notification of Limited Account Access

As part of our security measures, we recently noticed the following issue on your account:

Unusual account activity has made it necessary to limit account access until additional verification information can be collected. Case ID Number: IP-071-382-056

For your protection, we have limited access to your account until additional security measures can be completed. We apologize for any inconvenience this may cause. If you choose to ignore our request, you leave us no choice but to temporarily suspend your account.

Sincerely,
PayPal Account Review Department

Please understand that this is a security measure intended to help protect you and your account. We apologize for any inconvenience.

Click here to verify your account

Please do not reply to this e-mail. Mail sent to this address cannot be answered. For assistance, log in to your PayPal account and choose the "Help" link in the banner of any page. To receive email notifications in plain text instead of HTML, update your preferences here.
Online Shopping

- More than 75% of Americans use the Internet
- 2003 online shopping was $17.2 Billion in 4Q03
- 2004 increase in online shoppers was >14%
- 30% of all Americans now shop online
- Estimates are that by 2007, 50% will shop online
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**Online safety**

- Learn about product AND seller
- Understand retailer’s refund policies
- Select a secure password
- Use secure checkout (look for `https`)
- Things too good almost always are
- Use a specific credit card for e-shopping. Monitor frequently with on-line access (web, Quicken, etc.)
- Limit opportunities for bank account access. Consider separate accounts at different banks.

**Deter**

- Shred
- Protect your personal information
- Don’t give out your personal information
- Never “just click here”
- Use good passwords
- Physical security is still important
### Where Victims Go for Help

<table>
<thead>
<tr>
<th>Help Source</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTC</td>
<td>3%</td>
</tr>
<tr>
<td>Other Federal Agency</td>
<td>5%</td>
</tr>
<tr>
<td>State Dept of Motor Vehicle Admin</td>
<td>7%</td>
</tr>
<tr>
<td>State AG or State Consumer Agency</td>
<td>8%</td>
</tr>
<tr>
<td>Lawyer</td>
<td>12%</td>
</tr>
<tr>
<td>Credit Bureau</td>
<td>22%</td>
</tr>
<tr>
<td>Local Police</td>
<td>26%</td>
</tr>
<tr>
<td>Credit Grantor</td>
<td>43%</td>
</tr>
<tr>
<td>Did Not Contact Anyone</td>
<td>38%</td>
</tr>
</tbody>
</table>

### Monitor Your Credit

- **Call about free copies of your credit report**
  - Equifax – 800-685-1111
  - Experian – 888-397-3742
  - Trans Union – 800-888-4213

- **Contest bills with unknown charges**
  - OK to call but ALWAYS file in writing using the EXACT procedure specified by the credit card company
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Detect

- Be alert and check your bills
- Be alert and review financial statements
- Check your credit report

File A Report

- If you are a victim, file a Police report with LOCAL Police or Police where identity theft occurred, if known
  - Get a copy and retain for your records
  - Get information on the assigned investigation and keep phone numbers available for verification

- Contact ALL Creditors
  - Contact billing inquiries and security department
  - Change passwords
  - Close unused or unnecessary accounts
  - Monitor activity closely

Report to Major Credit Bureaus

- Ask for “Fraud Alert” on your file

- Trans Union – 800-680-7289
  - P.O. Box 1000, Chester, PA 19016-1000

- Experian (formerly TRW) – 888-397-3742
  - P.O. Box 9532, Allen, TX 75013

- Equifax – 800-525-6285
  - P.O. Box 105069, Atlanta, GA 30348

Other contacts

- Social Security Administration – 800-269-0271

- U.S. Postal Inspectors, if USPS involved – 800-275-8777

- State Department, if passport involved

- If checks missing or involved
  - TeleCheck – 800-710-9898
  - Certegy, Inc. – 800-437-5120
  - International Check Services – 800-631-9656

- FTC Identity Theft Hotline – 877-IDTHEFT (438-4338)
Defend

- Fraud Alert
- Close unused accounts
- File a police report
- Report to the FTC

Future trends

- Government regulation
  - New “Breach Disclosure” laws
- Two-factor identification
  - Something you have and something you know
- Better single factor identification
  - Biometrics
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Questions Before Elvis Leaves The Building?

FIGHTING BACK AGAINST
IDENTITY THEFT
FEDERAL TRADE COMMISSION

CONSUMERS | BUSINESSES | LAW ENFORCEMENT | MILITARY | MEDIA | REFERENCE DESK | EN ESPAÑOL

WELCOME TO THE FTC’S IDENTITY THEFT SITE

Welcome to the FTC’s Identity Theft Site

This website is a one-stop resource to learn about the crime of identity theft. It provides detailed information to help you detect, correct, and protect against identity theft. While there are no guarantees about avoiding identity theft, there are steps you can take to minimize your risk and minimize the damage if a problem occurs.

1. Contact the fraud departments of any one of the three consumer reporting companies to place a fraud alert on your credit report. A fraud alert will require creditors to take certain actions before opening any new accounts.

2. Close the accounts that you know or believe have been tampered with or opened fraudulently. Use the Identity Theft Alert (PDF, 60K) when disputing new unauthorized accounts.

3. File your complaint with the FTC. You may print a copy of your complaint to provide important standardized information for your police report.

Questions Before Elvis Leaves The Building?

PURDUE UNIVERSITY